

South Australian Year Book



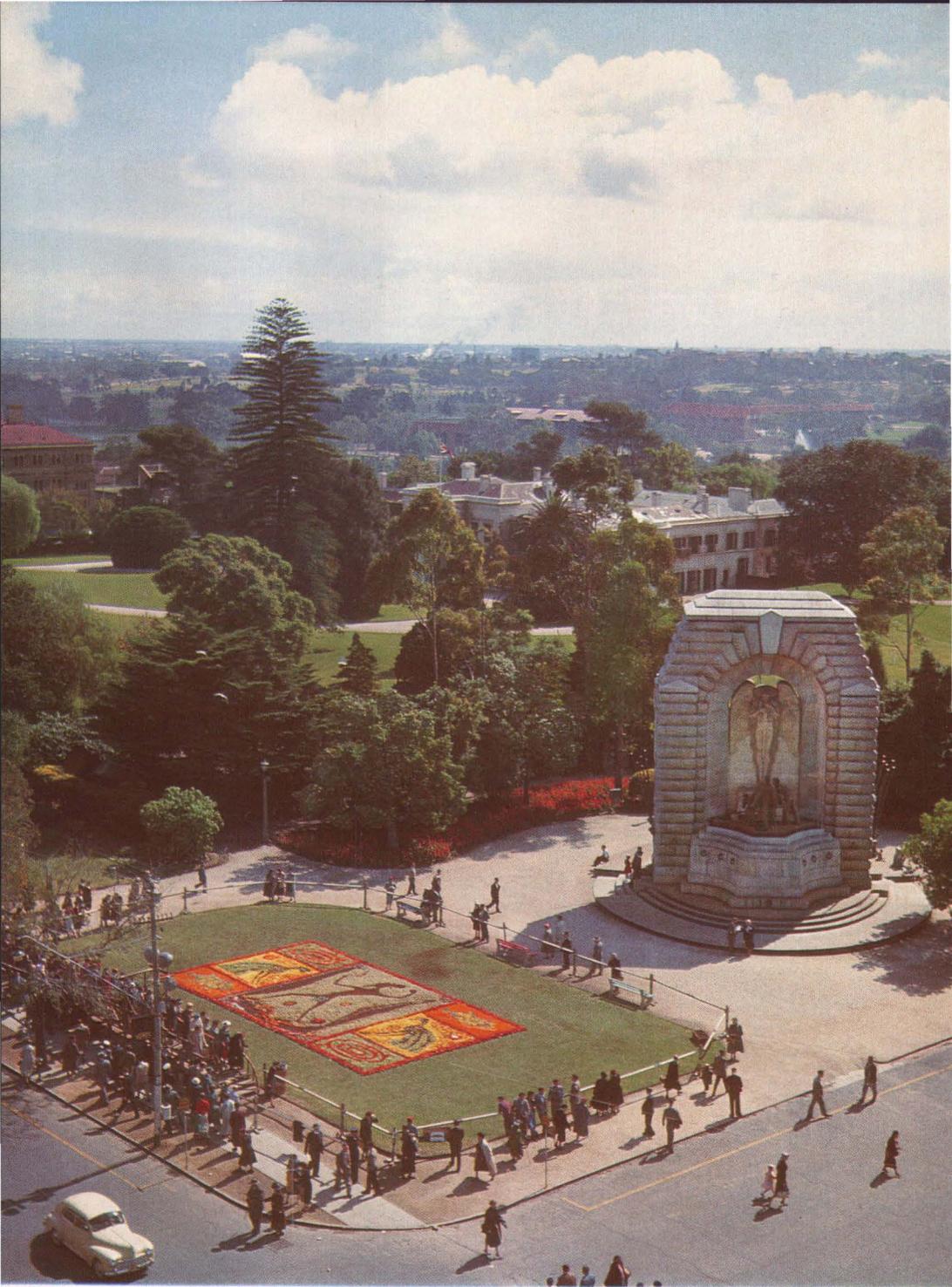
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SOUTH AUSTRALIAN
YEAR BOOK
1967



S.A. Govt Tourist Bureau

Adelaide—a view from North Terrace looking over Government House to the Adelaide Oval. A floral carpet is a feature of each National Flower Day

*South
Australian
Year Book*

No. 2 : 1967

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*Deputy Commonwealth Statistician
and Government Statist*

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
SOUTH AUSTRALIAN OFFICE

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PREFACE

Official statistics of South Australia are published in different media, each chosen as the most appropriate to meet a particular need. Mimeographed issues include bulletins or press releases which give as soon as available figures and some comment concerning a particular subject and a Monthly Summary of Statistics which supplies the latest information on a selected range of subjects. Printed publications embrace a Quarterly Abstract of South Australian Statistics which presents an up to date and reasonably comprehensive range of data on economic and social conditions in this State, a Statesman's Pocket Year Book which contains a wide range of statistical information in a compact form and a Statistical Register of South Australia (issued both in Parts and in one volume) in which is provided, without comment, detailed historical and current statistics in many fields.

The South Australian Year Book completes the set of authoritative statistical publications. Its aim is to portray South Australia both in figures and in text. Thus it ranges from an historical, geographical and climatological description of the State through a study of its constitutional, social, physical and financial development to a picture of South Australia as it is today. This volume, the second issue of the Year Book, includes some new articles—on Flora, Droughts and the Flinders University of South Australia—and such statistics of the 1966 Census as were available at the time of printing. Some historical information has been condensed but appropriate cross-references to the relevant articles in the first issue are given.

I gratefully acknowledge the valuable assistance given by contributors of special articles and by the various government departments and firms who supplied the photographs and plates used. I also appreciate the continuing interest in this project shown by the Government Printer and his staff. My special thanks are tendered to Mr. I. R. Collins, B.Ec., A.A.S.A., under whose direction the Year Book was compiled by Mr. G. D. Carey, B.Ec., A.A.S.A.(Senior), and to Mr. P. W. Hodgkinson, B.Ec., and Mr. H. E. Vivian, A.A.S.A., for their valuable support of Mr. Collins in this work.

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August, 1967

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PART 1

NATURAL ENVIRONMENT

1.1. DESCRIPTION

Size and Location

The State of South Australia has the ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and the sea, the boundary lies approximately 2 miles to the west of this meridian.

The State is approximately 746 miles from east to west at the northern boundary and 710 miles at the head of the Great Australian Bight. From north to south it varies from 391 miles near the western extremity to approximately 823 miles near the eastern boundary. South Australia covers a total area of 380,070 square miles (one eighth of the area of the Australian continent); however, approximately one third of this area has no significant use and over one half is devoted to extensive pastoral pursuits. Approximately 99% of the population live south of the 32nd parallel.

South Australia uses what is known as Central Standard Time, this being 9½ hours ahead of Greenwich Mean Time, and half an hour behind Eastern Standard Time used by States on the east coast of Australia.

Physical Features

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50% of the State is less than 500 feet above sea level and over 80% less than 1,000 feet. Even the dominant mountains, the Mount Lofty-Flinders system, nowhere exceed 4,000 feet and nowadays at no point prove really difficult barriers to communication.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which

is interrupted by two major indentations, Spencer Gulf and Gulf St Vincent. These two relatively shallow depressions cut into the settled areas a distance of approximately 200 and 100 miles respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, covering 1,680 square miles, is by far the predominant island of the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilized.

The vast ocean area to the south results in a more temperate climate than would be suggested by the latitude, while the trend of the coastline exposes the coastal areas to the westerly rainbearing air streams.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 500 miles to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty itself 2,334 feet. The western side of these ranges presents steep scarps to the Adelaide plains while on the eastern side more gentle slopes merge into the Murray basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St Mary's Peak of 3,900 feet is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The Mount Lofty-Flinders chain has an important climatic influence: higher rainfall on the plains to the west of the ranges, and in the ranges themselves, with relatively dry conditions in the Murray basin.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (4,970 feet) the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middleback Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than 70 feet over the 399 miles between the border and the sea. For the 134 miles to Overland Corner the river occupies a wide valley and then passes through a narrow steep-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is 39 feet below sea level and is fed by a series of intermittently flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal

drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 150 miles in length.

General Geological Background

The physiography of the State very accurately outlines the geological features, the areas of higher relief being the basement rocks protruding as cores or ridges through the flat-lying younger sediments of the basin areas.

The main physiographic feature is the Kangaroo Island-Mount Lofty-Flinders Ranges arc of hills, which, although of no great elevation, extend over a distance of 500 miles. The rocks of this arc, which are predominantly ancient sediments, have been folded and faulted in a spectacular manner providing many classic examples of textbook tectonics; they owe their present prominence to repeated fold and uplift movements throughout geological time. The hills of the chain rise from the coastal plains of Gulf St Vincent to the west, the plains of the Murray River to the east, and the Lake Frome and Lake Eyre plains in the north-east and north. The basement rocks are also exposed to the west of Spencer Gulf, but here they are more completely levelled off, and constitute a geological shield of greater antiquity than the Mount Lofty arc.

In the far north-west of the State, the ancient basement is again exposed in the east-west trending hills of the Musgrave and Everard Ranges. These ranges form the northern boundary of the Great Victoria Desert, which with the great coastal Nullarbor plain, covers the western half of the State.

There is thus a broad geological picture of ancient crystalline or partly crystalline folded rocks forming highland chains and provinces, surrounded by relatively young and soft flat-lying sediments which have accumulated in deep troughs and basins during periodic transgressions and regressions of the sea throughout most of geological time.

It is in the hard rock provinces that are found the deposits of minerals and rocks which are playing such an important role in the present high rate of industrial development of the State. The basin areas are important as sources of artesian water and are currently the areas in which vigorous petroleum exploration is proceeding and in which important natural gas discoveries have already been made.

In general, the younger sediments of the basin areas do not provide good agricultural soils except in the higher rainfall areas of the south and south-east of the State, while the best agricultural lands lie in the hard rock provinces of the Gawler-Barossa-Clare regions of the central ranges where relatively good rainfall is associated with more mature soil conditions.

1.2. CLIMATE AND METEOROLOGY

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

METEOROLOGICAL OBSERVATIONS

Meteorological services throughout Australia are administered by the Commonwealth Bureau of Meteorology and the Regional Office of the Bureau in Adelaide directs operations throughout South Australia. Daily weather reporting stations are established at over 60 representative localities and there are over 750 rainfall recording stations.

Station weather observations telegraphed several times a day provide the basic information for the weather forecasting and warning services provided by the Regional Office. These observations are also collated in bulletins, maps and reports issued for public information. The reports include climatic surveys which are studies of climatic variations over defined regions of the State.

RAINFALL

Average Annual Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four fifths of the State receiving an average of less than 10 inches of rain annually. An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

Distribution of Rainfall, South Australia and Australia

Average Annual Rainfall	Proportion of Total Area	
	South Australia	Australia
	%	%
Under 10 inches.....	82.8	39.0
10 and under 15 inches	9.4	20.6
15 and under 20 inches	4.5	11.2
20 and under 25 inches	2.2	9.0
25 and under 30 inches	0.8	7.2
30 and under 40 inches	0.3	6.1
40 inches and over	(a)	6.9
Total	100.0	100.0

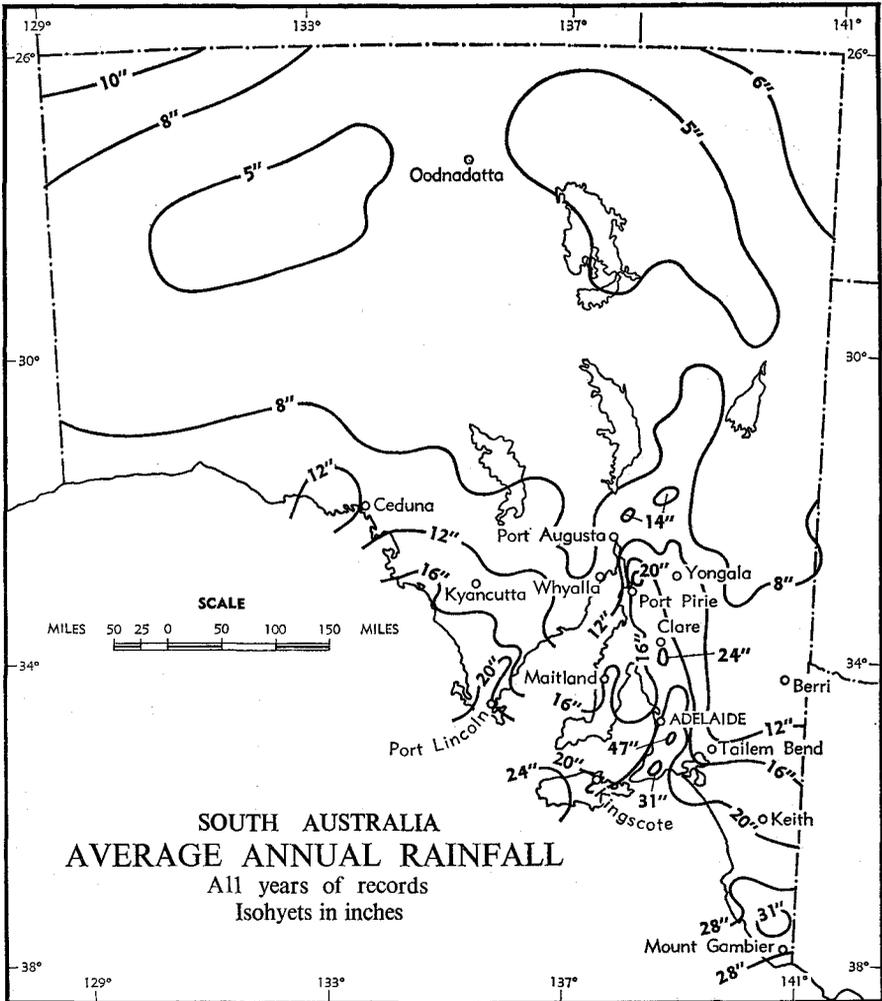
(a) Less than 0.05 per cent—an area of the order of 75 square miles in the Mount Lofty Ranges.

Over the southern half of South Australia the main source of rain comes from showers associated with unstable moist westerly airstreams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide where the average annual rainfall, in the vicinity of Stirling West, is about 47 inches. The Flinders Ranges have the effect of extending a strip area of higher rainfall well to the north.

As can be seen from Map 1 the isohyets generally show highest annual averages along the ranges and southern parts of the coast. Averages fall off rapidly to less than 10 inches within 100 to 150 miles inland, and then decrease more gradually to a minimum of below 5 inches in the vicinity of Lake Eyre. This area is the driest part of Australia, and there have been protracted periods when the average there has even been less than 3 inches.

Seasonal Distribution of Rainfall

Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but is rarely completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view.



MAP 1

The first significant falls generally arrive during April or May, and while June, July and August are usually the wettest months, rains tend to show a marked decrease during September and October.

By contrast the occurrence of rain over interior districts is quite erratic, but southern parts of the interior still exhibit a discernible trend for winter maxima. Records collected over the years from this northern half of the State show that heavy rains of up to 3 inches may occur in any month of the year, but on the other hand at least two or three months without any significant rain at all are experienced practically every year.

Average monthly rainfalls at 17 selected recording stations are shown in the following table. The average number of rain days (*i.e.* days receiving one point or more of rain) are also shown.

Average Rainfall and Days of Rain: Selected Stations, South Australia

For all years of records to end of 1964

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (Points)													
Adelaide	77	77	95	174	271	292	261	245	200	176	122	102	2,092
Berri	66	86	46	66	110	102	95	106	105	96	78	75	1,031
Ceduna	29	63	52	74	145	161	151	140	90	93	76	61	1,135
Clare	96	96	96	190	293	320	315	310	277	222	140	114	2,469
Keith	70	89	83	135	225	210	210	219	203	169	123	105	1,841
Kingscote	59	69	71	141	237	296	307	250	181	147	95	73	1,926
Kyancutta	45	70	51	89	141	153	169	159	117	111	96	78	1,279
Maitland	69	82	79	174	252	278	257	243	197	170	114	83	1,998
Mount Gambier	132	114	142	247	338	388	419	394	306	252	180	160	3,072
Oodnadatta	63	104	61	29	60	37	40	31	33	39	31	52	580
Port Augusta	59	66	66	75	102	107	77	88	88	91	71	63	953
Port Lincoln	53	59	73	140	227	298	305	258	191	141	92	69	1,906
Port Pirie	70	69	72	117	154	166	124	138	131	124	86	83	1,334
Stirling West	153	144	171	376	564	722	635	614	487	388	240	191	4,685
Tailem Bend	71	83	84	112	170	161	156	161	157	148	112	109	1,524
Whyalla	69	88	64	70	107	101	86	97	95	99	84	81	1,041
Yongala	77	78	64	103	143	165	154	178	147	127	106	97	1,439
AVERAGE NUMBER OF DAYS OF RAIN (a)													
Adelaide	4	4	5	10	13	15	16	16	13	11	8	6	121
Berri	3	4	3	6	8	9	11	10	7	7	5	4	77
Ceduna	3	3	3	6	10	12	12	11	8	7	6	4	85
Clare	5	5	5	10	12	15	16	16	12	11	8	7	122
Keith	4	4	4	9	12	13	15	15	12	11	8	6	113
Kingscote	4	4	4	7	14	16	19	18	13	11	8	7	129
Kyancutta	4	4	4	7	12	12	14	14	10	9	7	5	102
Maitland	4	5	5	10	13	15	17	16	12	11	8	6	122
Mount Gambier	7	8	9	14	17	18	21	20	17	16	13	10	170
Oodnadatta	3	2	2	2	3	3	2	2	2	3	3	3	30
Port Augusta	3	3	3	5	7	7	10	9	6	6	6	4	69
Port Lincoln	4	5	5	11	15	17	19	19	13	12	8	6	134
Port Pirie	3	3	3	6	8	10	11	10	8	7	6	4	79
Stirling West	6	7	7	13	15	17	18	18	15	14	11	9	150
Tailem Bend	4	5	4	9	12	13	13	13	11	10	8	6	108
Whyalla	3	3	3	5	6	7	9	8	6	6	5	4	65
Yongala	4	4	4	7	10	14	13	13	9	8	7	5	97

(a) Other than for Adelaide figures relate to standard 30 year period 1931-1960.

Rainfall Probability

Rainfall probability is the likelihood, expressed as a percentage, that a minimum rainfall will be received during a stipulated period.

A more detailed discussion, together with maps and with special reference to the cereal growing season was included on pages 5-9 of South Australian Year Book, 1966.

Rainfall Intensity

Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes—for example in Adelaide several falls at a rate of more than 400 points per hour over a 5-minute period have been recorded. These would be thunderstorm rains, and can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have occurred within a period of twenty-four hours ending at 9 a.m. were at—

Ardrossan (18th February 1946)	8.10in.
Carpa (18th February 1946)	7.83in.
Hesso (18th February 1946)	7.36in.
Wilmington (1st March 1921)	7.12in.
Wynbring (28th February 1921)	7.00in.

Other Yorke Peninsula towns besides Ardrossan also recorded over 7 inches on 18th February 1946. These, however, are very much below the 24-hour falls which have been recorded in tropical parts of Queensland and Western Australia. Crohamhurst in Queensland once recorded 35.71 inches in one day, and at least 20 other centres have had daily readings exceeding 24 inches.

Snow and Hail

The occurrence of snow in South Australia is infrequent and is mainly confined to the Mount Lofty Ranges and southern Flinders Ranges. Most falls are very light and do not persist long due to the relative warmth of the ground. Collated reports of snow in the Mount Lofty Ranges show a total of 116 days of snow experienced over a period of 124 years. While most falls have occurred during the months June to September, snow has been experienced as early as 25th April (1916) and as late as 3rd December (1955).

Hail falls most frequently about the southern coasts and ranges during the winter. Further to the north, hail can be experienced with summer thunderstorms and some of the largest hailstones have been reported from northerly parts of the State. Tornadoes and tornadic squalls are, in almost all cases, accompanied by hail.

Floods

Various localized areas of South Australia are prone to flooding. However, most local flooding is associated with intense falls and consequently is of comparatively short duration. Exceptions have occurred in parts of the south-east of the State where due to topography and other soil factors, stretches of water can persist for days and even weeks.

Extensive rises in the River Murray levels have at times caused damage to levees and installations along the banks. During 1956, following an excessive snow melt in the Australian Alps, prolonged flooding was experienced in many areas adjacent to the main course.

DROUGHTS IN SOUTH AUSTRALIA

Much of the Australian continent lies between latitudes 15° and 35° south, which is the zone of latitude in which subtropical anti-cyclones and subsiding air occur. The general atmospheric circulation is such that, in the main, upward motion occurs over equatorial regions, with descending motion over the subtropical regions. Lying in this area of descending air, much of the Australian continent is characterised by clear skies and an absence of rain.

There is no universally agreed definition of drought. A definition which may be generally accepted is "severe water shortage". However, this definition does not state what is meant by "shortage", and requires further clarification. Water-need depends on the types and numbers of animal and plant communities using the water, so that the concept of drought cannot be divorced from the use to which the water is put. Conditions which a market gardener would regard as a drought, would often cause a pastoralist little or no concern. The availability of water depends largely on rainfall, although losses (such as evaporation and wasteful use of water), and gains (storage in the soil, artesian basins and artificial reservoirs) must be taken into account.

Drought Studies

The Bureau of Meteorology drought research programme is based on the statistical analysis of monthly and annual rainfall data which has the advantage that the data are numerical and that the regulations for their observation, collation and processing have been substantially unchanged since the inception of records. If studies were based on drought effects on plants or animals, the development of drought-resistant types and improved farm management techniques would be difficult factors to eliminate.

The best known, and most commonly used rainfall statistic is the mean (or "average" or "normal"). However, most monthly and daily totals show a marked departure from normal and as a consequence, statistical measures such as "mean", "average" and "normal" are often poor indicators of rainfall occurrence.

Variations in annual rainfall totals are more realistically presented by using the limits of a certain proportion of the occurrences. This method may be used by calculating upper and lower rainfall amounts which constitute the limits of each 10% of annual totals (or decile) of rainfall occurrences at a station.

This gives rise to two terms used in connection with deciles—rainfall deciles and decile ranges. Rainfall deciles refer to deciles which can be used to indicate that a certain percentage of values falls below a fixed limit. The first decile is that rainfall amount which is the upper limit of the lowest 10% of totals, the second decile is that amount which is the upper limit of the lowest 20% of totals and so on. In this way, for example, for a station with annual rainfall totals over a 120 year period, the 120 totals involved are arranged into order of ascending magnitude, irrespective of year of occurrence. This list is then divided into tenths so that each tenth (or decile) will contain 12 rainfall figures. By contrast, a 30 year record treated in this manner would yield deciles containing only three rainfall figures.

Decile ranges on the other hand are the ranges of values between deciles, *e.g.*, the first decile range is that range below the first decile, the eighth decile range is between deciles seven and eight, and the tenth decile range is that range above decile nine. Therefore, we may consider that areas where rainfalls are in the first decile range, roughly coincide with "drought" areas. This assumption is only approximate, due to the fact that annual rainfall totals are for the calendar year, while droughts may last a few months or several years.

The following list of groupings is currently being used by the Bureau of Meteorology for decile ranges:

- Very much above average*—highest 10%—decile 10.
- Much above average*—next highest 10%—decile 9.
- Above average*—next highest 10%—decile 8.
- Slightly above average*—next highest 10%—decile 7.
- Average*—middle 20%—deciles 5 and 6.
- Slightly below average*—next lowest 10%—decile 4.
- Below average*—next lowest 10%—decile 3.
- Much below average*—next lowest 10%—decile 2.
- Very much below average*—lowest 10%—decile 1.

Using the above terminology, areas which have annual rainfall in the first decile range may be considered "very much below average", whilst those areas with annual rainfall in the tenth decile range, may be considered "very much above average".

The following table gives the percentage of area of South Australia with annual rainfall in the first decile range, for the years 1885-1965. It will be noted that the index given by the first decile range, is in fair agreement with the major drought periods in South Australia. This shows that in 1959, for example, slightly more than half of South Australia experienced rainfall below the first decile or, in other words, drought conditions.

Year	%	Year	%	Year	%	Year	%	Year	%	Year	%
1885	0	1899	0	1913	4	1927	30	1941	0	1955	0
1886	3	1900	6	1914	29	1928	64	1942	0	1956	0
1887	0	1901	0	1915	40	1929	64	1943	27	1957	13
1888	21	1902	14	1916	0	1930	0	1944	45	1958	0
1889	0	1903	0	1917	0	1931	3	1945	0	1959	54
1890	0	1904	0	1918	34	1932	0	1946	0	1960	0
1891	4	1905	14	1919	19	1933	0	1947	0	1961	70
1892	0	1906	0	1920	0	1934	0	1948	2	1962	0
1893	0	1907	0	1921	0	1935	9	1949	0	1963	2
1894	2	1908	0	1922	0	1936	0	1950	2	1964	2
1895	0	1909	0	1923	0	1937	19	1951	16	1965	34
1896	2	1910	0	1924	10	1938	0	1952	0		
1897	40	1911	0	1925	0	1939	0	1953	0		
1898	2	1912	13	1926	0	1940	50	1954	2		

Major Droughts

Rainfall records in South Australia did not commence until the 1860's, except at Adelaide, where there is a continuous rainfall record since 1839—the longest continuous rainfall record in the Southern Hemisphere. It has been stated that, during the first 20 years of settlement, droughts were scarcely noticeable. This has been attributed to the fact that, in the earliest years, settlers were mostly living in the areas with fairly reliable rainfall. Having regard to this, it is therefore convenient to classify major droughts in South Australia into two periods—pre-1860 and post-1860. In making this classification the first and second deciles were examined—for this reason some of the years listed below appear as 0% in the first decile table.

Major droughts prior to 1860:

- 1839: Severe drought Pt. Lincoln to Pt. Augusta.
- 1845: Drought still persisting (since 1839) but not general.
- 1846: Drought in the far north and interior areas.
- 1851: Drought in eastern district.
- 1859-60: Widespread drought September to March.

Major droughts since 1860:

- 1863-67: Severe drought.
- 1867-69: Severe drought.
- 1876: General drought.
- 1884-1903: One of the worst droughts ever recorded; worst periods 1895-98 and 1901-03.
- 1911-15: Severe drought; lowest wheat yield on record—1.41 bushels per acre in 1914.
- 1913-16: Drought in pastoral areas.
- 1926-30: Severe drought in the interior.
- 1928-29: Severe drought all areas.
- 1939-45: Severe drought all areas.
- 1947-48: Drought in pastoral areas.
- 1958: Drought in the far north.
- 1959: Drought throughout; worst area was the south-east.
- 1961: Drought in the north and west.
- 1965: Drought in the north-east and far west.

The worst droughts, from the point of view of rainfall deficiency, occurred in agricultural areas during the years 1884-86, 1895-98, 1901-03, 1911-15, 1928-29, 1943-46, 1959, 1961, and in pastoral areas during the years 1896-1903, 1913-16, 1926-30, 1939-40, 1943-45, 1959, 1961, 1965.

It should be noted that of these droughts, those of 1895-98, 1901-03, 1911-15, 1928-29, 1943-45, and 1959 affected both agricultural and pastoral areas.

Crop Yields as Drought Index

A useful indicator of the severity of droughts is given by such items as the wheat yield. The lowest wheat yield on record, 1.41 bushels per acre, occurred in 1914, and the second lowest, 1.66 bushels per acre, occurred in 1896, both being severe drought years.

Forecasting

The incidence of droughts shows no regular rhythm as regards time of onset, duration, or the extent of territory affected. This indicates there is little or no prospect of successfully forecasting droughts from an assumed occurrence of rainfall cycles. Years of good rainfall are usually characterised by more frequent occurrence of the typical rain-producing systems, which require an inflow of moist tropical air aloft accompanied by a closed cyclonic circulation in the upper atmosphere. This can occur over a surface anti-cyclone or "high", but is usually associated with a surface "low".

During drought years the upper air is of a predominantly dry continental type which inhibits rain production.

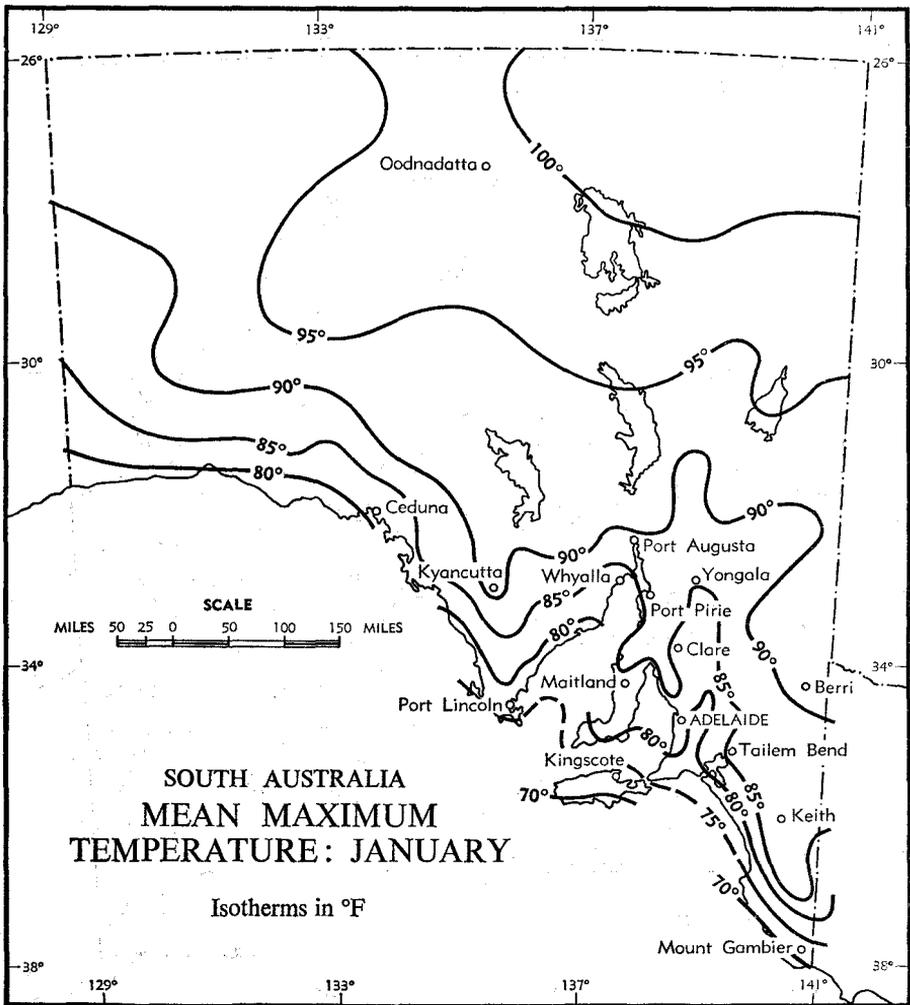
Further details of droughts appear in the Bureau of Meteorology publications "Droughts in Australia" by J. C. Foley (Bulletin No. 43) and "Rainfall Deciles as Drought Indexes" by W. Gibbs and J. V. Mahr (Bulletin No. 48).

TEMPERATURE**Seasonal Temperature Conditions**

Temperature is normally recorded under standard conditions in a Stevenson screen. Isotherms of the average maximum temperatures in a mid-summer month (January) and of the average minimum temperatures in a mid-winter month

(July) are shown on Maps 2 and 3 respectively. The isotherms are more or less parallel to the coastline but the cooling effect associated with higher altitudes of the Mount Lofty and Flinders Ranges is clearly shown.

From December to February it is generally warm to hot throughout the State but sea breezes frequently bring some relief to the coastal districts. In locations more than 50 miles inland maximum daily temperatures usually exceed 90°F and are quite often over 100°F. In general, areas to the north of the 90°F isotherm on the January map average more than 20 days annually during which the maximum temperature exceeds 100°F; while only on the extreme south-east coastal fringe and on Kangaroo Island does the average number of such "century days" fall below five per year. Air masses prevalent at this time of the year are relatively dry and hence cooling during the night is marked—a fall of 20°F to 30°F from day to night is usual, making the nights reasonably pleasant.

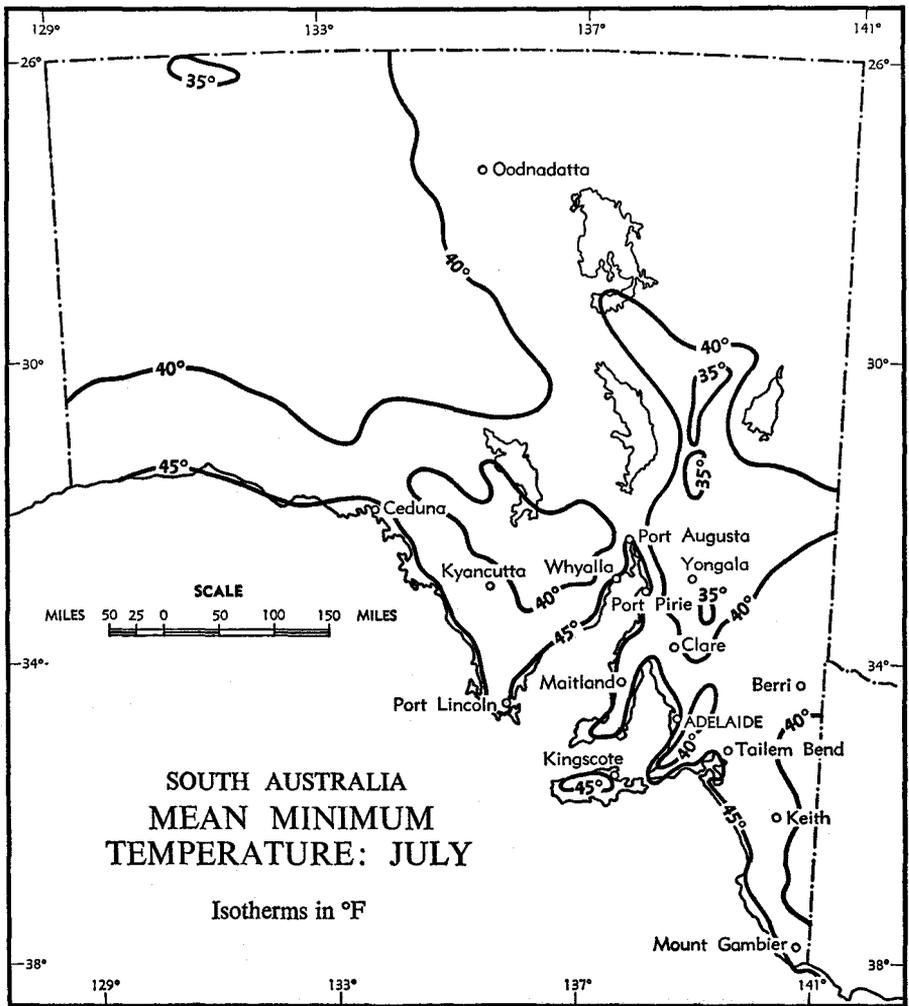


MAP 2

During March temperatures begin to fall and continue to do so during April and May, the first frosts of the year often being experienced during this period. The three coldest months are June, July and August, with the coldest areas along the highlands. In those parts of the State east and south-east of the ranges, the mean temperature for the latter months is near or just below 50°F, and these low temperatures cause vegetative growth to become very slow, although it does not cease altogether.

In the spring months, September to November, with gradually rising temperatures and longer hours of sunshine, crops and pastures grow rapidly. In this period severe frosts are sometimes experienced and these can cause considerable damage to fruit crops during the bud, flower, and small fruit stages.

When a pressure distribution causes very dry and warm air from the rapidly heating interior to flow over the State for two or three consecutive days, developing crops can be seriously affected by the desiccating effect of this air mass.



MAP 3

Mean maximum and minimum temperatures for each month at 17 selected recording stations throughout the State are shown below. These are based on records ranging from 7 years at Maitland to 63 years at Port Augusta.

Mean Maximum and Minimum Temperatures: Selected Stations, South Australia

Recording Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
MEAN MAXIMUM (°F)													
Adelaide	84.8	85.7	81.3	73.0	66.8	61.0	59.9	62.3	66.8	72.5	78.1	82.6	72.9
Berri	87.7	86.3	82.3	72.5	66.3	60.4	59.9	63.4	69.5	74.5	80.7	85.8	74.1
Ceduna	81.5	79.1	79.9	73.5	67.9	64.1	62.6	65.5	69.7	72.9	76.1	80.2	72.7
Clare	84.4	84.9	80.2	70.4	63.0	56.8	55.7	58.6	63.9	70.6	77.0	82.0	70.6
Keith	87.0	82.3	80.9	70.7	64.1	59.3	58.6	61.0	66.7	70.2	76.3	82.1	71.6
Kingscote	72.5	73.0	70.8	66.5	62.7	58.8	57.6	58.2	60.8	64.3	67.6	70.7	65.3
Kyancutta	90.7	88.9	86.4	76.8	70.7	63.8	62.9	65.9	72.0	77.2	83.0	88.4	77.2
Maitland	84.5	85.0	79.0	72.0	65.0	60.0	58.5	61.5	66.0	71.5	77.5	82.0	71.9
Mount Gambier	74.2	75.9	72.7	66.5	61.4	57.0	56.2	58.1	61.1	65.0	68.3	71.9	65.7
Oodnadatta	98.5	96.4	91.4	81.9	73.3	67.1	66.3	70.6	78.8	84.9	91.6	96.9	83.1
Port Augusta	89.5	89.5	85.2	77.4	70.3	63.6	62.8	66.5	72.4	78.3	83.8	87.7	77.3
Port Lincoln	77.4	77.7	74.8	70.3	65.8	61.3	60.2	61.6	64.6	68.2	71.8	75.2	69.1
Port Pirie	89.2	88.8	85.6	76.6	69.2	62.8	61.7	65.0	71.3	76.6	82.6	86.8	76.3
Stirling West	75.6	77.1	73.1	64.3	58.3	52.5	51.3	53.8	58.0	63.1	68.2	72.8	64.0
Tallem Bend	84.5	82.5	79.7	72.0	66.0	56.0	59.8	61.8	67.9	71.0	76.2	81.0	71.9
Whyalla	83.6	84.1	80.6	74.1	68.9	62.9	62.3	64.7	68.9	74.6	78.9	82.8	73.9
Yongala	85.9	85.8	80.7	70.5	62.4	55.5	54.5	57.6	63.8	71.2	78.3	83.5	70.8
MEAN MINIMUM (°F)													
Adelaide	61.0	61.8	59.1	54.4	50.8	46.6	45.4	46.2	48.3	51.7	55.4	58.9	53.3
Berri	59.1	58.9	56.0	50.0	46.0	42.7	41.5	42.6	45.7	49.8	54.0	57.6	50.3
Ceduna	58.8	59.3	56.4	51.0	46.9	43.5	43.8	44.2	47.0	50.0	53.8	57.7	51.0
Clare	56.1	56.7	52.8	46.8	42.6	39.6	38.1	38.9	41.2	45.2	49.9	54.1	46.8
Keith	53.7	52.7	50.2	47.5	44.3	42.5	40.2	41.1	43.3	46.0	48.6	51.9	46.8
Kingscote	58.3	59.5	58.0	54.5	51.9	49.1	47.6	47.3	48.7	50.8	53.7	56.7	53.0
Kyancutta	57.4	56.7	53.7	48.4	44.4	41.2	40.6	41.1	43.3	46.7	51.4	55.3	48.4
Maitland	58.0	58.5	56.5	51.5	47.5	45.0	43.5	44.0	45.0	47.5	51.0	54.5	50.2
Mount Gambier	53.5	54.8	52.4	49.5	46.4	43.5	42.4	53.1	45.1	46.9	49.6	52.0	48.3
Oodnadatta	71.6	71.0	66.0	57.3	49.9	44.3	42.6	44.8	51.3	58.3	64.3	69.7	57.6
Port Augusta	65.3	66.0	62.1	55.7	50.0	45.9	43.9	45.8	49.5	54.8	59.7	63.5	55.2
Port Lincoln	58.5	59.4	57.5	54.1	50.9	48.1	46.4	46.4	47.7	50.1	53.4	56.6	52.4
Port Pirie	62.6	63.1	60.3	54.7	50.6	46.4	45.4	46.3	49.0	52.9	57.5	60.9	54.1
Stirling West	52.0	53.2	50.9	47.2	44.7	41.7	40.7	41.2	43.0	45.1	47.7	50.5	46.5
Tallem Bend	56.2	56.8	53.4	49.2	46.8	42.9	41.5	42.7	44.6	48.0	51.2	54.5	49.0
Whyalla	63.8	65.0	62.0	55.7	50.5	47.0	43.9	45.8	49.5	53.9	58.6	62.1	54.8
Yongala	55.8	56.3	51.7	45.1	40.9	37.6	36.1	36.9	39.4	43.4	49.0	53.7	45.5

The highest temperature ever recorded in South Australia was 123.2° at Oodnadatta on 2nd January 1960, and the lowest 17.4° at Yongala on 16th June 1959.

HUMIDITY

"Relative humidity" at a particular temperature is the ratio of the actual vapour pressure to the saturated vapour pressure (at that temperature) expressed as a percentage. Since relative humidity depends not only on the actual water vapour content of the air, but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours, and conversely, the lowest relative humidity values tend to occur during the warmest part of the afternoons when measurements of under 20 per cent are not uncommon.

The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

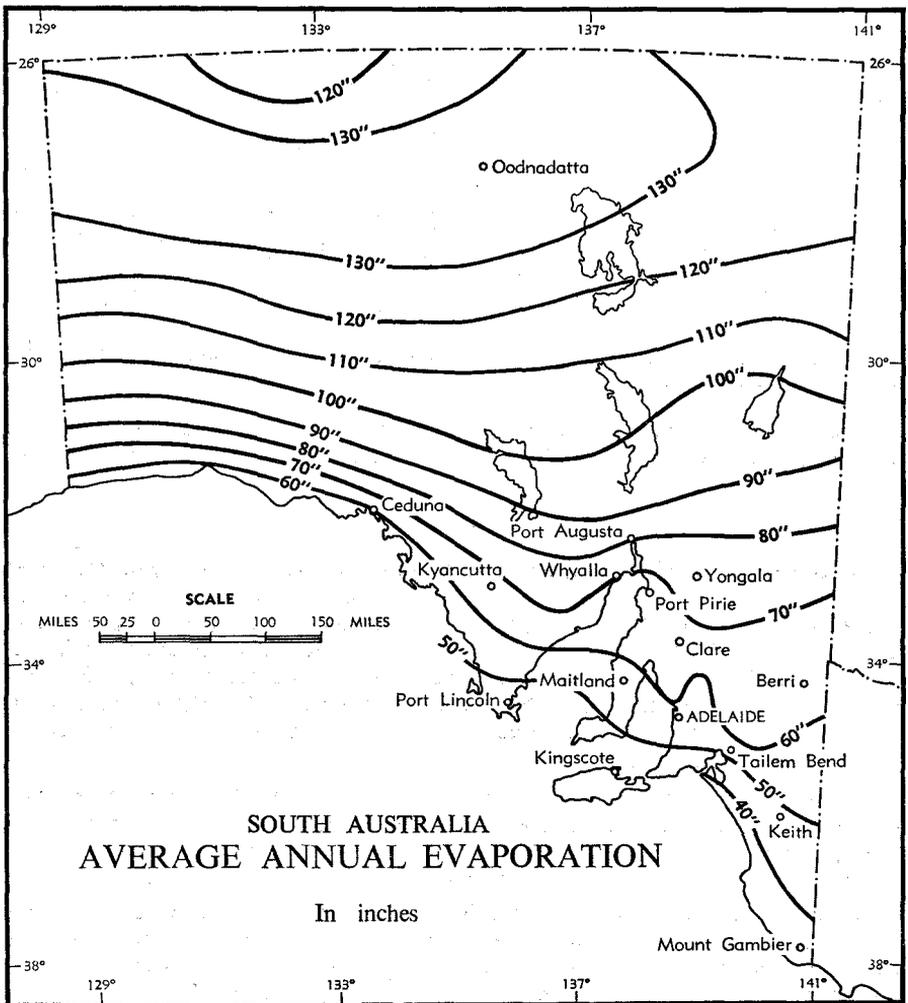
With an average index of mean relative humidity of under 35% in summer increasing to about 50% in winter, the far northern parts of the State experience the lowest values of relative humidity in South Australia. By comparison, most southern parts of the State have an average index of mean relative humidity of about 45% to 55% in summer, increasing to about 70% to 80% in winter.

EVAPORATION

In South Australia most measurements of evaporation have been made with tanks, each 3 feet internal diameter and 3 feet deep, sunk into the soil so that the rim is only an inch or so above the surface.

However, early in 1967 a change-over to the standard American Class A pan was made. These pans, 4 feet in diameter and 12 inches deep, are placed above ground level on wooden stands. Comparative readings are being made between these new pans and the older sunken tanks to determine the differences, if any, between the two methods. Figures for the evaporation for the new pans will not be available for several years.

The annual average evaporation using the sunken tank varies from under 40 inches along the south-east coastal fringe to more than 130 inches over a large area around and to the west of Oodnadatta in the far north (see Map 4). About half the area of the State has an evaporation rate exceeding 100 inches



per annum, and this high rate is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 6 inches. A critical survey of the evaporation network and methods of observation, together with tabulations of the results of Australian observations appears in the Bureau of Meteorology publication "Evaporation in Australia" (Bulletin No. 44).

SUNSHINE AND CLOUD

The annual average sunshine total (as determined from records of sunshine and average cloudiness) ranges from about 2,000 hours along parts of the southern coastal fringe to 3,500 hours near the northern border of the State. Adelaide has an average of 2,508 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about 10½ hours over interior districts. During the June and July winter months daily averages are still as high as 7 hours in the far north interior, but over the southern coastal fringe the daily average of just over 8 hours for summer is reduced to about 3 hours during winter.

WIND

During the summer months winds from the southern quadrants are the most prevalent and a well defined sea breeze is common along the whole of the coastal fringe from October right through to about April and May. During the winter months the north-westerly predominates, but the proportion of west to south-west winds is also relatively high.

South Australia is not subject to the type of sustained wind storms associated with tropical cyclones as in Queensland and tropical Western Australia. However, gales do occur from time to time along the coast during the winter and cause minor damage to buildings and foreshore works. Probably the most noteworthy storm was on 11th April 1948, when the wind averaged over 40 m.p.h. for six hours in central and south-eastern districts, and the naval frigate *Barcoo* was grounded at Glenelg.

Most violent wind squalls are associated with thunderstorms and usually last only a few minutes. It was during such squalls that the highest wind gusts were recorded in South Australia—92 m.p.h. at Leigh Creek on 3rd December 1953, and also at Adelaide on 13th July 1964.

CLIMATE OF ADELAIDE

The longest continuous series of weather observations in the Southern Hemisphere started in Adelaide in November 1836, when Sir George Kingston commenced rain gauge readings at his property on the corner of Grote Street and West Terrace. Unfortunately, the earliest figures were mislaid and records are available only from the beginning of 1839.

No other regular observations were made until Sir Charles Todd arrived to fill the post of Superintendent of Telegraphs and Government Astronomer in 1856. During the first year or two observations were made at his private residence in Adelaide, and for some months, in Government House grounds. In May 1860, the Observatory on West Terrace was completed and the instruments were moved to that site.

Temperature records at Adelaide date back to 1858 when readings were first taken from a thermometer placed in a screen known as a Greenwich Stand which failed to protect the thermometer fully from reflected radiation. In 1887 a new series of readings using a standard Stevenson Screen was introduced

and this showed maximum temperatures during the warmer months to be slightly lower on average, although most readings were not significantly affected. Both screens were in continuous operation until 1948 when use of the Greenwich Stand was discontinued.

For over 100 years the observational site at Adelaide has remained practically unchanged. Minor shifts occurred in 1940 and 1962 but these were within 100 yards of the original observatory site.

Adelaide is the driest of Australia's capital cities, having less rainfall and a lower relative humidity than any other capital. Summer maximum temperatures are high and the record of 117.7°F in the Greenwich Stand on 12th January 1939 is the highest recorded in any of the capital cities.

Temperature

In the summer months, maximum temperatures frequently exceed 90°F and from time to time "heat waves", with readings at or near 100°F for several consecutive days, are experienced. The outstanding heat wave was in January 1939 when the record temperature of 117.7°F was recorded and 14 days out of 15 exceeded 90°F.

July is the coldest month, when the mean maximum is only 59°F with the extreme lowest minimum being 32°F on 24th July 1908. August is only slightly warmer than July, but after August steadily rising temperatures are experienced during the spring months.

Rainfall

Adelaide's summer rainfall is light and unreliable. The average fall in each month from January to March is under 1 inch and completely rainless months in this period are not uncommon. In fact, each of the 5 months December to April has at some time been recorded as completely dry, and in the period January to March 1893, there were 69 consecutive rainless days. On the other hand, heavy rain is occasionally experienced at this time of the year and on 7th February 1925, rainfall was 5.57 inches—a record for one day. Each month from May to September averages over 2 inches and in this period the rain is fairly reliable. June is the wettest month, but the average is still under 3 inches for the month. The 128-year annual rainfall average is 20.86 inches, and over the period annual totals have ranged from a low of 11.32 inches in 1959 to a high of 30.95 inches in 1851.

Other Conditions

Relative humidity in Adelaide is the lowest of all capital cities in Australia and is at its lowest in January, when the average 9 a.m. reading (which approximates the average for the whole 24 hours) is 39%. This low value of the relative humidity explains why the summer in Adelaide, even during a heat wave, is not unduly severe for personal comfort. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching as high as 75% in June and July.

Adelaide is not subject to violent sustained wind storms. The prevailing wind during the day in summer is a south-westerly sea breeze which is well defined throughout the months October to April. Another common wind during summer, known locally as the "gully wind", blows from the east or south-east out of the Adelaide hills (more particularly at night) and becomes very strong and gusty at times. In winter the prevailing wind during the day is north-westerly with a high proportion of south-westerlies.

Climatological Data, Adelaide

(1) Temperature and Relative Humidity

Month	Temperature					Relative Humidity (9 a.m.)		
	Maximum		Minimum		Mean	Mean	Highest Monthly Mean	Lowest Monthly Mean
	Mean	Highest Recorded	Mean	Lowest Recorded				
Years of Record	110	110	110	110	110	99	99	99
	°F	°F	°F	°F	°F	%	%	%
January ..	85.5	117.7	61.4	45.1	73.4	39	59	29
February ..	85.0	113.6	61.7	45.5	73.3	43	57	30
March	80.6	110.5	59.0	43.9	69.8	47	58	29
April	72.8	98.6	54.5	39.6	63.7	56	72	37
May	65.7	89.5	50.4	36.9	58.0	67	76	49
June	60.5	78.1	46.8	32.5	53.7	75	84	63
July	58.9	74.0	44.9	32.0	51.9	76	87	66
August	61.7	85.0	46.0	32.3	53.8	70	78	54
September ..	66.2	95.1	48.1	32.7	57.2	60	72	44
October	71.8	102.9	51.5	36.1	61.7	51	67	29
November ..	77.6	113.5	55.2	40.8	66.5	44	58	31
December ..	82.3	114.6	58.8	43.0	70.6	40	56	31
Year ..	72.4	117.7	53.2	32.0	62.8	53	87	29

(2) Rainfall and Wind

Month	Rainfall				Wind			
	Mean	Highest During Period	Highest in One Day	Mean Days of Rain	Average Speed	Highest Gust	Prevailing Direction	
							9 a.m.	3 p.m.
Years of Record	128	128	128	128	15	50	50	50
	In.	In.	In.	No.	M.P.H.	M.P.H.		
January ..	0.76	3.31	2.30	4	7.8	72	SW	SW
February ..	0.76	6.09	5.57	4	7.5	66	NE	SW
March	0.95	4.59	3.50	5	6.9	78	S	SW
April	1.72	5.81	3.15	10	6.9	81	NE	SW
May	2.71	7.75	2.75	13	7.0	70	NE	NW
June	2.90	8.58	2.11	15	7.4	67	NE	N
July	2.61	5.44	1.75	16	7.3	92	NE	NW
August	2.44	6.20	2.23	16	7.9	75	NE	SW
September ..	2.01	5.83	1.59	13	8.0	69	NNE	SW
October	1.74	4.25	1.24	11	8.4	75	NNE	SW
November ..	1.22	4.45	2.96	8	8.4	81	SW	SW
December ..	1.04	3.98	2.42	6	8.2	75	SW	SW
Year ..	20.86	30.95	5.57	121	7.6	92	NE	SW

(3) Other Conditions

Month	Mean Daily Sunshine	Clear Days (b)	Mean Amount of Cloud (c)	Days of Fog	Days of Lightning	Amount of Evaporation	Vapor Pressure 9 a.m.	Mean Barometric Pressure (d)
Years of Record	85	30 (a)	30 (a)	67	95	95	30 (a)	110
	Hours	No.		No.	No.	In.	In.	Mb.
January ..	9.9	12.9	3.6	0.0	2.2	9.29	0.327	1,013.3
February ..	9.3	11.2	3.7	0.0	1.5	7.52	0.352	1,014.3
March	7.8	10.6	4.0	0.0	1.8	6.26	0.332	1,017.2
April	5.9	7.2	5.2	0.0	1.5	3.78	0.329	1,019.9
May	4.7	4.9	5.8	0.4	1.6	2.30	0.313	1,020.1
June	4.1	4.1	6.1	1.1	1.5	1.47	0.294	1,019.7
July	4.3	4.3	6.0	1.3	1.5	1.47	0.282	1,019.9
August	5.2	5.6	5.5	0.6	1.8	2.09	0.282	1,019.1
September ..	6.1	5.8	5.3	0.2	1.8	3.18	0.289	1,017.6
October	7.1	5.7	5.3	0.0	2.7	5.03	0.287	1,015.9
November ..	8.5	7.2	4.9	0.0	3.0	6.78	0.292	1,015.1
December ..	9.4	9.5	4.2	0.0	2.2	8.62	0.322	1,013.3
Year ..	6.9	89.0	5.0	3.6	23.1	57.79	0.308	1,017.1

(a) Standard 30-year normal, 1911-40.

(b) With less than two-tenths cloud.

(c) Scale 0 (clear) to 10 (overcast) at 9 a.m., 3 p.m. and 9 p.m. daily.

(d) Mean of 9 a.m. and 3 p.m. readings corrected to sea-level.

WEATHER CONDITIONS IN SOUTH AUSTRALIA—1965 AND 1966

Several weather records were established in this period, particularly the summer of 1964-65. General comments on the weather in each season are as follows—

Summer 1964-65

Average temperatures for December were among the lowest on record in many areas. This was particularly so in Adelaide, where the mean maximum for the month was an all-time low of 70.5°F (12°F below normal), and not one day had a maximum as high as 90°F. The month was exceptionally cloudy and in Adelaide the sunshine total of 187.5 hours (104.9 hours below normal) was the lowest in all 83 years of record. However, progressively warmer conditions were experienced during January and February, and a serious fire broke out in the Clare-Mintaro area on 21st February.

Not a single station in the State received above-normal rains during the three summer months. In fact, during January and February no rain was recorded at all at many places. The Adelaide January to March rainfall total of 46 points was not only typical of the dry start to the year, but was also the lowest first-quarter total in the 127 years of Adelaide record.

Autumn 1965

Average autumn temperatures were generally close to normal.

Rainfall was well below normal for March and April. However, most gaugings for May were above average in the cereal-growing areas, thereby enabling the major seeding operations to commence. No rain of any significance was recorded in the drought-affected northern pastoral areas during the autumn.

Winter 1965

Day temperatures were well below normal throughout most of the winter. Cold, frosty nights were also common during June and July, but the frost incidence decreased very markedly during the August period.

Winter rains were experienced over the whole State. In the drought-affected northern pastoral areas, rainfall was generally above average with best falls occurring during August. In the agricultural districts, aggregate winter rains were generally just below normal.

Snow was reported along parts of the Mount Lofty and Flinders Ranges on 22nd June.

Spring 1965

Temperatures were generally about normal except during October when several record high temperatures were experienced, particularly near the end of the month when many centres reported century readings.

The major portion of the settled areas had poor rains. Parts of the north-west interior received near normal falls, but rainfall in the remainder of this area and also in the north-east corner of the State was far below normal, and these areas were badly drought-affected at the end of the year.

The year 1965 was characterized by frequent intense dust storms over northern parts of the State. Annual rainfall was below average in all areas and the Adelaide total of 1,334 points was the third lowest ever recorded.

Summer 1965-1966

Rainfall was variable, with greatest deficits in the interiors and most of the coastal area. Heaviest excesses were in the eastern parts, about the Murray Valley and Murray Mallee.

Temperatures were about normal for the whole State.

Only one serious fire was reported. This was in the Adelaide Hills, where 2,000 acres were burnt.

Autumn 1966

Rainfall was generally below normal throughout the State, apart from the western districts, which showed a surplus.

Temperatures were about normal. A few early season frosts were recorded in April.

Winter 1966

Rainfall over most of the State was near to or above normal. The main exception was the north-eastern parts of the State, where a deficit was recorded. This area was still under the influence of the drought.

Temperatures were below normal over most of the State, by one to three degrees, even though there were no cold spells during the season.

Spring 1966

Spring rains were below normal over all the State except for a coastal strip in the western and south-east districts. The eastern parts of the State were very dry, with some parts receiving only half their normal rain.

Temperatures on the whole were about normal for the State. A widespread warm spell at the end of November, helped push mean maxima above normal.

1.3. NATURAL RESOURCES

MINERALS

Iron ore, South Australia's most important mineral, is found in the Middleback Ranges of upper Eyre Peninsula. These ranges which lie to the west of the port of Whyalla and extend discontinuously with broad erosion gaps, from Iron Knob in the north to Iron Duke in the south, a distance of nearly 40 miles, are composed primarily of iron-rich rocks and contain the only known deposits of high grade ore in the State. Several deposits of low grade ore have been located on lower Eyre Peninsula.

Barite (barytes) occurs throughout the Adelaide System rocks, in the Mount Lofty and Flinders Ranges, in the Olary district and elsewhere.

By far the largest part of Australian reserves of gypsum are located in South Australia. The deposits have in general been formed in coastal basins, the

largest of these occurring at Lake MacDonnell, Stenhouse Bay and on Kangaroo Island. Other deposits, mainly of seed gypsum, are found inland at Moonabie, Lake Fowler, Cookes Plains and along the River Murray.

Conditions in South Australia are ideal for the production of salt from the gulf waters by solar evaporation. Salt is also obtained from certain shallow lakes, in particular from Lake Bumbunga and Lake Fowler.

Proven opal deposits exist at Andamooka and Coober Pedy; however, the extent of opal fields is not known as there has been no systematic exploration.

Although of little economic significance until recently, there has long been known to exist in the vicinity of Nairne an enormous body of iron pyrite.

South Australia supplies the bulk of Australia's talc requirements, the principal occurrences being at Mount Fitton, in the northern Flinders Ranges, and in the Gumeracha district. Other deposits occur at Tumby Bay and in the Barossa Valley near Lyndoch and Williamstown.

Sub-bituminous coal is found at Leigh Creek in the far north and several lignite deposits are known at Moorlands and in the Inkerman-Balaklava area.

Limestone and dolomite together form one of the State's most abundant natural resources. The principal deposits are—limestone at Rapid Bay, Penrice, Angaston and Klein Point, lime sand at Wardang Island and Coffin Bay, and dolomite at Ardrossan.

South Australia possesses a wide variety of clays including a number of special varieties, the most noteworthy being ball clay at Woocalla, china clay at Mount Crawford and fire clay at Birdwood, Littlehampton, Tea Tree Gully, Booleroo Centre and Lincoln Gap.

In the past, deposits of other minerals have been discovered and exploited until the fields were worked out. Easily the most important of these minerals was copper ore, found initially at Kapunda and at Burra in the 1840's and later (and more extensively) in the Moonta-Wallaroo area. These fields played an important part in the development of the colony in the 19th century. Uranium deposits were worked extensively at Radium Hill in the 1950's, while less important deposits of gold, silver-lead ores and manganese ore have been exploited over past years.

The finding of natural gas at Gidgealpa is probably the most exciting of the State's recent mineral discoveries, while elsewhere the presence of molybdenite, nickel and further lead ore deposits has been recorded.

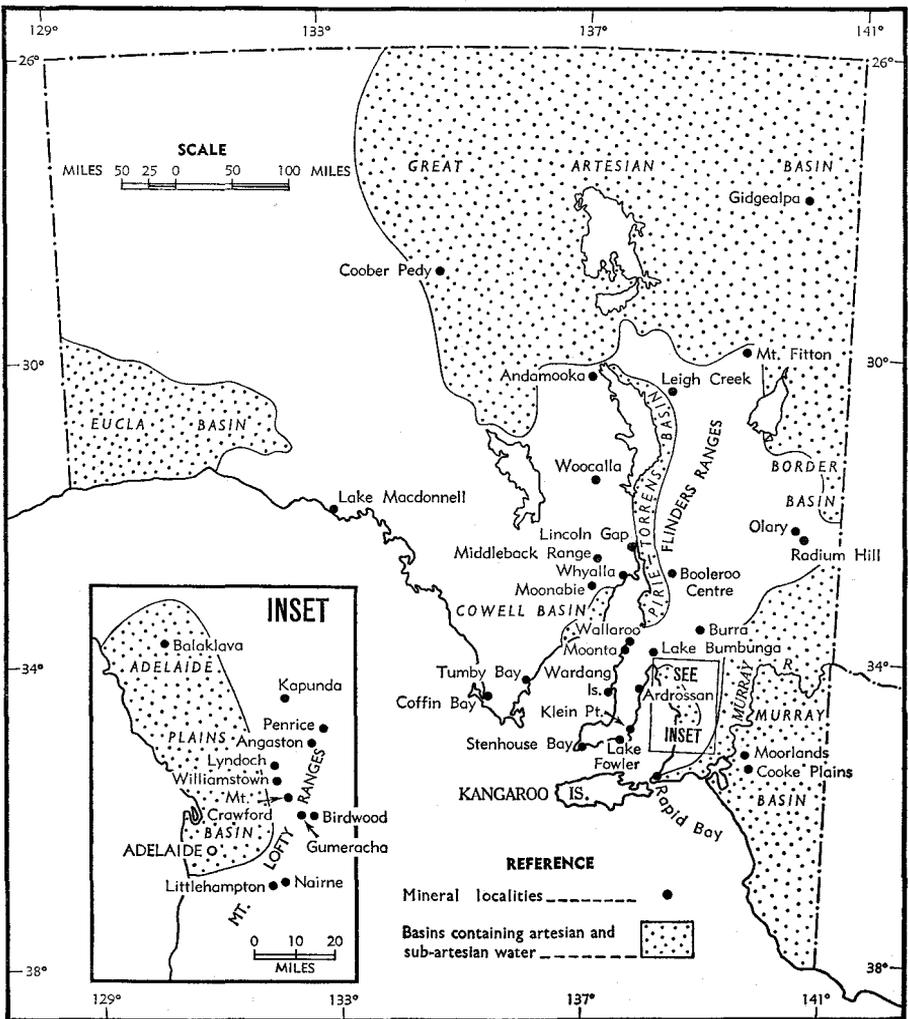
Locations of mineral deposits referred to above are shown on Map 5 on page 21.

UNDERGROUND WATER

With no permanently flowing rivers other than the Murray, South Australia is forced to conserve as much of the somewhat meagre rainfall as possible. A considerable area is served by pipeline reticulation from reservoirs and the River Murray but many country towns, farms and pastoral areas depend upon underground water.

Artesian water is available in many areas. In the north-east a portion of the Great Artesian Basin occupies one quarter of the State, and settlement in this area is very largely dependent on the presence of underground water. On the New South Wales border, north-west of Broken Hill, is a sub-artesian basin (*i.e.* where the assistance of pumping is required) much of which overlies the Great Artesian Basin. Artesian water of variable quality is found in a basin extending from Port Pirie to the northern end of Lake Torrens. Water in the southern part of the Pirie-Torrens Basin is suitable for domestic use, as is that of the Adelaide Plains Basin which lies further south on the eastern coast of Gulf St

SOUTH AUSTRALIA
MINERAL RESOURCES AND
ARTESIAN WATER



MAP 5

Vincent. Most of the latter basin is sub-artesian, although flowing supplies are obtained in areas adjacent to Adelaide. Artesian water suitable for domestic use is obtainable in many areas between the River Murray and the south-east corner of the State. In other areas of the Murray Basin, which extends east to the Mount Lofty Ranges and almost as far north as Broken Hill, good stock water is obtainable by pumping. Approximately 20,000 square miles of the Eucla Basin of the Nullarbor plain lie in South Australia. The water of this basin is highly saline but much can be used for stock. Extreme salinity renders all but limited areas of the Cowell Basin, on the west coast of Spencer Gulf, unsuitable for economic use.

In addition to these artesian areas, supplies of groundwater are known and utilized in many parts of the State. Much of the extensive reticulation of Eyre Peninsula is dependent on such supplies.

It is estimated that the usage of underground water in South Australia exceeds 100 million gallons per day for all purposes. The exploration and development of underground water resources is a continuing responsibility of the Department of Mines which provides the services of geologists and an extensive drilling organization.

SOILS

General

There are many kinds of soils in South Australia ranging from free-flowing sands such as the coastal dunes, to the shrinking and swelling clays of which good examples are found near Bordertown and Tanunda, whilst some show a marked texture contrast with depth, such as the sand over clay soils of the South-East. Not only do these soils differ in their visible attributes, such as their colour, texture, stoniness and degree of slope, but also in the properties, largely unseen, of their chemistry, their relations to air and water, and to the micro-organisms which form the soil flora and fauna.

Undoubtedly the most widespread deficiency is phosphorus. Low phosphorus contents are typical of South Australian soils. The gravelly ironstone soils of Kangaroo Island and parts of the Adelaide Hills are among the most impoverished in the world, containing only between 5 and 40 parts per million of phosphorus in their surface soils, whereas the red-brown earths in their natural state contained 200 to 300 parts per million. These figures do not compare favourably with those for the soils of Great Britain, in which 600 parts per million of phosphorus is common. However, soils are changed by the treatment they get, and the phosphorus contents of some areas of some soils have been so built up over the years that their residual effect is now sufficient to produce a good cereal crop without the further addition of superphosphate.

On the other hand, prolonged clean cultivation in vineyards and frequent cropping in wheatland areas causes deterioration of the structure of surface soils and depletion of nitrogen. The latter deficiency can be remedied by the proper use of legumes, such as medics and clovers, during the pasture phase of the crop rotation in wheatlands. Nitrogen is one of the most mobile of the nutrient elements in soil and is highly susceptible to differences in management.

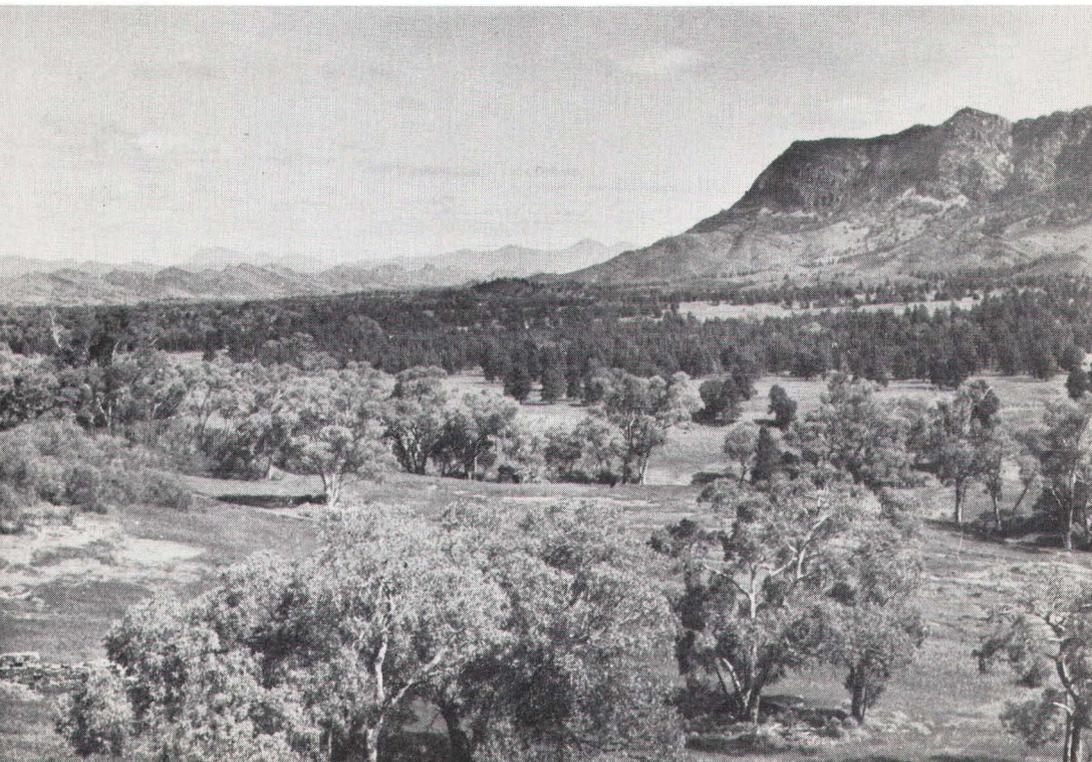


T. R. N. Lothian

Coastal—*Calocephalus brownii*, *Poa* and *Festuca* species leading to sand dune with *Atriplex*, *Olearia*, *Acacia* and *Eucalyptus* species. Emu Bay, Kangaroo Island.

Savannah woodland—*Callitris* (Native Pine) with *Eucalyptus camaldulensis* (River Red Gum) lining creeks. Aroona Valley with Mount Hayward on right and Wilpena Pound in distant centre.

T. R. N. Lothian



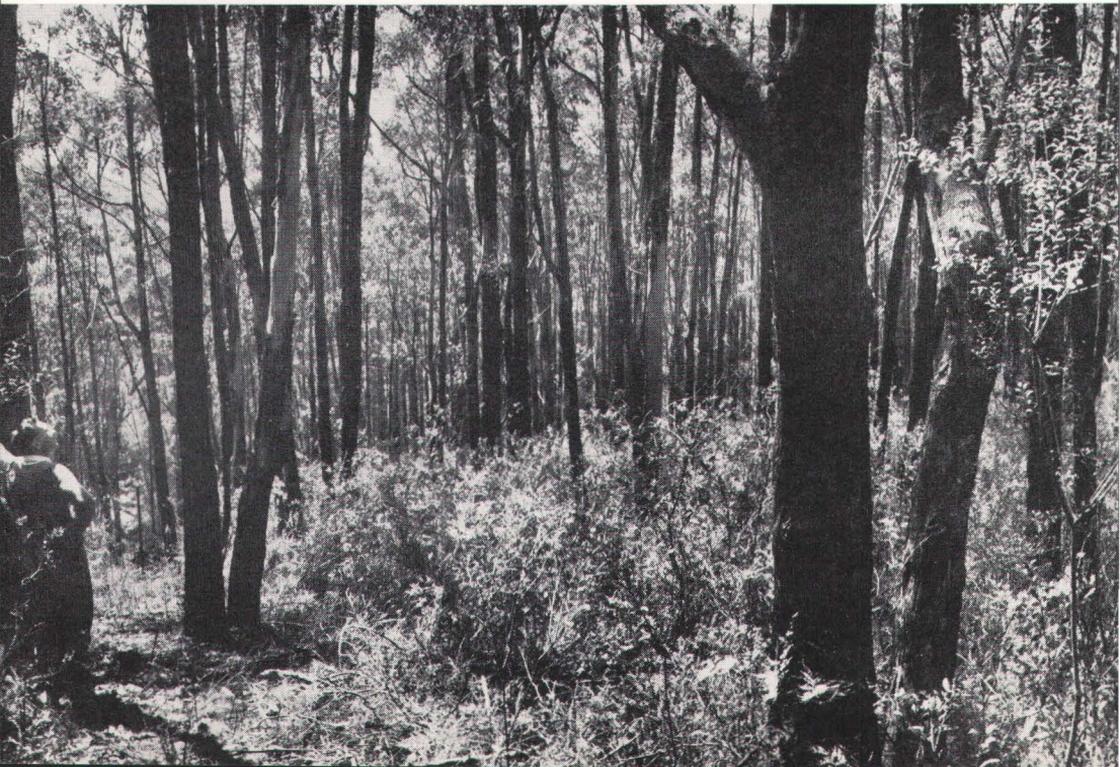


T. R. N. Lothian

Savannah woodland—*Eucalyptus leucoxylon* (South Australian Blue Gum) now devoid of ground cover as result of grazing. Above Devil's Elbow, Mount Lofty Ranges.

Dry sclerophyll forest formation—*Eucalyptus obliqua* (Stringy Bark) with dense under-storey. Mount Lofty.

T. R. N. Lothian



Some soils which seem to be unique to Australia, such as the mallee soils or calcareous earths are well represented in this State. The irrigated horticultural settlements established on them along the River Murray have been notably successful, but they are susceptible to wind erosion where dry land arable farming is practised.

It is not possible in this limited space to discuss or describe many important features that affect plant growth, such as acidity and alkalinity, supply of trace elements and so on. Information about these and their importance in different localities can be obtained from the South Australian Department of Agriculture. The Department has recently published a bulletin entitled "Soils of South Australia's Farm Lands." The extent of country covered by the different soil groups is illustrated by the Atlas of Australian Soils which is being compiled by the Division of Soils, C.S.I.R.O. The first sheet of this atlas, published in 1960, includes the areas of higher rainfall country in South Australia, and refers to the many soil surveys made in this State.

Building Soils

The building soils of Adelaide and environs are of varying qualities as to stability and bearing capacity. In certain locations shrinking and swelling soils have resulted in considerable foundation failures. These soils, commonly known as Bay of Biscay soils, occur at their worst in areas adjacent to the Mount Lofty Ranges. The best building soils are found in areas along the coast and in a small area to the east of the city.

1.4. FLORA AND FAUNA

FLORA

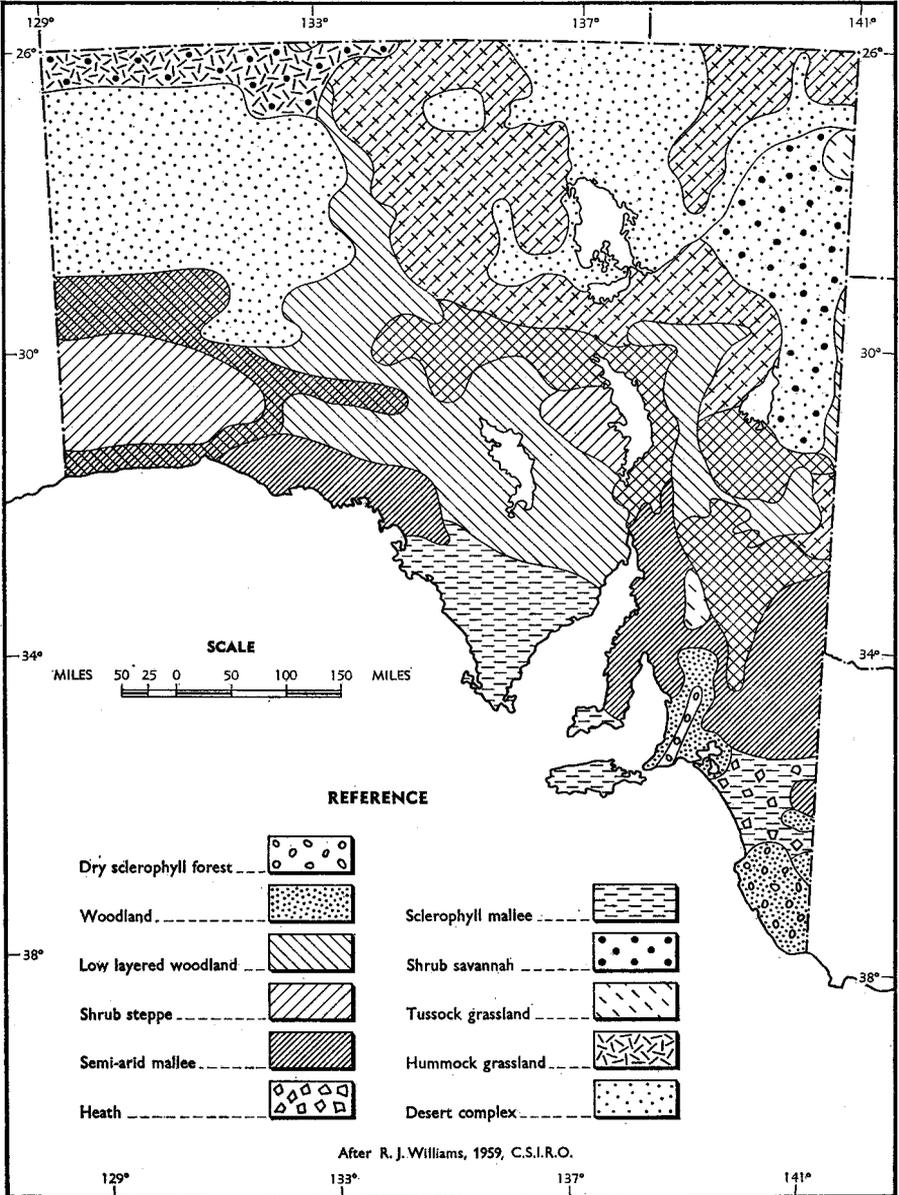
Australia climatically is recognized as having an arid centre surrounded by irregular concentric bands of gradually increasing rainfall, brought about by geographical features or general climatic factors. Rainfall, together with soil types and their nutritional level, influences vegetation, which is also controlled not so much by the total rainfall, but the effective rainfall and evaporation rates. This results in what is called "the growing season".

Apart from physical factors (generalized above), another influence on vegetation is its source which is affected by the geological history of the region.

The vegetation of any region can be examined on two broad fronts:

1. Floristics, or nature of the flora, *i.e.* the individuals or species.
2. Plant communities, or the way plants grow together.

SOUTH AUSTRALIA
VEGETATION MAP



MAP 6

NATURE OF THE FLORA

The flora of Australia has been derived from three main sources.

- (1) Paleotropic—which includes plants akin to those of the Indo-Malaysian rain forests and the wide-spread genera of the old world tropics, *i.e.* *Atriplex* (Saltbush) and *Kochia* (Bluebush).
- (2) Southern or Antarctic—includes typical genera, such as the Southern or Antarctic Beech, *Nothofagus*, *Coprosma*, etc., and Conifers, such as *Araucaria*, *Dacrydium*, *Phyllocladus* and *Podocarpus*.
- (3) Native or Australian Element—*i.e.* those genera which have developed in and reached their maximum distribution over Australia. These include *Eucalyptus*, the phyllodinous or leafy Wattles *Acacia*, *Banksia*, *Grevillea*, *Hakea*, *Callistemon*, *Melaleuca*, *Thryptomene*, *Verticordia*, *Pultenaea*, *Goodenia*, and *Eremophila*.

The Australian floral elements appear to have developed in two main centres:

- (a) South-west Western Australia—the only area where a considerable number of the genera and species are found (endemics) such as *Dryandra*, *Isopogon*, *Lechenaultia*, *Verticordia*, *Anigozanthos*, *Goodenia*, *Stylidium*, *Calothamnus*, *Eremophila*, *Grevillea*, *Hakea* and a number of very remarkable *Eucalyptus*.
- (b) South-eastern Australia where both the geological history and the occurrence of exotic plants have been influential.

Genera include *Grevillea*, *Hakea*, *Banksia*, *Boronia* (all of which are found in south-west Western Australia also), *Eucalyptus*, mainly tall tree species, *Pterostylis* and other orchid genera, *Pimelea*, *Epacris* and *Spyridium*.

South Australia, because of its long and unsettled geological history, is very poor in endemics which occur mainly on Kangaroo Island—of the present South Australian flora about 80% is found elsewhere.

The State flora can be divided readily into northern and southern elements using Goyder's Line, which approximates the ten-inch isohyet and the southern limit of Bluebush, *Kochia*.

The first Professor of Natural History of the Adelaide University, Professor Ralph Tate, divided South Australia into two main botanical provinces:

- (1) Northern or Eremaean (desert division) province.
- (2) Southern or Euronotian province.

Of the plants of the northern province approximately two-thirds are of exotic genera and one-third Australian genera, whereas the position is reversed in the southern province. Genera of the northern province include *Acacia*, *Atriplex*, *Bassia*, *Blennodia*, *Eremophila*, *Helipterum*, *Kochia*, *Ptilotus*, *Swainsona*, etc. In the southern province the common genera are *Acacia*, *Boronia*, *Correa*, *Dillwynia*, *Spyridium*, *Epacris*, *Eucalyptus*, *Olearia*, *Pultenaea*, *Pterostylis*, *Caladenia*, while species of Australian genera, *e.g.* *Grevillea*, *Hakea*, *Melaleuca* and *Prostanthera* are almost equally divided in their occurrence over the two provinces.

A traverse of South Australia from the higher to the lower rainfall region shows clearly that the genus *Eucalyptus* prefers the better-watered regions. On the other hand, the leafy or phyllodinous section of *Acacia* is wide-spread throughout South Australia. In the northern province they form scrub or woodland in occurrence with *Cassia* and *Eremophila* species (spp.).

The history of botany, and in particular plant collecting in South Australia has been excellently covered by the late J. M. Black.⁽¹⁾ However, it is worth noting that in addition to work proceeding at scientific institutions, such as the Botanic Garden and its State Herbarium, the Botany Department of the University of Adelaide, and the Waite Agricultural Research Institute, there is a number of dedicated amateur botanists, all of whom are adding to our knowledge.

When Robert Brown started collecting native plants in 1802, the flora of the State was free from introduced or foreign plants. During colonization, land exploration and subsequent utilisation, plants from overseas, were either accidentally or deliberately introduced with seeds of fodder or arable crops and more recently, seeds, plants and bulbs were introduced by man for his use and pleasure. Many have escaped and become naturalised as weeds often suppressing the native vegetation, e.g. *Chrysanthemoides monolifera* (Necklace Plant), *Homeria* spp. (Cape Tulip), *Echium lycopsis* (*plantagineum*) (Paterson's Curse or Salvation Jane).

Today the South Australian indigenous flora totals 618 genera from 125 families and comprises 2,350 species. Of this total 296 species are endemic and in addition there are 62 endemic varieties. A further 669 species of introduced plants have colonised various parts of the State and are now regarded as naturalised.

VEGETATION

Where a number of different plant species occupies a particular habitat, collectively they are known as a plant community. These communities differ in many ways and can be classified into broad groups or formations, which can be separated into smaller units. A study of plant communities indicates that climate, length of growing season, soil types and their nutritional level, all influence the composition of the resulting associations.

Rainfall is of prime importance. Because 83% of South Australia receives less than ten inches of rain per annum, and a further 10% receives between 10-15 inches per annum (coupled with evaporation rates of greater than 70 inches per annum and summer maxima of greater than 90°F.), the major portion of the plant communities are capable of withstanding arid conditions. Total rainfall in itself is an insufficient measure, the major influences are effective rainfall, evaporation and soil types. Prescott, Wood, Specht and others have shown how these factors affect the vegetation by measuring the amount of water available, which determines the "growing season". The formula used is $P/E^{0.75}$ (where P is the amount of rainfall at any period and E is the amount of evaporation). This equation is relative to southern Australia. Where the monthly value is 0.4 or greater, sufficient moisture is present to support active plant growth.

South Australia's annual rainfall increases from a variable 5-8 inches per annum in the arid zone, to more than 40 inches in the Mount Lofty Ranges. The growing season within South Australia varies from less than one month in the desert zone to more than nine months in the better-watered parts of the State (e.g. Mount Lofty Ranges).

(1) Black, J.M. *Flora of South Australia*. 2nd ed. Part 1, Government Printer, Adelaide, 1943, pp. 7-10.



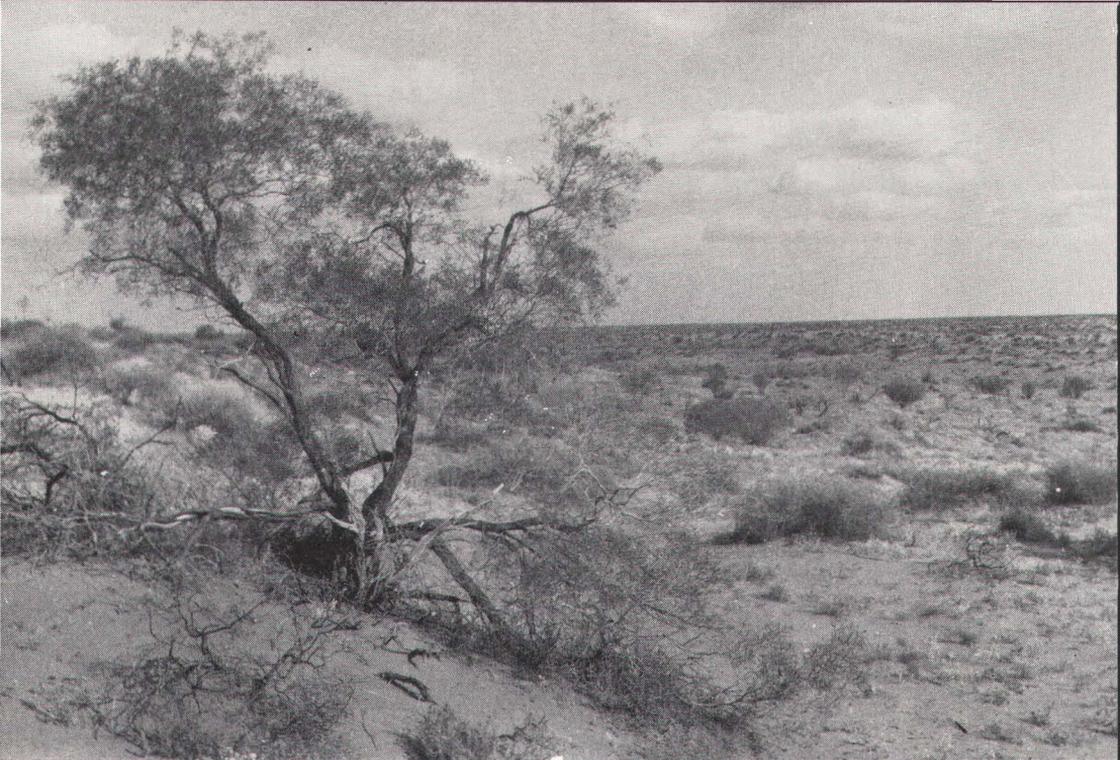
T. R. N. Lothian

Sclerophyllous mallee Form A—*Melaleuca uncinata* (Broom Bush) with dense under-storey of *Eriostemon*, *Grevillea*, *Hibbertia*. Gammon Ranges looking east down Main Water Pound.

Mallee sub-formation—*Eucalyptus gracilis*, *E. oleosa* and *Cratystylis*, *Atriplex*, *Cassia* species. Eyre Highway 60 miles west of Penong.

T. R. N. Lothian





T. R. N. Lothian

Desert complex—*Acacia ligulata*, *Cassia* and *Eremophila* species. Simpson Desert (Western Region).

Shrub steppe formation—*Atriplex* (Bluebush). On Corunna Station, north-west of Port Augusta.

S.A. Govt Tourist Bureau



The following table prepared by Wood shows the accepted broad plant forms and their relation to rainfall, length of growing season and soils, whilst the distribution of the main vegetation formations is shown in Map 6 on page 24.

Vegetation and Environmental Factors^(a), South Australia

Plant Formation	Approximate Limits of Mean Annual Rainfall	Approximate Length of Growing Season	Soils	Relative Nutrient Status of Soils
	Inches	Months		
Sclerophyll	25-45	>9	Podsols and residual podsols	Low
Savannah woodland	15-30	7-9	Red-brown earth, terra rossa	Moderate
Sclerophyllous mallee	15-20	7-9	—	Very low
Mallee heath	15-20	7-9	Solonized clay with increasing depth of sand	Very low
Heath	15-20	7-9	—	Very low
Mallee	10-15	5-7	Solonized brown	Moderate
Low-layered woodland	5-10	1-5	Desert loam	Moderate
Shrub steppe	5-10	1-5	Desert loams, solonized brown	Moderate
Desert complex	<8	<1	Various, chiefly sand	Low

(a) "Introducing South Australia", 1958, edit, R. J. Best prepared for A.N.Z.A.A.S., p. 89.

There are twelve major formations found within South Australia, which are in turn sub-divided into many smaller units or associations. The following occur in the high to moderate rainfall zone:

- Coastal.
- Savannah woodland.
- Dry sclerophyll forest formation.
- Tussock grassland.
- Sclerophyllous mallee Form A.
- Sclerophyllous mallee Form B.
- Mallee sub-formation.
- Aquatic and swamp.

while the following occur in the arid zone:

- Low-layered or arid woodland.
- Shrub steppe formation.
- Desert complex.
- River, lake and swamp formations of arid regions.

MODERATE RAINFALL ZONE

Coastal

The coastline of South Australia includes limestone cliffs, sand dunes, mud flats and salt marshes, and marine meadows.

The cliff vegetation comprises mainly shrubs and persisting herbaceous species including the following: *Disphyma australe*, *Zygophyllum* spp., *Scleranthus pungens*, *Enchylaena tomentosa*, *Rhagodia baccata*, *Tetragonia implexicoma*, *Muehlenbeckia adpressa*, *Beyeria leschenaultii*, *Goodenia varia*, *Eutaxia microphylla*, *Correa* spp., etc.

On the cliff tops, shrubby plants are to be found. These include *Melaleuca lanceolata*, *Casuarina stricta*, *Eucalyptus* spp. *Pittosporum phylliraeoides*, *Stantulum* spp. (Quandong), *Exocarpos* spp. (Native Cherry).

Pioneer plants on the seaward side of the dunes include *Cakile maritima*, *Atriplex cinerea*, *Spinifex hirsutus* and *Nitraria schoberi*. As the dune stabilises, additional species occur and include *Olearia axillaris* (Coastal Daisy Bush), *Scirpus* and *Lepidosperma* spp., *Leucopogon parviflorus*, *Acacia sophorae*, *Calocephalus brownii*. Scramblers found amongst these include *Muehlenbeckia adpressa*, *Clematis microphylla*, *Comesperma volubile* and *Tetragonia implexicoma*. Within the dune complex additional species found are *Kunzea promifera*, *Myoporum parvifolium*, *Swainsona procumbens*, *Calytrix tetragona*, and a fern *Cheilanthes tenuifolia*.

The streams emptying into the gulfs form broad deltas of silt and sand. There are two distinct areas; one which receives a moderate rainfall, and the other in the drier regions. The plant *Avicennia marina* var. *resinifera* occurs only when the roots are covered twice daily with tidal salt water. These occurrences of mangroves are the southerly outpost of what is a tropical plant community. On land subject to inundation only at peak tides, salt marshes develop with succulent sub-shrubby species. These occur in the upper reaches of the Port River, around Port Wakefield and elsewhere. Principal plants include species of *Arthrocnemum* and *Salicornia*. As the level of the land rises other plants grow and include salt grasses, *Sporobolus virginicus* and *Distichlis spicata*, together with *Atriplex paludosa*, *Suaeda australis*, *Selliera radicans*, *Juncus maritimus* (Rush), *Frankenia* spp., *Disphyma australe*, *Triglochin* and *Bassia* spp. A sub-association is found at the mouths of fresh water streams where the Kangaroo Island or Swamp Paperbark, *Melaleuca halmaturorum* is found.

In the extensive shallow water of coastal waters several marine flowering plants are to be found, including species of *Zostera*, *Cymodocea* and *Posidonia*.

Savannah Woodland

Overall appearance is park-like with the trees (of which there are a number of species forming dominants) standing well apart. The trees are umbrageous, have well-developed and rounded crowns, with trunks which usually are less in height than the depth of the crown. There are usually few prominent shrubs. Herbaceous plants and grass occur during the wet season. Originally occupying red-brown earths—terra rossas—much of this area is now occupied by farmlands or suburban development. Sub-soils are often limey, especially in the drier limits of the formation.

In this State the formation is found along the foothills of the Mount Lofty Ranges, southern and central parts of the Flinders Ranges and parts of the central Eyre Peninsula, Yorke Peninsula and Kangaroo Island.

There are several main associations found within the formation, resulting from the availability of water in the soil, and the dominant trees with increasing available water are *Casuarina stricta*, *Eucalyptus odorata*, *E. leucoxydon*, *E. camaldulensis* and *E. viminalis*.

Casuarina stricta association—Drooping Sheoak, is found in drier areas of the formation, on Eyre and Yorke Peninsulas, Kangaroo Island and elsewhere. On the Adelaide plains the association is a developmental stage which changes first into *Eucalyptus odorata* (Peppermint Gum) association, and, with increased water availability, the *E. leucoxylon* association. *Casuarina stricta* (Sheoak), is the dominant tree, but associated with it are *Melaleuca lanceolata*, *Pittosporum phylliraeoides*, *Callitris* spp., *Santalum* spp. (Quandong), while grasses include *Danthonia* spp. (Wallaby Grass) and *Themeda* spp. (Kangaroo Grass).

Eucalyptus odorata—Peppermint association. While the *Casuarina stricta* association may develop into *Eucalyptus leucoxylon*, soil type and rainfall appear to prevent *E. odorata* from doing so. It generally inhabits the drier region of *E. leucoxylon* area, occupying the plains and the lower foothills, while the Blue Gum colonizes the higher foothills. The Peppermint inhabits soils which usually are more clayey and shallow. The *E. odorata* (Peppermint) is usually a tree of 40 to 50ft in height, with rough dark bark and dull green or grey-green foliage. In the drier parts it degenerates into a mallee form. Associated shrubs are *Acacia pycnantha* (Golden Wattle), *A. armata* (Kangaroo Thorn), *Bursaria spinosa* (Native Box) and *Hardenbergia violacea*, usually a climber. The undergrowth with the addition of bulbous plants is similar to the *Casuarina* association. Much of the under-storey of this association near Adelaide, has been invaded by weeds.

Eucalyptus leucoxylon—Blue Gum Association. Reaching its greatest development on the red-brown earths with some clay in the upper levels, and the rainfall between 20-30 inches per annum, this association is found in the south-east, southern Eyre Peninsula, Kangaroo Island, upper foothills of the Mount Lofty and Flinders Ranges. Usually the trees are scattered, but with increasing rainfall there is a denser layer of under-shrubs. The dominant tree is the *Eucalyptus leucoxylon* (South Australian Blue Gum). Under higher rainfall conditions and changed soil types, *E. cladocalyx* and *E. viminalis* occur in this association. The South Australian Blue Gum is a tall tree with an open canopy, deciduous bark and the stems marked white, grey and yellow. *Acacia pycnantha* (Golden Wattle) is the principal under-layer. *Dodonaea viscosa* (Hop Bush) and *Bursaria spinosa* (Native Box) are present, but not common. Other shrubby plants found in this association include *Hibbertia* spp., *Tetratea* (Pink Eye), *Astroloma*, *Dillwynia* and *Pultenaea*. Many species of grasses and herbaceous plants are present. Mistletoes are frequently very common and as the tree matures and over-ages, there appears to be an increase in the incidence of these parasites. The principal species are *Lysiana (Loranthus) exocarpi* and *Amyema (Loranthus) miquelii*, the latter often causing the death of trees which they infest. On the eastern side of the Mount Lofty Ranges, and southern Flinders Ranges where conditions are drier, there is a change in the associated vegetation. Ground species are more common while shrubs are almost non-existent.

Eucalyptus viminalis—Manna Gum. Within the Mount Lofty Ranges, on the sheltered southern and western slopes where soils are deeper, resulting in greater water availability, *Eucalyptus viminalis* (Manna Gum) grows. It is probably an intermediate stage between the savannah woodland and the dry sclerophyll forest, which in South Australia is dominated by *E. obliqua*. *E. viminalis* is a spreading white-trunked tree of between 30-50ft with rough bark at the base and light green leaves.

Eucalyptus cladocalyx—Sugar Gum. As a savannah woodland formation (it also occurs as dry sclerophyll) it is found on moister ground at the western end of Kangaroo Island. It is usually associated with *E. diversifolia* (South Australian Coastal Mallee). Shrubs include species of *Beyeria*, *Lasiopetalum*, *Correa*, *Olearia*, *Daviesia*, and *Bauera*, and numerous Proteads such as *Isopogon*, *Hakea*, *Grevillea*, etc.

The only sub-association which need be mentioned is *Eucalyptus camaldulensis* (River Red Gum), which has reached its greatest development around Kuitpo and in the south-east.

The savannah woodland formation has been greatly changed by man felling, ring-barking or clearing land, and the consequent colonizing by alien plants. Native grasses were quickly replaced by European types, especially *Biza*, *Aira*, *Bromus*, *Festuca*, *Hordeum*, and in some places *Agrostis*.

On the higher slopes of the Adelaide foothills the under-storey of *E. odorata* has changed completely. Where the land has been cleared *Olea europea* (Olive) and *Asclepias rotundifolia* (Cotton Bush) are common. Others which have occupied the previous sites of the trees, or invaded the existing stands, include *Rosa rubiginosa* (Briar), *Lycium ferocissimum* (South African Boxthorn), *Lavendula stoechas* (French Lavender), *Chrysanthemoides monilifera* (Necklace Shrub or Bush), and in sheltered parts *Cratageus* (Hawthorn), *Rubus* (Blackberry), *Ulex* (Gorse) and *Cytisus* (Canary Broom).

Weeds such as *Cynodon* (Couch), *Plantago*, *Echium*, *Calendula*, *Hypochaeris* and *Arctotheca* (*Cryptostemma*), have virtually taken over the entire areas. Many exotic bulbous plants have colonized the savannah woodland area and these include *Homeria*, *Sparaxis*, *Romulea*, *Freesia*, *Gladiolus*, *Synottia*, *Watsonia* and *Oxalis*.

Dry Sclerophyll Forest

The State lacks tropical rain forests and wet sclerophyll forests, not only because of lack of rainfall but also the low nutritional status of the soils.

The dry sclerophyll forests consist of evergreen trees and shrubs with hard leaves, which is the characteristic vegetation inhabiting Mediterranean climates.

Two soil types are associated with this association, podsols which are leached grey-coloured soils with a clay horizon and low in plant foods, and red loams (basaltic in origin) which are deep rich soils, usually loamy in texture. On the latter soil type rain forests develop if other environmental factors are present. A variation of the podsol is to be found in which either hard nodules formed by the various oxides of iron are in the upper layers, or it is capped with these—these soils are known as laterites.

The sclerophyll formations are characterised by plants—in addition to *Eucalyptus*—belonging to major Australian plant families, Proteaceae—*Banksia*, *Hakea*, *Grevillea*, etc., Leguminosae—especially Australian genera; Epacridaceae (*Epacris*, etc.), and the leafy or phyllodinous sections of *Acacia*.

The dry sclerophyll community is characterised by trees in forest form, boles greater in height than the canopy depth, with spreading canopies which are usually continuous. It represents the highest type of plant community found in this State and occurs over a scattered region, including Mount Lofty Ranges in the vicinity of Adelaide, towards the southern tip of the Fleurieu Peninsula, and the lower south-east extending to the western portion of Kangaroo Island.

The principal dominants are the *Eucalyptus obliqua* (Stringy Bark), (Messmate of east Australia), and *E. baxteri* (Brown Stringy Bark), the latter occurring in slightly drier areas and on soils of poorer value. *E. elaeophora* (Bastard Box) is found in the Southern Flinders Ranges on podsols. *E. cladocalyx* (Sugar Gum) is the dominant on Kangaroo Island, Eyre Peninsula and parts of the Flinders Ranges. *E. fasciculosa* (Pink Gum) occupies the drier portion and frequently is found on rocky sites. *E. cosmophylla* (Cup Gum) requires more light than the other species and is found on northern-facing slopes of the Mount Lofty Ranges and large areas of Kangaroo Island.

Eucalyptus obliqua occupies regions receiving at least 25in. of rain per annum. It is a tall Stringy Bark tree, up to 60 or even 80ft high (in the eastern States usually 120ft). Usually associated with it is *E. baxteri*, which is a smaller, branched tree. Characteristic under-storey plants include *Acacia myrtifolia*, *Pultenaea daphnoides*, *Hakea rostrata*, *Epacris impressa*, *Daviesia corymbosa*, *Platylobium obtusangulum*, *Grevillea lavandulacea*, *Tetratheca pilosa*, *Astroloma* spp., *Isopogon ceratophyllus*, *Xanthorrhoea* spp. and *Hibbertia* spp. Numerous climbing plants are found, including *Marianthus bignoniaceus*, *Glycine* spp., *Thysanotus patersonii*, *Cassytha* spp. (Devil's Twine) a parasite often forming tangled masses over plants of the under-storey. True annuals are almost entirely absent but several bulbs and herbaceous plants are common.

Eucalyptus baxteri—Brown Stringy Bark. Where soils are shallow, with less rainfall and lower altitude, this species dominates although *E. obliqua*, *E. cosmophylla* and *E. diversifolia* may be found. *Astroloma conostephioides*, *Acacia myrtifolia*, *Pultenaea daphnoides* and *Hibbertia sericea* are among the common under-shrubs, while the others given above are found in favoured localities only. This association is found in the Mount Lofty Ranges, Upper South-East (near Keith) and Lower South-East. A co-dominant in this locality is the rough-bark *E. viminalis* (Manna Gum), var. *huberiana*. The trees are relatively close together and the under-storey plants include *Pteridium aquilinum* (Bracken), *Xanthorrhoea australis*, *Hibbertia stricta*, *Bossia cinerea*.

Eucalyptus elaeophora—This association is found on soil types resulting from schists and gneisses. From Mount Compass northwards to Torrens Gorge this tree is a dominant species. The tree is either one rising 40 to 50ft or as a depauperite form which occurs on rocky ridges. The under-storey plants are generally the same as for the previous associations, but in some areas *Hakea* and members of the Epacridaceae dominate. *E. obliqua* is found in contiguous gullies.

Eucalyptus fasciculosa—Pink Gum. This is a not unattractive small tree, often with several trunks, but mainly between 25-40ft high with smooth and whitish bark, rough below. Its name is derived from the colour of the timber. It is scattered through the Mount Lofty Ranges, on slopes of shallow soil—Belair National Park, Morialta, Black Hill, One Tree Hill, Para Wirra National Park, and in the Upper South-East and on Kangaroo Island. Co-dominants often found with it are *E. baxteri*, *E. leucoxydon* and *E. elaeophora*. The undergrowth is scattered, forming hard tufted plants including species of *Hibbertia*, *Tetratheca*, *Astroloma*, *Daviesia*, *Hakea rostrata*, while *Acacia myrtifolia*, *Epacris impressa*, *Pultenaea daphnoides* are limited to the moister gullies.

Eucalyptus cosmophylla—Cup Gum. This covers northern-facing slopes in the Mount Lofty Ranges near Adelaide, Mount Compass, on the central portion of the Fleurieu Peninsula, the South-East of South Australia and the central portion of Kangaroo Island. *E. baxteri* is often present as a co-dominant. Because of its open character, this formation is rich in under-shrubs and herbaceous plants.

It has heath-like appearance and is intermediate between dry sclerophyll forest and the sclerophyllous mallee Form A. The majority of plants of the understorey belong to Australian families, *Myrtaceae*, *Epacridaceae*, *Proteaceae*, *Cyperaceae*. Amongst the more common species are *Banksia marginata*, *B. ornata*, *Isopogon*, *ceratophyllus*, *Hakea ulicina*, *H. rostrata*, *Adenanthos* spp., *Boronia caerulescens*, *Daviesia brevifolia*, *Xanthorrhoea* spp., *Casuarina* spp., *Grevillea lavandulacea*, *Leucopogon* spp., *Astroloma* spp. On Kangaroo Island the species content is richer because of the many endemics (which have affinities with Western Australian plants). These include species of *Petrophila*, *Lhotskya*, *Boronia*, *Lasiopetalum*, *Loudonia*, *Tetralochea halmaturina*, *Grevillea* and *Hibbertia*.

Eucalyptus cladocalyx—Sugar Gum. *Eucalyptus cladocalyx* (with *E. elaeophora* as a co-dominant tree) replaces *E. viminalis* which reaches its western range at St Vincent Gulf. It is usually tall-growing, above 100ft high, with clean stems and a dense head of dark glossy green foliage. Endemic to South Australia within the 25in. rainfall regions, on brown earths it is found both in this formation and savannah woodlands. The dry sclerophyll formation occurs in the moister parts of the Lower Flinders Ranges (hills at Horrocks Pass and elsewhere, also Wirrabara) and lower and central Eyre Peninsula (where the tree is smaller and develops a more branching habit). Under-shrubs are species of *Acacia*, *Dodonaea*, *Banksia*, *Scaevola*, *Pteridium*, *Grevillea*, *Hibbertia*. Several other small associations are here briefly mentioned.

Eucalyptus rubida (Candle Bark Gum) a relic community which is found at the eastern end of Cleland National Park. Pure over-age stands of this species are to be seen behind Bridgewater where it occurred with *E. leucoxylon* (South Australian Blue Gum) which have been felled because of their better quality timber, leaving widely spaced trees of *E. rubida*.

E. macrorrhyncha (Red Stringy Bark) is an isolated and small stand near Clare. This is an example of discontinuous distribution as it is a common eastern species.

Eucalyptus ovata (Swamp Gum) and *Xanthorrhoea australis* are found in the Lower South-East, although trees of *E. ovata* occur elsewhere, but always in wet localities.

Tussock Grassland Formation

The major plant species giving rise to this formation belong to the sedges and plants of the Liliaceae.

Gahnia trifida-*Cladium filium* association is found on the renzina plains of the Lower South-East. Formerly *Banksia marginata* was common but this has been removed and this association may have been partly man-made. Large areas are covered by tussocks of *Gahnia* (Cutting Grass), *Cladium* (Thatching Grass) and the white tussock grass *Poa caespitosa*. Examples of this association are found on Kangaroo Island, lower Eyre Peninsula, Bool Lagoon and upper South-East.

Lomandra dura—*Lomandra multiflora* (Iron Grass). This is widespread in the frost-affected highland and plateau country (1,500-3,000ft) from Burra to Peterborough, within the 12-18in. rainfall. Other localities are along the eastern slopes of the Mt Lofty Ranges, above Sedan, and extending southwards to Langhorne Creek. *Casuarina stricta*, *Eucalyptus leucoxylon*, *E. odorata* and *Callitris preissii* (*propinqua*) were often associated with it, but early records indicate that the areas were probably treeless, brought about by the low winter temperatures.

Sclerophyllous Mallee Form A

All Mallees are Eucalypts which in growth habit produce several thin (whipstick) to stout stems with few branches, and bear leaves mainly at the ends of these. Within South Australia about 15-18 species of Eucalypts have this mallee habit, and several other species produce this mode of growth under certain soil and climatic conditions. This association is defined within the 20in. to 8in. isohyets. They are trees typical of the plains, except in the arid regions where they are found on the ranges.

The principal species of Eucalyptus found in the various mallee formations are *E. angulosa*, *E. anceps*, *E. cneorifolia* (Narrow-leaf Mallee) on Kangaroo Island, *E. diversifolia*, *E. dumosa*, *E. flocktoniae*, *E. gracilis*, *E. incrassata* and its varieties, *E. leptophylla*, *E. oleosa*, whilst others localized in occurrence include *E. behriana*, *E. viridis* and *E. landsdowneana*.

The soils are variable but always alkaline, principally sand overlying solonized clays at varying depths. This relationship of the soil components gives rise to the following three distinct sclerophyllous mallee associations—

Mallee—Broombush, which occurs where the sand is less than 18in. deep; Mallee—Heath, which is present when the sand is deeper than 18in.; and Heath, which is almost treeless, occurring where the sand is deeper than 48in.

These associations with their soils are represented in complex stands over large areas.

Associated with these mallees are sclerophyllous or hard-leaved shrubs, often forming very dense stands and varying in height from between 12-60in. They are usually rich in species principally of Protaceae, Myrtaceae, Leguminosae and Casuarinaceae.

Mallee—Broombush (*Eucalyptus* spp. *Melaleuca uncinata*). Low trees of mallee Eucalypts dominate this vegetation type of which there are several variations. (1) *E. incrassata*—*E. leptophylla*—*Melaleuca uncinata*. In the upper South-East, this covers hundreds of square miles but in recent years major pastoral schemes have cleared large areas. On the drier areas towards the River Murray, *Callitris verrucosa* (Native Pine) becomes a co-dominant. (2) *E. incrassata*—*E. leptophylla*—*E. flocktoniae*—*Melaleuca uncinata*. This association is found principally on Eyre Peninsula with *Olearia*, *Melaleuca*, *Goodenia*, *Casuarina*, *Hakea*, *Grevillea*, together with various phyllodenous *Acacia*. Again in the drier areas *C. verrucosa* becomes a co-dominant. (3) *E. flocktoniae*—*E. dumosa*—*Melaleuca uncinata*. This association is also found on Eyre Peninsula and usually other Eucalypts are present including *E. calycogona* and *E. oleosa*. Under-shrubs, in addition to those listed above, include species of *Phebalum*, *Boronia*, *Cassia*, *Dodonaea*, *Pultenaea*, *Leptospermum*. *Triodia* (Porcupine Grass) is often present on dune crests. (4) *E. cneorifolia*—*Melaleuca uncinata*. This is found over most of Kangaroo Island. Associated genera include *Daviesia*, *Leucopogon*, *Clematis*, *Calytrix*, *Pimelea*, *Grevillea*, *Hakea*, *Melaleuca*, *Pultenaea*, *Boronia*, and several of the leafy Wattles (*Acacia*).

Mallee Heaths (*Eucalyptus leptophylla*—Heath). This and the succeeding association grade into one another with the Eucalypts occurring in scattered clumps, with shrubs between them. The heath is dense and comprises mainly species of *Acacia*, *Hakea*, *Grevillea*, *Banksia*, *Casuarina* and *Astroloma*.

Heath. This covers large areas but principally in the Upper South-East, on Eyre Peninsula, also on the Gammon Plateau. It comprises small and often stunted gnarled shrublands, but is rich in seasonal herbaceous and annual plants. A number of terrestrial orchids is usually present.

Sclerophyllous Mallee Form B

Several Eucalypts are found in this formation but two associations are dominated by either *Eucalyptus cosmophylla* or *E. diversifolia*, with *E. rugosa*, *E. conglobata* and even *E. baxteri* sometimes present.

This association forms the link between the dry sclerophyll forest and the sclerophyllous Mallee Form A. It is often present on the shallow somewhat rocky soils which have poor water-retaining capacity.

There is a rich variety of other plants associated including species of *Epacris*, *Grevillea*, *Hakea*, *Pultenaea*, *Daviesia*, *Hibbertia*.

It occurs widely and can be found in National Park, Belair, Upper South-East, in the southern-central parts of Eyre Peninsula, also Kangaroo Island (Flinders Chase).

Mallee Sub-formation

The principal difference between the preceding types and this, is the greatly reduced shrub layer which is usually discontinuous, and often absent. After the break of season a ground layer of grasses and annuals, together with ephemerals, is present.

The soils are alkaline, usually containing large quantities of limestone either as sheet travertine or rubble and having heavy subsoils. Much of the cereal growing now occupies regions previously clothed with mallee or savannah woodlands.

This complex and widespread formation is characteristic of South Australia within the 10-14in. rainfall regions. It forms a link with the plant communities of the arid zones.

Found in the Murray Mallee, Yorke and Eyre Peninsulas it occurs on hills and ranges in the arid regions where increased rainfall helps its development. There is a major development in the Gammon Ranges.

Eucalyptus anceps and *E. dumosa* are typical of the moister areas. Associated shrubs include *Rhagodia parabolica*, *Cassia sturtii*, *C. nemophila*, *Kochia brevifolia*, *Acacia colletoides*, *A. brachybotrya*, *Vittadinia triloba*, *Salsola kali*, *Ptilotus* spp., *Stipa* and *Danthonia* spp., *Dianella* spp.

In the intermediate rainfall zone, *Eucalyptus oleosa* and *E. brachycalyx* are dominant, but with decreasing rainfall the latter disappears and is replaced by *E. gracilis*. *Callitris preissii* (Native Pine) is found on deeper sands, while *Melaleuca lanceolata* occurs throughout. As rainfall decreases sclerophyllous undershrubs give way to shrubs having semi-succulent and hairy leaves, typified by *Atriplex* (Saltbush) and *Kochia* (Bluebush) spp.

Aquatic and Swamp

Aquatic communities—Few rivers and creeks in South Australia are constant and in summer may appear as a series of ponds or swamps. Aquatics such as *Myriophyllum*, *Nitella*, *Nasturtium* spp. (Water Cress), *Ranunculus* spp. (Water Buttercups), occur in such places. In the far South-East (between Pt MacDonnell and the Victorian border) several short but constantly flowing streams arise from springs, and additional plants to the above species are *Potamogeton*, *Ruppia*, *Lemna*, *Lepilaena*. On the margins of streams, or where shallow water remains *Triglochin* spp., *Cladium* spp. and *Gahnia* spp. are found, giving way to *Typha* (Bulrush), *Phragmites*, *Juncus* and *Scirpus* (Reed) communities as silting and reduced flow of water occurs.

Eucalyptus camaldulensis (River Red Gum).—The most widely distributed species in Australia, it occurs where there is an abundance of water. In regions of less than 27in. per annum it remains associated with creeks, rivers and their valleys. Where the rainfall is above 27in. per annum, it extends to the hills and ranges, forming savannah woodland e.g. at Blackwood and Kuitpo. Associated vegetation includes *Acacia retinodes*, *A. verticillata*, *Goodenia ovata*, various ferns, (*Adiantum*, *Pteridium*), *Gahnia*, *Cladium*, *Patersonia*, *Rumex*, *Acaena*, *Microseris*.

Fresh Water Swamps—Usually occurring on river flats, head waters of streams and badly drained hill gullies, three types can be distinguished—silt swamps, peat swamps and peaty silt swamps. (1) Silt swamps—the soil is principally a mineral one mixed with silt and organic matter. Scattered trees of *Eucalyptus rubida* (Candle Bark Gum) and a dense undergrowth of tall shrubs occur. These include *Leptospermum juniperinum*, *Viminaria denudata* and *Acacia retinodes*. (2) Peat swamps—These occur on the deep glacial sands near Mt Compass and on Fleurieu Peninsula. Shrubs as above are found as well as *Utricularia*, *Cladium*, *Hypolaena*, *Selaginella*, *Blechnum*, *Sprengelia*, *Lycopodium* and some terrestrial orchids. Alkaline peat swamps are found in the Lower South-East between Pt MacDonnell and the Victorian border, immediately behind the coastal sand dunes. (3) Peaty silt swamps—The soil is structureless and wetter than silt swamps, but not as wet as true peat-swamps. Thickets of *Leptospermum lanigerum*, *L. juniperinum* and *Acacia retinodes* are common. Also found are *Blechnum*, *Todea* (rare), *Gleichenia* (Coral Fern), *Scirpus*, *Drosera* (Sundew), *Sprengelia* and *Villarsia*.

ARID ZONE

The arid zone is a diverse region of ranges and hills with skeletal soils, while on the plains the soils contain various amounts of limestone and gypsum; others are covered with gibbers. Many of the plants absorb the dew, or it falls to the ground where it is absorbed by the roots. The growing season is from one to five months.

Low-layered Arid Woodland

This formation is dominated by widely-spaced low growing trees (or tall shrubs). A low shrub layer is usually present but seldom continuous, but under some dominants *Casuarina cristata* may be completely absent. The shrubs may have either hairy semi-succulent leaves or sclerophyllous leaves. When rains occur, herbaceous and perennial grasses appear, together with ephemerals.

This is a very widespread formation, at its edge associated with Mallee, but as rainfall decreases this disappears, to be replaced by *Acacia* species.

Myoporum platycarpum (Sugar Wood) association is usually found in the under 15in. rainfall regions and is associated with *Atriplex* spp. It is found over a large area of the north-east of the State, i.e. east of the Flinders Ranges.

Casuarina cristata (Black Oak) is widely found in rocky regions and frequently forms widespread and often dense stands. *Atriplex stipulata* and *Kochia sedifolia* are associated with it.

Acacia sowdenii (Western Myall) occurs to the immediate west of the Flinders Ranges (north and west of Port Augusta) then north-westerly where it is widely scattered. Associated shrubs include *Cassia* spp., *Kochia sedifolia*, *Sida* spp., *Eremophila* spp.

Acacia aneura (Mulga) is a climax vegetation within the 5-8in. rainfall region frequently occupying very large areas of undulating country. It often occurs in massive pure stands.

Heterodendron oleifolium (Bullock Bush) also occurs in the 5-8in. rainfall areas, usually associated with other tree species, but sometimes forms almost pure stands.

Shrub Steppe

Whilst grasses and perennial plants may be present, this formation derives its name from communities of low shrubs having hairy and semi-succulent leaves and are usually spaced at distances equal to their diameter.

Chenopodiaceous shrubs are the permanent plant species and most widely represented genera are *Atriplex* and *Kochia*. Soils are usually alkaline but can vary considerably while numerous species of *Bassia* (Bindyis) are usually present.

The formation is rich in ephemerals and following rains Composites, Crucifers, Legumes and grasses occur in variety. Most of the woody types are valuable fodder reserves which are supplemented by the ephemerals.

This formation covers vast tracts in the 5-8in. rainfall region, the most notable being the Nullabor Plains.

Desert Complex

This comprises a varied and complicated pattern of plant communities in desert regions where evaporation is greater than rainfall during each month of the year. Long parallel sand ridges (often up to 200 feet high) are typical and both the dunes and interdunal corridors have scattered but permanent vegetation including *Hakea leucoptera*, *Grevillea juncifolia*, *Eremophila* spp., *Acacia linifolia*, *A. brachystachya* and associated spp.

On the tops of the dunes *Zygochloa paradoxa* (Cane Grass) is found while *Trodia* spp. (Spinifex, Porcupine grass) are on the lower slopes and sandy interdunal areas where also occurs a modified form of shrub steppe. Ephemerals are seasonally present, mainly Composites, grasses, Crucifers, Legumes and annual Chenopods.

The Simpson Desert is the finest example of this formation but others including the surrounds of Lake Torrens, Lake Eyre and similar localities are typical.

Rivers, Lakes and Swamp Vegetation of Arid Regions

River Vegetation—The plant communities are dependent on the water availability and its quality. (1) *Eucalyptus camaldulensis* (River Red Gum)—This is found lining all water courses and in arid regions it may occupy the bed of streams. (2) *Muehlenbeckia cunninghamii* (Lignum)—On flood plains along the River Murray and elsewhere on moist heavy grey soils, and containing soluble salts on the surface, Lignum is the major plant coloniser. (3) *Eucalyptus bicolor* (River or Flood Box)—On light or heavy, grey or red alkaline and often saline soils which have been deposited by flood action and at a slightly higher level than those of the preceding region, *E. bicolor* with *Atriplex nummularia* (Old Man Saltbush) and *Kochia sedifolia* (Bluebush) occur. *Marsilea* (Nardoo) is often found as a ground cover.

Where the soils contain more gypsum and soluble salts, the trees of *E. bicolor* become smaller and twisted in growth. With increasing salinity *Salsola*, *Pachyornia*, *Disphyma* and associated spp. occur.

Swamps and Lakes—(1) Mound springs give rise to localised vegetational stands which show similarities to the communities of equivalently watered areas. Swamps can be seen east of Leigh Creek at Mundy Waters, west of Marree and north of Oodnadatta at Dalhousie Springs. (2) Salt Lakes. On Lake Eyre, Lake Frome and Lake Torrens because of the deep surface layer of salt and gypsum, vegetation rarely occurs on their beds. Towards the shore line, Samphires and others, e.g. *Arthrocnemum*, *Disphyma*, *Atriplex*, *Frankenia*, *Spergularia* and *Tetragonia* are found. (3) Fresh Water Lakes. These usually have silty or clay bottoms. *Marsilea* spp. are common on shallow lakes (near Koonamore). As the water recedes the following spp. occur *Gnaphalium*, *Eragrostis*, *Calomagrostis*, *Crassula*, *Atriplex*, *Tetragonia*, *Brachyscome* and *Teucrium*.

FAUNA

South Australia is poorly endowed with mammals and birds, this being largely attributable to the dry conditions which prevail over much of the State. Highly developed agriculture in the limited favourable areas and widespread pastoral occupation beyond have seriously depleted the larger fauna by diminishing the native habitats. Introduced predators are established throughout all occupied territory and range beyond it.

Determined efforts are being made, however, to establish a series of national parks and reserves which will preserve samples of the various habitat types, and, it is hoped, their indigenous fauna. The Commissioners for National Parks and Wildlife Reserves control over 400,000 acres (see Part 6.4), while the Flora and Fauna Board administers the Flinders Chase Reserve on Kangaroo Island which is free from the introduced fox.

The relatively well-watered south-eastern region originally supported a variety of mammals, especially the larger marsupials, but these are reduced to remnant populations by extensive land development and by heavy shooting pressure. The brush-tailed possum (*Trichosurus vulpecula*) is still common, as is the grey kangaroo (*Macropus major*). In the dry interior the red kangaroo (*Macropus rufus*) at times greatly increases in numbers, probably due to changes caused by grazing and extra water supply. Emus and wombats are still to be found in numerous localities.

Bird life is more abundant and many species can be observed close to Adelaide, in the Mount Lofty Ranges, and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has led to the disappearance of many species in certain districts. Many mallee birds may be found in areas of greater aridity and these areas also have their true desert forms.

South Australia is rich in reptiles, and numerous interesting species can be observed in the arid regions. As there are few permanent streams or swamps in the State some insects and other invertebrates common elsewhere are scarce or lacking. On the other hand many interesting desert-adapted forms are to be observed.

Apart from the fishes, which include edible species of considerable economic importance, the marine fauna has been little explored.

PART 2

EXPLORATION AND COLONIZATION

There are many paradoxes in the story of the discovery and exploration of South Australia, these mainly being explained in terms of the nature of the State. In 1833 Charles Sturt was able to write that "a spot has been found on the South Coast of New Holland to which the colonist might venture with every prospect of success. All who have ever landed on the eastern shores of Gulf St Vincent agree as to the richness of its soil and the abundance of its pasture." However, in 1792 the French admiral D'Entrecasteaux was so far from being in agreement with this as to describe the coast of South Australia as "so uniform that the most fruitful imagination could find nothing to say of it". It is against a background of such contradictions that the picture of South Australian exploration unfolds: the Dutch reached South Australian waters in 1627, but it was not till after 1801 that British explorers discovered the valuable central southern coastline; Sydney was settled in 1788, but it was not until after 1836 that British settlers came to grips with the South Australian environment. The geographical characteristics of the country had a lot to do with this slow development and were also to hinder subsequent exploration.

EXPLORATION BEFORE COLONIZATION

The Dutch made the first recorded discovery of Australia in 1606 on the Gulf of Carpentaria, and Dutch ships were sighting Western Australia from 1616 onwards. It was in 1627 that the first part of the South Australian coast was discovered when the *Gulden Seepaart* under the command of Francois Thyssen examined the coastline from Cape Leeuwin to the islands of St Francis and St Peter in the far west of South Australia. On board the *Gulden Seepaart* was Pieter Nuyts, "Councillor Extraordinary of India", after whom this area was named "A Landt Van P. Nuyts".

The Dutch, however, were a trading nation and the South Australian coast impressed them very little, for it presented no evidence of the existence of

trading wealth at all. Indeed, so little interest was displayed in this section of the Australian coastline that it was 165 years before the next recorded sighting of South Australia was made, and this was by a French explorer.

Rear Admiral D'Entrecasteaux, who had been searching all around Australia for the lost French explorer La Perouse, sighted land south of Cape Leeuwin in December 1792 and examined the cliffs of the Australian Bight. He sailed to the head of the Bight, but then abandoned hope of finding anything other than desolate country after so many miles of barren coast, and sailed south for Van Diemen's Land. The early impressions of the South Australian coast were therefore most unfavourable and tended to discourage further investigation.

The British who followed were far more interested in the possibility of colonization to help ease their population problem at home, and consequently, once the effects of early discouragement had worn off, they began to take an interest in South Australia as a possible site for a new colony. Lieutenant James Grant was the first British explorer to sail along the South Australian coast, sighting the extreme easterly shores of South Australia in about 1801. While in Cape Town he had been informed of the discovery of Bass Strait and was instructed to sail through it in the *Lady Nelson* on his way to Port Jackson. Sailing along the extreme south-east coast he named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.

The first notable British contribution to the exploration of the South Australian coast came, however, with the voyages of Matthew Flinders in the *Investigator*. With the support of the President of the Royal Society, Sir Joseph Banks, Flinders sailed from England in July 1801. On his voyage of circumnavigation of the Australian continent he thoroughly explored the coast of South Australia, between January and April 1802. In addition he discovered the Gulfs and Central Highlands, thus solving the question of whether a north-south strait divided the Australian continent in two. More important was the fact that Flinders reported very promising country for settlement. Many places along the coast carry the names given by Flinders: several of these were named after places in his home county of Lincolnshire, e.g. Port Lincoln, Sleaford, the Althorpes and Boston Bay, while others include unusual but attractive names such as Backstairs Passage, The Pages, and Antechamber Bay. Flinders was in fact the first man to explore South Australian waters between Nuyts Archipelago and Encounter Bay. It was at Encounter Bay on 8th April 1802 that he met Captain Nicolas Baudin, the French explorer, heading along the coast from the east in *Le Geographe*.

Baudin, in command of *Le Geographe* and accompanied by *Le Naturaliste*, left Havre in October 1800 with instructions to explore several specified regions, including the then unknown portion of the southern coastline of Australia. After being delayed in the East Indies and Van Diemen's Land, Baudin sailed westward and charted the mainland coast from Western Port to Encounter Bay, where he met Flinders. The object of Baudin's expedition was to make scientific discoveries on behalf of Napoleon, but he had wasted considerable time *en route*. Thus most of the South Australian mainland coast was discovered before him by Grant and Flinders, and he was the original explorer of only a small section between Cape Banks and Encounter Bay. Some French names still remain, for example Lacepede Bay, Guichen Bay and Rivoli Bay. After the meeting at Encounter Bay, Baudin sailed further westward and along the northern shore of Kangaroo Island to Murat Bay, before being forced to abandon further exploration and to return to Port Jackson in June 1802. However, after re-equipping his expedition and with the addition of another ship (*Casuarina*), for charting work in shallow

waters, Baudin returned to the South Australian coast by way of King Island in Bass Strait. Leaving King Island on the 27th December, Baudin in *Le Geographe* and Freycinet in command of *Casuarina* headed direct for Kangaroo Island, where they circumnavigated the whole island and charted its coast, being the first to chart its southern and western shores. This was to be the last major contribution made by an official French expedition to exploration of the South Australian coast.

Although these discoveries on the South Australian coast did not lead to any immediate colonization, there began an increasing series of visits by sealing vessels to Kangaroo Island. A group of American sealers built a schooner on the island in 1804, while wild gangs of sealers and runaway convicts were forming settlements from 1806 onwards. In addition, French exploration in the area had led to a fear on the part of the British authorities that it might result in French colonization, and, although not greatly valuing the area for itself, the British would have found it an embarrassment to have the French settled on the Australian continent. As a result, in 1804 the British sent a government surveyor by the name of Grimes to Kangaroo Island to report on it as a possible site for colonization. The Grimes Report was most unfavourable, stating that the soil was poor and that the island lacked fresh water. On the other hand, in 1819 a Captain Sutherland visited the island and wrote an over-optimistic report on its future. It was this report which later led the South Australian Company into establishing their first station there in 1836.

In the period between 1804 and 1836 a number of further discoveries took place at various parts of the South Australian coastline by Captains Dillon (1815-16), Gould (1827-28), Hart (1831-33) and Jones (1833-34), together with the discovery of Lake Alexandrina by a group of sealers in 1828. Reports of this period were marked by contradictions regarding the suitability of South Australia for settlement. However, contradictory as were these accounts reaching England, they managed to convince the founders of South Australia even before 1830 that there was "a sufficient, indeed a superabundance, of fertile soil for the purpose of the colony".

The most significant explorations of the period immediately prior to colonization were those of Captain Charles Sturt, who explored the Murray River from New South Wales down to its mouth, traversed Lake Alexandrina and located the Goolwa channel, reaching the western shore of the Murray mouth on 12th February 1830. Captain Sturt's journey has become something of an epic in Australian history: with a small party of soldiers and convicts he rowed 1,700 miles on the Rivers Murrumbidgee, Darling and Murray. They suffered from desperate weariness, endured a distressing lack of provisions, and were periodically attacked by bands of Aborigines. However, the main object of Sturt's journey was accomplished—the settling of the long-insoluble "problem of the rivers" of south-eastern Australia. But the real significance to South Australia was more than the mere settling of what was little more than an academic question, for his discoveries opened up 2,000 miles of navigable inland waterway and gave to Gulf St Vincent, which lay so near the mouth of the Murray, an importance and significance previously undreamt of. It was the age of canal building in Europe and of the development of the Mississippi in America, so that navigable water was considered of prime importance. The exuberance felt by everyone interested in South Australia at such a discovery is typified by the Wakefield theorists: "The whole produce of eastern Australia will eventually be shipped from this place". In fact the Murray became "the grand attraction of the scheme". However, Sturt's own fervour at this stage was somewhat cooler than that of interested persons in England for there was one great disappointment which

marred his discovery—the Murray lacked a sufficiently safe navigable mouth. Sturt found that the Murray flowed into a series of shallow lakes and a sand-blocked mouth. So little did Sturt's contemporaries understand the earth movements and land formations of the area, that their only conclusion was that there must somewhere be another channel emptying the waters of the Murray into the sea. So, the "problem of the rivers" was replaced by the "mystery of the Murray mouth"—and official action was to be taken promptly to solve this mystery.

Governor Darling of New South Wales sent Captain Collet Barker to the southern coast to try to solve the problem of the Murray. Barker, landing at Noarlunga on 17th April 1831, ascended Mount Lofty and then returned to his ship, the *Isabella*, and examined Port Adelaide. After landing again at Rapid Bay, he crossed the hills to the Murray, thus proving that the river had no westerly outlet. Barker's expedition came to a tragic end when, under mysterious circumstances, he was apparently murdered at the Murray mouth by the usually peaceable Narrinyeri natives. This was the first of a long series of tragic deaths, mainly due to navigational difficulties, in the area of the Murray mouth which tended to cast a hoodoo on its navigation later on. Barker's party, however, reported fertile country in the region and the existence of a pass from the Murray mouth to Rapid Bay on Gulf St Vincent. While Barker's expedition proved without doubt that there was no really navigable connection between the Murray and the sea, it added to the rapidly growing volume of favourable accounts of the fertility of the region around Gulf St Vincent. Interested people in England were so obsessed with the geographical fact of the great Murray waterway opening up the centre of Australia that they barely registered the unfavourable accounts of its egress to the sea.

Probably the greatest encouragement for the settlement of South Australia came from Charles Sturt himself, who after his return to Sydney in May 1830 wrote *Two Expeditions into the Interior of Southern Australia* (published in 1833), in which he said: "My eye never fell on a country of more promising aspect, or more favourable position, than that which occupies the country between the lake and the ranges of St Vincent's Gulf, and continuing northward from Mount Barker, stretches away without visible boundary". This glowing report, together with that of Barker's expedition, was welcomed by those in England seeking a suitable site to establish a colony where the principles of the "Wakefield Plan" could be applied without restriction. Sturt spared no efforts in converting opinion to the potentialities of South Australia and, as well as his *Two Expeditions*, he wrote a private letter to the Colonial Office on 17th February 1834. Sturt actually marked the present position of the Outer Harbor at Port Adelaide as the proper and natural site for the capital. "It is in the angle formed by the creek with the coastline that I would recommend the formation of a township, . . . because it appears to me that when the distant interior shall be occupied and communication established with the lake and valley of the Murray, the banks of this creek will be the proper and natural site for the capital . . . The level country to the north would be overspread, the valley of the Murray would be peopled, every available spot would be located, and its numerous ramifications would afford pasture for thousands of cattle". In his reasons for this opinion he showed more foresight than he was to do later when, in disagreement with Colonel Light, he supported those who wished to move the capital to Encounter Bay.

Colonel William Light, who had been appointed Surveyor-General of the new colony, sailed from England in the *Rapid* on 4th May 1836 with instructions to select a site for the capital of the colony. After a brief visit to Encounter Bay,

during which he unhesitatingly rejected that area as being unsuitable, he landed at Nepean Bay on Kangaroo Island where some South Australian Company ships had already established a settlement. From here Light explored the east coast of Gulf St Vincent. Then, pressed for time by the unexpected arrival of the new settlers, he was able to make only a quick trip to Port Lincoln and a brief inspection of part of the west coast of Gulf St Vincent before, in concurrence with Sturt's earlier opinion, he decided that the most suitable site for Adelaide was on the banks of the small, but centrally situated, River Torrens.

COLONIZATION

The colonization of South Australia was in itself an experiment involving certain entirely new principles and was to represent a turning point in British colonial policy.

The period was conducive to colonization as in Britain there was widespread unemployment and poverty, the popular remedy for which was emigration. Nevertheless the somewhat revolutionary nature of the plans was to result in seven years of negotiation and considerable modification of early ideas before the colonization of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, and his ideas were contained in a number of writings including the now famous "A letter from Sydney" series, written in 1829 while he was imprisoned in Newgate Gaol. Wakefield's plans involved three broad principles: the sale of land, the use of the receipts for sponsoring emigrants, and the granting of some measure of self-government. Drawing on developments in New South Wales Wakefield argued that the then current system of giving away vast tracts of land to settlers resulted in an imbalance between land and labour. It was therefore desirable to restrict land distribution and increase the labour supply, and this could be done by selling land at a suitably high price to prevent all labourers becoming landowners and by devoting the proceeds to free passage for a carefully selected labour force.

At the same time, following conflicting observations by early explorers, encouraging reports of the South Australian coastline filtering in from traders and seamen gave rise to moves for the practical application of Wakefield's ideas for the founding of a colony in South Australia.

The first attempt to form a colony was made by Robert Gouger, who, having met Wakefield in Newgate Gaol in 1829, was so impressed with his ideas as to approach certain interested parties with a view to purchasing a tract of land in South Australia. He was unable, however, to gain sufficient support to interest the Colonial Office in his plans.

In 1830 the National Colonization Society was formed with Gouger as its secretary. The Society served to further disseminate Wakefield's principles, but was not directly associated with plans for a colony in South Australia.

Renewed interest in colonization followed the first of Captain Sturt's enthusiastic reports of the land of the lower Murray and in 1831 a group of intending settlers, still enthused with the ideas of Wakefield, formed the South Australian Land Company. A committee headed by Colonel Robert Torrens approached the British Government for a charter and then made preparation for the first voyage. The Government was not prepared to grant the necessary territory, and negotiation continued until 1833 when the Company finally conceded that the Government was unlikely to approve any plans involving a chartered colony.

From the same core of enthusiasts who had supported this and earlier ventures there emerged in 1834, the South Australian Association. This group

was prepared to abandon hopes for a chartered colony, conceding the issue of self-government, provided that the enabling legislation accommodated Wakefield's other principles for land sales and migration. The passage of the legislation was by no means smooth; the scheme was new and involved untried principles, and knowledge of the territory was still extremely limited. In addition the association of many persons of liberal outlook with the plans probably reinforced official caution, and these people were to gain few if any concessions.

Doubts on the suitability of the site were to be largely dispelled by the writings and personal representations of Sturt and the confirmatory expedition by Barker, and finally in July 1834 legislation for a colony in South Australia was put before Parliament. This legislation represented a considerable compromise on early plans.

The South Australian Colonization Act (4 & 5 William IV. Cap. 95) was assented to on the 15th August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally borne fruit, and at least some of the ideas of Wakefield were to be tried. The territory allotted under the Act embraced 309,850 square miles, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons. Authority was to be divided, with the Colonial Office through the Governor controlling all affairs of government except land sales and immigration, these fields being reserved to a Board of Commissioners. Provision was made for self-government upon the population reaching 50,000. All land alienated by the Crown was to be sold at a price of not less than "12 shillings" (\$1.20) per acre and the whole of the proceeds used in "conducting the emigration of poor persons from Great Britain and Ireland".

Although Parliament was prepared to authorize the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorized to borrow \$400,000 against future general revenue to finance the founding of the colony and the establishment of government, and \$100,000 against the sale of land to start the migration programme. Finally, the Act contained two conditional clauses which were to harass the whole venture and served to delay colonization another twelve months. The first of these conditions, which were to be satisfied before the Commissioners could exercise their general powers, required that government securities to the value of \$40,000 be lodged as a guarantee for the venture. Secondly land to the value of \$70,000 was to be sold prior to settlement.

A Board of Commissioners with Torrens as chairman was appointed early in 1835. The Board immediately offered land in the new colony at \$2 per acre including rights to a city acre with every 80 acres of rural land. In spite of considerable publicity, unsurveyed land in an unknown colony proved difficult to sell, and with less than half the land sold the price was reduced to the permitted minimum of \$1.20 per acre. Finally, George Fife Angas, a member of the Board, together with two others took up the balance of the land on behalf of the South Australian Company, which was then in the process of being formed.

In December 1835 with sufficient land sold and with the \$40,000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonization. The South Australian Company was formed in January 1836, and in February two ships of the Company sailed for Kangaroo Island to establish a settlement.

May 1836 saw the first official departure, that of the Surveyor-General, Colonel William Light, whose tasks included choosing a site for the first settlement. Details of Light's early movements are given on pages 42-43. The first Company vessels reached Kangaroo Island in July, and colonists arrived at Adelaide from early November. The first Governor of the colony, Captain John Hindmarsh R.N., arrived at Holdfast Bay on the 28th December 1836 and the new colony was officially proclaimed on the same day. By this time some 300 colonists were already in residence. Hindmarsh was to remain in the colony for 18 months, a period marked by political feuding and very little progress.

The one outstanding feature of the first two years was the work of Light. Expected to carry out impossible tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. Fortunately his views prevailed and the city was surveyed to the plan which has since won so much acclaim, and the land allotted by March 1837. The survey of country land for the preliminary purchasers proceeded very slowly and it was not until May 1838 that the first ballot for country sections was held. At the same time the survey staff were becoming increasingly disgruntled with the unrealistic demands of the Commissioners and in June almost the entire staff resigned. Thoroughly exhausted by his constant struggle with misguided officialdom Light died in October 1839.

While the preliminary survey was in progress the settlers remained in Adelaide where their energies and resources were largely devoted to speculation in town lands and in land orders, and where supplies had to be imported with a corresponding outflow of capital. Superimposed on this situation was the continual arrival of new immigrants who served only to increase the volume of the unemployed.

Much of the inactivity of the colony was due to constant clashes between Hindmarsh and the Resident Commissioner, J. H. Fisher, which finally led to the dismissal of Fisher and the recall of Hindmarsh in July 1838. It was realized that the divided authority as incorporated in the Colonization Act was impracticable, and the next Governor, Colonel George Gawler, was authorized to represent both the Crown and the Commissioners.

Appalled at the stagnation of the colony, Gawler immediately undertook a liberal spending programme. Surveying was considerably increased with the result that half a million acres had been surveyed by mid 1841. At the same time an extensive public building and works programme provided relief for the unemployed. Generally Gawler created a renewed state of optimism which remained until 1840 when land values were depreciated and sales declined. Immigrants continued to arrive throughout this period.

Most of Gawler's expenditure was met by bills drawn on the Commissioners in London. In 1841 a situation was reached where the Commissioners could no longer honour these bills and Gawler was summarily replaced by Captain George Grey. The Imperial Parliament met the bulk of the debts, and in 1842 the Board of Commissioners was abolished. Thus the small measure of independence which the Board represented disappeared and South Australia became an ordinary Crown Colony.

The term of office of Grey was in contrast to that of Gawler, with Grey imposing rigid economies. Public expenditure was cut and considerable unemployment with its accompanying hardships followed. Speculation ceased and the unemployed gradually left Adelaide to be absorbed on the lands which Gawler had opened up. By this time the flow of immigrants had been stopped by the suspension of the assisted migration scheme.

By 1844 the colony was producing wheat in excess of its needs and when Major Robe succeeded Grey as Lieutenant-Governor in 1845 South Australia was finally self-supporting. Moreover prosperity was on the doorstep: copper had been located at Kapunda in 1843 and a major find was made at Burra in 1845. Heavy immigration followed these discoveries and continued until the Victorian gold rush. Copper soon became the principal export, with wool providing a complementary cargo. In addition, the repeal of the Imperial Corn Laws in 1846 and the Navigation Acts in 1849 strengthened the export trade in grain.

The discovery of gold in Victoria in 1851 greatly influenced the development of South Australia. In the first place it drained off a large proportion of the skilled artisans and forced the closing of the copper mines. On the other hand it gave great impetus to agriculture when the price of wheat rose sharply, and the feeding of the miners became as attractive a proposition as was the actual mining. A temporary shortage of money was relieved when considerable quantities of gold were attracted to the colony by enabling legislation and the provision of armed escorts. Four years later when the miners returned many of the more fortunate purchased land with their winnings.

At the same time political changes were taking place and in 1856 South Australia attained self government. Further details are given in Part 3—Constitution and Government.

EXPLORATION AFTER COLONIZATION

Only a minor portion of the area proclaimed as South Australia was to prove economically viable, but extensive exploration with its accompanying hardships was necessary to establish this fact. Post-colonization exploration was of two forms—the first being the continuous process of discovery as settlers sought grazing and crop lands and sometimes mineral resources, and the second the more deliberate activities of the professional explorers as they sought to cover vast distances through unknown terrain.

The earliest exploratory moves of the colonists were directed towards establishing an overland route between Adelaide and Encounter Bay, and in discovering a north-easterly passage to the River Murray that would by-pass the Mount Lofty Ranges. Contact was first made with Encounter Bay in about July 1837 by Colonel Light and J. H. Fisher, and in December of the same year an expedition by Strangways and Hutchinson played a further important part in making contact with the River Murray by driving a bullock cart across the ranges to Encounter Bay, and then exploring the Murray mouth, the Goolwa channel and the southern part of Lake Alexandrina. The north-easterly route to the Murray was first traversed successfully early in 1838. Penetration of the Mount Lofty Ranges began in 1837, and by the end of the year parties had crossed the ranges and descended to Lake Alexandrina.

From the beginning of 1838, attempts were made to open up stock routes from the eastern States. Joseph Hawdon and Charles Bonney were the first to make an overland cattle drive to Adelaide. Leaving Hawdon's station near Albury on 13th January 1838 with a party of seven men, they took a route which followed the Murray for much of the way, and reached Adelaide in 11 weeks with the cattle in good condition and only 4 head out of 300 lost *en route*. At the same time, Edward John Eyre was making a similar cattle drive, but after unsuccessfully trying to find a suitable trail south of the Murray, he was forced to make his way back to the Loddon River and then follow the trail taken by Hawdon. In another journey starting in 1838, Eyre became the first to bring sheep overland to Adelaide, driving 1,000 sheep and 600 cattle along the Hawdon

trail. Charles Sturt was another to make an early stock drive to Adelaide, while Bonney in 1839 pioneered an alternative route which followed the south-east coast of the State and crossed the Murray above Lake Alexandrina.

Other parts of the State were also attracting attention. A section of Yorke Peninsula was visited in 1838, and in the following year a number of expeditions were made into the hinterland of Port Lincoln. Thus by 1840 the area within a 50 mile radius of Adelaide had been explored for pastoral, farming and mineral lands. Settlers had also ventured by boat along the Murray, by boat to Port Lincoln and thence inland, and by boat and overland to Yorke Peninsula. Reports by drovers who came down the Murray suggested that the land on the other side of the Murray was of little immediate value. It was soon to be realized, however, that very different conditions prevailed in the lower South East, and by the mid 1840's this area was supporting a considerable sheep population.

Knowledge of the arid interior and of the far west coast was to be obtained from a number of major expeditions, the first such venture being led by the afore-mentioned Edward John Eyre. In 1839, Eyre journeyed north to Mount Arden, at the head of Spencer Gulf, where he established a base camp. From Mount Arden he made the first sighting of the dry bed of Lake Torrens. Crossing to Port Lincoln, Eyre proceeded up the west coast of the peninsula which was to bear his name, passed through Streaky Bay, and came to within 50 miles of the Western Australian border. The return journey to Mount Arden camp was made across the top of Eyre Peninsula.

The interest of the colonists was now divided between the country to the northward, including Eyre's new-found lake, and the possibility of establishing an overland stock route to Western Australia. Eyre having just returned from the desolate country of the Great Australian Bight showed little enthusiasm for the latter idea, and in June 1840 set out for the north. From Mount Arden he made three attempts to penetrate beyond the lakes, but after following the Flinders Ranges to Mount Hopeless and making a number of observations, he concluded that Lake Torrens was a giant horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for 18 years.

Thwarted in his efforts to go north Eyre decided to attempt the western crossing. Leaving Mount Arden the party separated, one group going direct to Streaky Bay while Eyre went down to Port Lincoln. The party reformed at Streaky Bay and moved to Fowler's Bay, where a camp was established in November 1840. After a number of preliminary explorations around the Bight, Eyre and a small party set out for King George's Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George's Sound in July after an extremely tortuous crossing which, although an example of human endeavour, contributed little to geographic knowledge.

In 1842 and 1843 the Surveyor-General, Colonel Frome, made two trips to the Lake Torrens region in an attempt to determine the nature of the area. However, after reaching a "desert-like" Lake Frome (which he believed to be part of Lake Torrens) he turned back, making two short thrusts to the east on the return journey. Frome had seen enough to be able to report that "there is no country . . . as far as the meridian 141° (and probably much beyond it) available for either agricultural or pastoral purposes".

Captain Charles Sturt, whose earlier journey down the Murray had helped precipitate the colonization of South Australia was again to contribute to South Australian exploration. Considerable mystique had developed concerning Central

Australia, including the rumoured presence of an inland sea, and in August 1844 Sturt set out from Adelaide in an effort to unveil this area. Hoping to avoid the supposed horseshoe lake, Sturt followed the Murray and Darling Rivers to Menindee. After passing through Broken Hill and seeing Eyre's Mount Hopeless from the other side of the lakes, the party moved to Mount Poole some 200 miles north of Menindee. Here they rested for six months while waiting for rain to fall. In July 1845 Sturt set off in a north-westerly direction crossing Sturt's Stony Desert and the north-east corner of the State. Although temporary relief was provided by Eyre Creek, whose course they followed for some considerable distance, the desert nature of the subsequent terrain forced the party to turn back when very close to their central goal, and only 500 miles from the Gulf of Carpentaria. A second assault on the desert also failed, although Sturt explored along Cooper's Creek for almost 100 miles before returning to the base camp and thence to Adelaide in January 1846.

In 1846 John Horrocks led a small party north from his station, Penwortham, through the Flinders Ranges via Horrocks Pass (so named by the party) and on to a camp site at Depot Creek. The party had brought with them the only camel then in the colony, the first time one had been used for exploration work in Australia. From Depot Creek Horrocks made two trips, the first of about twenty miles and the second about sixty miles to Lake Dutton where, jostled by his camel, he accidentally shot himself, thus bringing the expedition to an early end, but not before he had formed the opinion that there was no suitable pastoral land in that direction. Horrocks died of his wounds about three weeks later.

Further to the west a small expedition led by John Darke explored country to the north and east of the Gawler Ranges, and concluded that there was no useful land for settlers in this region. On his way home to Port Lincoln Darke was mortally wounded by natives near what is now known as Darke Peak. In 1857 Stephen Hack explored the country west of Lake Gairdner and found useful pastoral country at the south-western end of the Gawler Ranges.

At about this time the northern lakes again became a centre of interest. In 1856 there had been considerable rainfall in the area, and when the Deputy Surveyor-General, G. W. Goyder, visited Lake Torrens he found an inland sea surrounded by excellent vegetation. Goyder's glowing report was, however, discounted by a return journey the following year. Indeed the extremely fickle seasons experienced in the north were to lead to many conflicting reports as the explorers and settlers moved northwards. Between 1857 and 1859 several exploratory expeditions visited the region of Lake Torrens and it was during this period that the myth of the horseshoe lake was destroyed. Knowledge of the lakes district was extended by B. H. Babbage, who discovered Lake Eyre in 1858, and Major P. E. Warburton, who located the first stock crossing. A. C. Gregory, coming south from Queensland in search of Leichhardt, passed between the lakes *en route* to Adelaide in 1858.

At the same time parties were searching for pastoral country in the north, with the most extensive search being made by John McDouall Stuart in 1858. Stuart, who had been in Sturt's party in 1844, set out from Mount Arden, passed to the west of Lake Torrens, and circled north of Coober Pedy, returning to Mount Arden via Fowler's Bay. In the meantime the South Australian Government was offering a reward for the first successful north-south crossing of the continent, and after making two exploratory journeys to the north in 1859, Stuart set out in March 1860 to attempt such a crossing.

Stuart had an advantage over Sturt in that the intervening years had revealed the lakes to be passable and he was thus virtually able to begin his expedition at

Chambers Creek at the southern tip of Lake Eyre, and to pass through known country as far as The Neales watercourse. Stuart reached the MacDonnell Ranges in the Northern Territory in April, and later the same month estimated that he had reached the centre of the continent. His attempt to reach the northern coastline, however, was thwarted and in June he turned back. In a second attempt in 1861 he followed the same route and this time reached Newcastle Waters before being forced to return. At his third attempt Stuart was successful, reaching the sea on the 24th July 1862 and establishing a route which was to be followed by the Overland Telegraph 10 years later.

While Stuart was making his second attempt to reach the north, the ill-fated Burke and Wills expedition was crossing the continent further to the east. Their journey took them across the north-east corner of the State along much the same path as that followed by Sturt some 17 years earlier. In 1861 and 1862 parties led by Alfred Howitt, who left from Melbourne, and John McKinlay from Adelaide were to pass through the same area in search of Burke and Wills. After finding traces of the expedition on Cooper's Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870-1872, and the subsequent maintenance of this link between Adelaide and Darwin, naturally led to minor exploration of the adjacent country. At this stage attention turned to the land between the telegraph line and the settlements of Western Australia. Foremost among the explorers of this region, and whose paths brought them within South Australia, were John Forrest and William Ernest Giles. In March 1870 Forrest left Perth for Adelaide, covering much the same path as Eyre had taken 30 years earlier. Forrest crossed South Australian territory again in 1874 when he travelled from Geraldton in Western Australia across the centre of the continent, coming down the Alberga watercourse to Peake telegraph station.

Giles had set out from the Overland Telegraph in 1873 at a point north of Oodnadatta, but was forced to return after covering approximately half the distance to the western seaboard. He tried again in May 1875, this time going south from Beltana to Port Augusta and then to Ooldea on a route which 40 years later was to be closely followed by the east-west railway. From Ooldea the party went north for over 100 miles before again striking out to the west. Giles reached Perth in November, and three months later left Geraldton to return to South Australia on a route similar to that taken by Forrest two years earlier, arriving at Peake telegraph station in August 1876.

In 1873 W. C. Gosse, returning from an unsuccessful attempt to reach Perth from Alice Springs, had discovered and named the Musgrave Ranges.

A number of persons other than those mentioned contributed to the exploration of the State, both in the period discussed and subsequently. The inhospitable nature of the country meant that many areas had to await the coming of the aeroplane before an accurate physical description could be recorded. One such expedition was that led by Donald Mackay in 1935 when the western half of the State north of the east-west railway line was aerially surveyed.

PART 3

CONSTITUTION AND GOVERNMENT

3.1. SYSTEM OF GOVERNMENT

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (*e.g.* international affairs including defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition statutory powers within specified fields are exercised by certain semi-governmental authorities such as Municipal Tramways Trust, Electricity Trust of South Australia, South Australian Housing Trust, and Metropolitan and Export Abattoirs Board.

Both the Commonwealth and the South Australian Parliaments are bicameral: in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House; in each the Upper House has restricted powers concerning money Bills.

Electoralates

For elections for the Commonwealth Upper House (Senate) each State is a single multi-member electorate. South Australia is divided into five multi-member electoralates for elections for the State Upper House (Legislative Council) and into eleven and thirty-nine single-member electoralates respectively for the Lower House of the Commonwealth (House of Representatives) and the State (House of Assembly).

Although in both the Commonwealth and South Australia it is Parliament alone which has the power to make changes in the number, size, and distribution

of electorates, it is customary to appoint Electoral Commissions to recommend in these matters.

The terms of the Commonwealth Constitution provide for changes in House of Representatives electorates in certain eventualities, but in the South Australian Parliament changes in electorates for either House can be effected only by amendment to the Constitution.

Because of a prescribed relationship between population and the distribution of House of Representatives electorates Commonwealth Electoral Commissions are usually appointed after each Census to consider the effect of changes in the distribution of population and, if necessary, to suggest alterations to the boundaries and distribution amongst the States of Lower House electorates. In South Australia the boundaries of electorates are defined in a schedule to the State Constitution; there is no prescribed relationship between population and electorates, and Electoral Commissions are appointed at irregular intervals.

Party System

Most members of both the Commonwealth and the South Australian Parliaments are elected by the voters from candidates pre-selected and endorsed by one or other of the major parties. Once policy has been determined at a party meeting, members usually observe party solidarity, speaking, voting, and acting in accordance with that policy both in and out of Parliament whether the party be in government or in opposition.

Responsible Cabinet Government

The system known as "responsible Cabinet government" operates throughout Australia; the Sovereign (or the Governor-General of the Commonwealth or Governor of the State as the representative of the Sovereign) performs acts of government on the advice in Executive Council of Ministers who are accountable for those acts to Parliament and, through Parliament, to the electorate. An essential feature of the system is that the Government will resign or seek a new mandate from the electors if it ceases to command a majority on the floor of the Lower House.

Ministers, Cabinet, and Executive

When a Ministry is to be formed, usually after a general election or when a Government has been defeated in the Lower House, the representative of the Sovereign "sends for" that Member of the Lower House who he thinks will be supported by a majority in the House; when assured of that Member's ability to command the necessary majority the Sovereign's representative commissions that Member, as Prime Minister or Premier, to form a Ministry. Persons to be appointed to the rank of Minister are usually selected either by the Prime Minister or Premier personally or by ballot by Government party members from Members of Parliament belonging to that party or coalition of parties constituting a majority in the popular (lower) House. Irrespective of the method of selecting ministers it is customary for the Prime Minister or Premier to allocate ministerial portfolios, after which the Sovereign's representative formally approves the appointment of each Minister.

A Minister generally holds one or more portfolios and may administer one or more departments. Although each Minister is answerable to Parliament for

the administration of his department it is customary for him to be supported by all other Ministers, provided he acts and speaks within the broad framework of established policy.

The Cabinet is a ministerial body which may comprise all Ministers, as in South Australia, or senior Ministers only, as in the Commonwealth. It does not form part of the legal machinery of government and details of its proceedings are not normally made public.

In each State and in the Commonwealth, there is an Executive Council which is a constitutional body formed to advise the Sovereign's representative in the exercising of executive power. Traditionally attendance is limited to the Sovereign's representative and Ministers of the day, although actual membership may be wider. Meetings of Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk: decisions of Cabinet are, where appropriate, given legal form, appointments are made and resignations accepted, proclamations are issued, and regulations are approved.

Committees

At one stage in the consideration of every Bill each House resolves itself into Committee for freer discussion of proposed legislation than would be possible under the rules of formal debate usually applied in Parliament.

In addition to this normal Parliamentary procedure there operates in the Commonwealth and in this State, a Committee system whereby a limited number of Members enquire deeply into particular matters thus enabling a greater volume of work to be handled more effectively. There are Joint Committees, consisting of members of both Houses, and each House has committees to attend to its own functions. Standing Committees (*e.g.* the South Australian Public Works Standing Committee) consider matters of a continuing or recurring nature, and *ad hoc* committees are formed to enquire into and report on specific matters as they arise.

Party representation on Joint and House Committees is usually proportionate to representation in Parliament or the appropriate House respectively.

Administration

The pattern of public administration in South Australia is determined by the division and delegation of statutory authority already mentioned. Various aspects and areas of administration are attended to by Commonwealth and State Government departments, by local government authorities, and by semi-government instrumentalities deriving authority and responsibility from either Commonwealth or State legislation. Within this framework numerous Boards and Committees exercise administrative and, in some cases, judicial powers.

These various levels of administration are largely interdependent and complementary.⁽¹⁾ Some items of Commonwealth legislation are completely, or almost

(1) "Examples of administrative interdependence are legion. Indeed, growing interdependence of this kind has accelerated the establishment of organs of Commonwealth and State co-operation in recent years. To the great credit of public administrators in Australia formal and informal co-operation take place at almost every point of common interest." G. S. Reid "*Commonwealth-State Relations—Administrative Trends and Problems*" in *Public Administration* (Aust.), Vol. XXI, No. 2, p. 113.

completely administered by State authorities, often in matters in which (the Commonwealth and the State having concurrent powers) Commonwealth legislation either supplements or supersedes State legislation, *e.g.* the South Australian Supreme Court applies the Commonwealth Matrimonial Causes Act in this State. Performance of State functions by Commonwealth authorities is neither as frequent nor as extensive, but there are instances of the provision of services or facilities, *e.g.* the Commonwealth Electoral Office maintains the House of Assembly electoral roll; State Land Tax may be paid at Post Offices.

Judicature

The degree to which South Australians are subject to the jurisdiction of Commonwealth and State courts respectively varies with the type of action. Most criminal and civil actions are heard, at least originally, in State courts, but many individuals are subject exclusively to Commonwealth jurisdiction in industrial matters.

Generally speaking, the decisions of the lower courts (*e.g.* the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Courts, and the decisions of these higher courts, acting in either their original or appellate jurisdictions, may be the subject of appeal to the High Court of Australia. An ultimate appeal may, with the consent of the High Court, be made to the Privy Council.

Included in the jurisdiction of the High Court of Australia is the review of legislation to test its constitutional validity.

3.2. COMMONWEALTH GOVERNMENT

Federation

The Commonwealth of Australia was proclaimed as from 1st January 1901 in "An Act to constitute the Commonwealth of Australia", a statute of the Imperial Parliament, which received Royal assent in July 1900. The draft constitution, which was enacted with only minor amendment, had been prepared at inter-colonial conferences during 1897, 1898, and 1899, and was accepted at referenda during 1899 by South Australia, New South Wales, Victoria, Queensland, and Tasmania, and in 1900 by Western Australia.

Separation of Powers

The Commonwealth Constitution provides, in sections 52, 69, 86, 90, and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in section 51, for certain specified fields of interest to be common to both Commonwealth and State Governments; in cases of conflicting legislation, that of the Commonwealth prevails to the extent of the inconsistency. All other fields of interest remain the exclusive province of the State Governments until amendment is made to the Commonwealth Constitution Act or until the State Parliaments cede particular powers to the Commonwealth Parliament, as was the case in 1921 when the States transferred to the Commonwealth full control over air navigation.

Financial Resources

Since Federation the distribution of financial resources between the Commonwealth and the States has been an almost constant problem. Under the original terms of the Constitution the Commonwealth, for ten years, returned to the States three quarters of the net revenues from the duties of customs and excise; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Part 12—Public Finance.

COMMONWEALTH LEGISLATURE

The Commonwealth Constitution provides that “the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives”. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

Franchise

Elections for both Houses of Parliament are conducted by secret ballot. There is universal adult suffrage of British subjects who have resided in Australia for at least six months and who are not of unsound mind, convicted and under sentence for any offence punishable by imprisonment for one year or longer, attainted of treason, or holders of temporary entry permits under the Migration Act.

Compulsory voting was introduced in 1924.

In 1962 special provision was made for the enfranchisement of Australian Aborigines in all States, subject to residence for one month in the subdivision for which enrolment is sought. They are not compelled to enrol as electors, but once enrolled they must vote. Aborigines in South Australia already held this entitlement for Federal elections by virtue of their enfranchisement under similar conditions for State House of Assembly elections.

EXECUTIVE GOVERNMENT

Governor-General

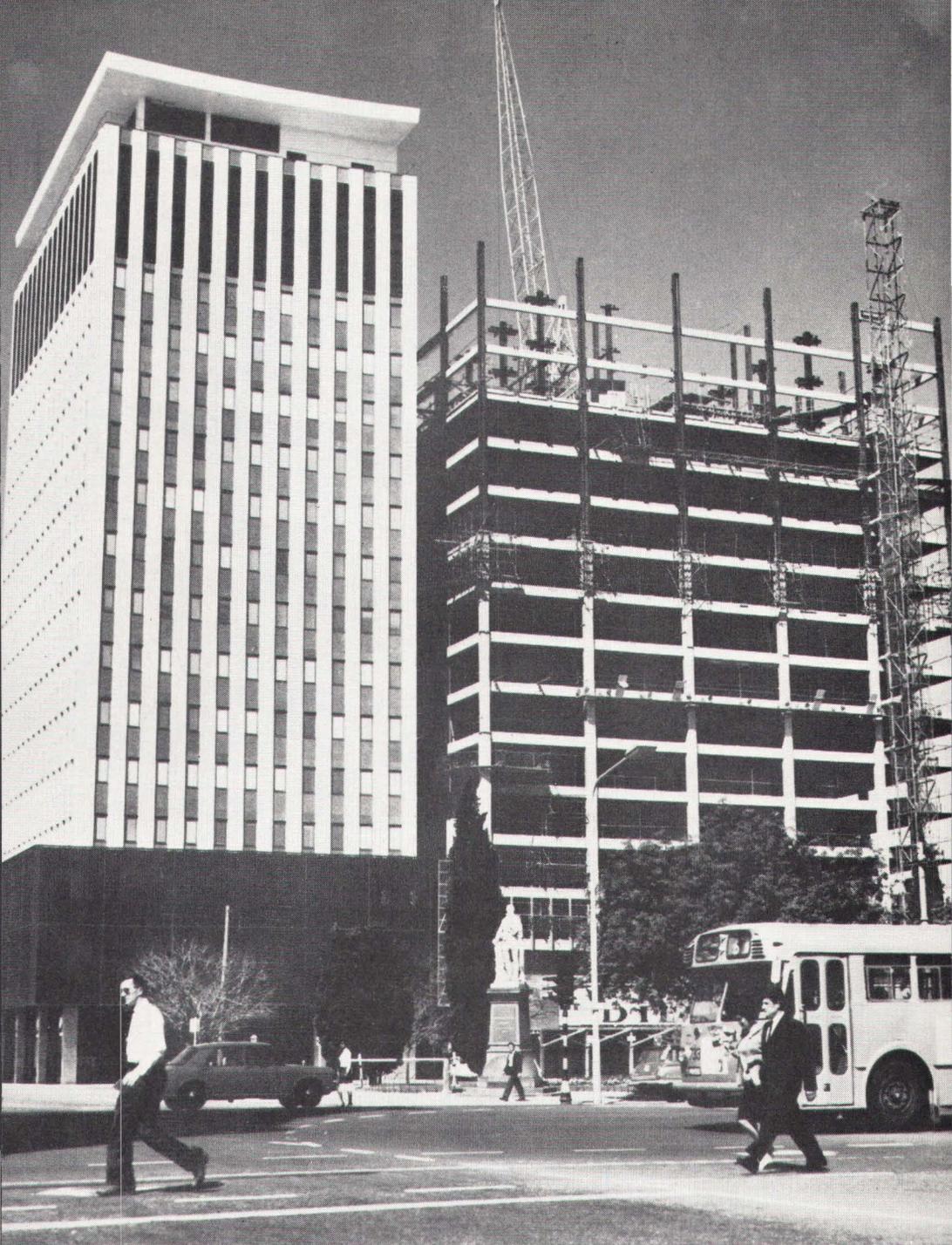
On 22nd September 1965 His Excellency the Rt. Hon. Lord Casey, P.C., G.C.M.G., C.H., D.S.O., M.C., was sworn in as the seventeenth Governor-General of the Commonwealth. His authority as the Queen’s representative is derived from Letters Patent, Instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

Executive Council

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are members. Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

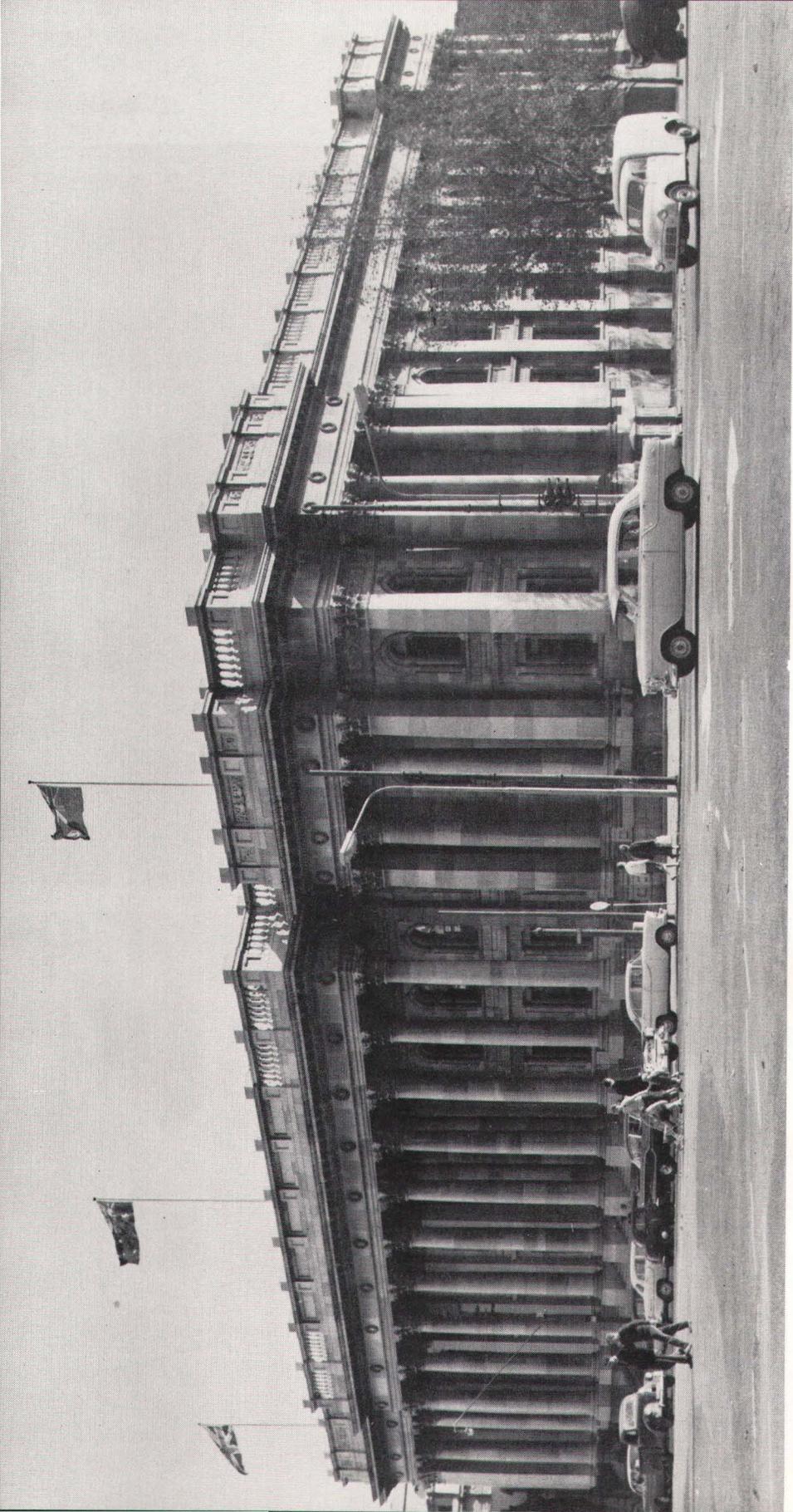
Ministry

Members of the 35th Ministry (the 2nd Holt Ministry) are listed below; the State in which each Minister’s electorate is situated is shown in parenthesis.



Department of Immigration

Victoria Square Adelaide—the Reserve Bank Building and, under construction, a new office building for the State Government



Parliament House, Adelaide—built of South Australian granite and marble and completed in 1939

Holt Ministry from 14th December 1966***Prime Minister***

The Rt. Hon. H. E. Holt, M.P. (Vic.)

Minister for Trade and Industry

The Rt. Hon. J. McEwen, M.P. (Vic.)

Treasurer

The Rt. Hon. W. McMahon, M.P. (N.S.W.)

Minister for External Affairs

The Hon. P. M. C. Hasluck, M.P. (W.A.)

Minister for Defence

The Hon. A. Fairhall, M.P. (N.S.W.)

Minister for the Interior

The Hon. J. D. Anthony, M.P. (N.S.W.)

Minister for Supply

Senator the Hon. N. H. D. Henty, (Tas.)

Minister for Primary Industry

The Rt. Hon. C. F. Adermann, M.P. (Qld.)

Vice-President of the Executive Council; and Postmaster-General

The Hon. A. S. Hulme, M.P. (Qld.)

Minister for National Development

The Hon. D. E. Fairbairn, D.F.C., M.P. (N.S.W.)

Minister for Education and Science

Senator the Hon. J. G. Gorton, (Vic.)

Minister for Labour and National Service

The Hon. L. H. E. Bury, M.P. (N.S.W.)

(The above Ministers constitute the Cabinet.)

Minister for Shipping and Transport

The Hon. G. Freeth, M.P. (W.A.)

Minister for Territories

The Hon. C. E. Barnes, M.P. (Qld.)

Minister for Civil Aviation

The Hon. R. W. C. Swartz, M.B.E., E.D., M.P. (Qld.)

Minister for Immigration

The Hon. B. M. Snedden, Q.C., M.P. (Vic.)

Minister for Health

The Hon. A. J. Forbes, M.C., M.P. (S.A.)

Minister for Air, and Minister assisting the Treasurer

The Hon. P. Howson, M.P. (Vic.)

Minister for Customs and Excise

Senator the Hon. K. M. Anderson, (N.S.W.)

Minister for Repatriation

Senator the Hon. G. C. McKellar, (N.S.W.)

Minister for Social Services

The Hon. I. M. Sinclair, M.P. (N.S.W.)

Minister for Housing

Senator the Hon. Dame Annabelle Rankin, D.B.E., (Qld.)

Minister for the Army

The Hon. J. M. Fraser, M.P. (Vic.)

Attorney-General

The Hon. N. H. Bowen, Q.C., M.P. (N.S.W.)

Minister for the Navy

The Hon. D. L. Chipp, M.P. (Vic.)

Minister for Works

The Hon. C. R. Kelly, M.P. (S.A.)

THE SENATE

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

Representation

At present the Senate consists of sixty members—ten from each State. The original provision was that each State, voting as a single electorate, should elect six senators but by the Representation Act of 1948, which was effective for the 1949 elections, the number was raised to ten. Except in extraordinary circumstances each Senator is elected for a term of six years, five from each State retiring every three years.

Parliament has the power to vary the number of Senators above a minimum of six for each State. Under the terms of the Constitution any variation in the number of Senators necessitates a change in the number of Members of the House of Representatives.

The party representation in the Senate at 1st July 1965 was:

State	To Retire 30th June 1968				To Retire 30th June 1971			
	L.P.	C.P.	A.L.P.	Others	L.P.	C.P.	A.L.P.	Others
New South Wales	1	1	3	—	2	1	2	—
Victoria	2	1	2	—	2	—	2	(a)
Queensland	3	1	1	—	1	1	2	(a)
South Australia	2	—	3	—	2	—	3	—
Western Australia	1	1	3	—	2	1	2	—
Tasmania	2	—	2	(b)	2	—	3	—

L.P.—Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria). C.P.—Country Party. A.L.P.—Australian Labor Party.

(a) One member—Australian Democratic Labor Party.

(b) One member—Independent.

The members representing South Australia in the Senate are:

To Retire 30th June 1968:

Bishop, Reginald (A.L.P.)
Cavanagh, James Luke (A.L.P.)
Hannaford, Douglas Clive (L.C.L.)
Mattner, Edward William (L.C.L.)
Nicholls, Theophilus Martin (A.L.P.)

To Retire 30th June 1971:

Davidson, Gordon Sinclair (L.C.L.)
Drury, Arnold Gordon (A.L.P.)
Laught, Keith Alexander (L.C.L.)
Ridley, Clement Frank (A.L.P.)
Toohey, James Philip (A.L.P.)

Elections for the Senate: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10th December 1949 ..	434,224	420,437	96.82	48,838	11.62
28th April 1951	440,454	427,593	97.08	24,792	5.80
9th May 1953	453,496	437,583	96.49	21,297	4.87
10th December 1955 ..	462,747	444,827	96.13	39,802	8.95
22nd December 1958 ..	490,930	473,832	96.52	36,677	7.74
9th December 1961 ...	521,396	501,312	96.15	28,284	5.64
5th December 1964 ..	551,341	528,464	95.85	39,421	7.46

Prior to the election in 1949 the system of preferential voting was used for Senate elections, but for the 1949 and subsequent elections a system of proportional representation has been used.

THE HOUSE OF REPRESENTATIVES

Representation

The Members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole. Section 24 of the Commonwealth Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, "until the Parliament otherwise provides", for allocating to each State its share of the available seats, but stipulates that no original State shall have less than five members in the House. In addition one member with limited voting rights is elected from the Northern Territory.

In the redistribution of seats on the basis of the Census of 30th June 1954 South Australia gained a seat. Eleven members from South Australia were elected for a term of three years on 26th November 1966.

Preferential voting is used for elections for the House of Representatives.

At present each State is represented in this House as follows—

Party	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
L.P. ...	20	19	8	8	4	2	—	—	61
C.P. ...	9	5	4	—	2	—	1	—	21
A.L.P. .	17	8	6	3	3	3	—	1	41
Ind. ...	—	1	—	—	—	—	—	—	1

L.P.—Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria). C.P.—Country Party. A.L.P.—Australian Labor Party. Ind.—Independent.

House of Representatives, 1966 Elections

Voting and Party Representation in South Australian Electorates

Electorate	Electors on Roll	Electors Voting	Successful Candidates		
			Name	Party	First Preference Votes
Adelaide	32,920	31,282	Jones, A. T.	L.C.L.	14,724
Angas	45,104	43,626	Giles, G. O'H.	L.C.L.	30,070
Barker	53,374	51,716	Forbes, Hon. A. J.	L.C.L.	33,921
Bonython	88,083	84,324	Nicholls, M. H.	A.L.P.	40,133
Boothby	45,891	43,914	McLeay, J. E.	L.C.L.	28,187
Grey	49,630	47,628	Jessop, D. S.	L.C.L.	22,562
Hindmarsh	55,131	53,112	Cameron, C. R.	A.L.P.	26,096
Kingston	69,071	66,881	Brownbill, Miss K.	L.C.L.	35,041
Port Adelaide	45,593	43,839	Birrell, F. R.	A.L.P.	23,766
Sturt	53,285	51,032	Wilson, I. B. C.	L.C.L.	31,479
Wakefield	47,383	45,987	Kelly, Hon. C. R.	L.C.L.	31,280

Elections for the House of Representatives: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10th December 1949 .	434,224	420,437	96.82	9,380	2.23
28th April 1951	440,454	(a)384,082	(a)97.09	7,910	2.06
29th May 1954	455,872	(a)357,854	(a)96.77	8,812	2.46
10th December 1955 .	462,747	444,827	96.13	18,050	4.06
22nd December 1958 .	490,930	473,832	96.52	15,619	3.30
9th December 1961 ..	521,396	501,312	96.15	15,629	3.12
30th November 1963 .	541,536	523,135	96.60	13,963	2.67
26th November 1966 .	585,465	563,341	96.22	16,220	2.27

(a) Contested electorates only.

REFERENDA

Alteration to the Commonwealth Constitution must be initiated in the Commonwealth Parliament and requires the approval of a majority of electors voting in a majority of the States as well as a majority of all the electors voting in the Commonwealth as a whole.

Of the twenty-six proposals so far submitted to the people of Australia only five have been approved (one in each of 1906, 1910, 1928, 1946 and 1967).

The most recent referendum (1967) proposed two alterations to the Constitution—the first, to sections 7 and 24-27, sought approval to alter the Constitution so that the number of Members of the House of Representatives may

be increased without necessarily increasing the number of Senators; the second, to sections 51 and 127, sought approval to alter the Constitution so as to omit certain words relating to the people of the Aboriginal race in any State and so that Aboriginals are to be counted in reckoning the population.

All States and a majority of electors in the Commonwealth voted in favour of the proposal regarding Aboriginals while all States (except New South Wales) and a majority of Commonwealth voters rejected the Parliamentary proposal.

3.3. GOVERNMENT OF SOUTH AUSTRALIA

EARLY CONSTITUTIONAL HISTORY

As has been described in Part 2 the Foundation Act for South Australia provided for the powers of government in the new colony to be shared by a Governor and a Board of Colonization Commissioners. The Board, which was to be represented in the Colony by a Resident Commissioner, was given power to dispose of Crown Lands in the Colony at a fixed price and to apply the funds derived therefrom to the provision of passages for specially chosen immigrants from the United Kingdom. The other executive and legislative powers in the Colony were entrusted either to the Governor alone or to the Governor associated with a Council of Government, which consisted of certain government officials presided over by the Governor.

Many problems were associated with the division of authority thus created, and during the first few years of its existence the Colony experienced very considerable administrative and financial difficulties. The Colonization Commissioners, in their Fourth Annual Report to the Secretary of State for the Colonies, complained that "the boundary line between the power of the local government and that of the commissioners was not distinctly drawn". The Foundation Act was amended in 1838 and Lt. Col. Gawler was appointed both Governor and Resident Commissioner. Although this change brought about unity of action between the two authorities within South Australia it failed to provide a satisfactory solution for the Colony's financial problems. Consequently in 1842 the Imperial Parliament passed legislation repealing the original 1834 Foundation Act and the amending 1838 Act; with the repeal of those Acts the Authority ceased under which the Board of South Australian Commissioners and the Resident Commissioner exercised their functions. Thus all power was vested in the Colonial Office, and South Australia was placed on the same footing as other Crown colonies.

The new Act provided authority for Her Majesty to set up within the province one of three alternative Councils of Legislature: a Legislative Council consisting of the Governor and seven other persons; a General Assembly elected by the freeholders and other inhabitants of the colony and a Legislative Council appointed by the Crown; or a single House of Assembly composed of both nominated and elected members. The provision prohibiting the transport of convicts to the colony was re-enacted.

It was the first of these three forms that was brought into operation, and under Royal Instructions issued at Windsor on 29th August 1842 the Legislative Council was constituted to consist of the Governor and three official and four non-official Members (persons not holding offices under the Crown) nominated by the Crown.

From time to time the colonists persisted with petitions for popularly elected representation. By 1849 the colony was in a position to carry the costs of local self-government, and in England in the same year a Committee of the Privy Council styled "The Committee for the consideration of all matters relating to Trade and Foreign Plantations" presented a long and able report, in which it recommended that more extensive powers of self-government should be granted to the Australian colonies.

An Act "for the better government of Her Majesty's Australian Colonies", which closely followed the recommendations of this Committee, was passed by the Imperial Parliament in 1850. This Act authorized the existing nominee Council in South Australia to set up a new form of Legislative Council, to consist of such members not exceeding 24 as should be thought fit, one-third of whom were to be appointed by Her Majesty and two-thirds of whom were to be elected; the Governor, with the advice and consent of the Legislative Council so to be established, was authorized to make laws for the peace, welfare, and good government of the colony. The Enabling Act further provided that it should be lawful for the Governor and the partly nominated and partly elected Legislative Council, after its constitution in due course, to establish in lieu of such Legislative Council "a Council and a House of Representatives or other separate Legislative Houses, to consist respectively of such members, to be appointed or elected respectively by such persons and in such manner as by such Act or Acts shall be determined and to vest in such Council and House of Representatives or other separate Legislative Houses the powers and functions of the Legislative Council for which the same may be substituted." Any Act passed for this purpose had to be reserved for signification of Her Majesty's pleasure thereon and laid before both Houses of the Imperial Parliament for at least 30 days before such consent was given.

The new Legislative Council was elected in July of 1851. In 1853 it exercised the authority given to it by the Imperial Act and passed a Bill for an Act to establish a Parliament in South Australia. Under the terms of this Bill the Parliament of South Australia was to consist of a Legislative Council and a House of Assembly. The Members of the Legislative Council were to be nominated by Her Majesty and were to hold office for life. The House of Assembly was to consist initially of thirty-six Members who were to be elected by adult male inhabitants who held a freehold estate of the clear value of \$40, or were householders occupying a dwellinghouse of the clear annual value of \$10, or were rated by any municipality or district council within the district for which they voted, or had a leasehold estate in possession of the value of \$20 per annum, with not less than one year to run.

As was required by the Imperial Act the Bill was forwarded to London to be laid before both Houses of the Imperial Parliament and to be submitted for Her Majesty's Assent.

A considerable body of the colonists opposed the principle of a nominated Legislative Council and favoured an elective Upper House. During the substantial period that elapsed between the despatch of the Parliament Bill to London and the receipt of the decision of the Imperial Authorities this group prepared a Memorial for transmission to Her Majesty. In this Memorial, which was subsequently signed by 5,000 persons, the protagonists of an elective Upper House expressed their strong opposition to certain of the provisions of the Parliament Bill and associated legislation. As a result the Queen in Council refused assent to the Bill, and it was returned to the South Australian Legislative Council for re-consideration.

RESPONSIBLE GOVERNMENT

On 15th August 1855 the Legislative Council was dissolved, and elections for a new Council were held in September and October of the same year. A new Constitution Bill, making provision for an elective Upper House, was prepared by the Government and submitted in November to the newly elected Legislative Council. The Bill was debated at length and a number of amendments were adopted. The Bill as amended was passed on the 2nd January 1856 and was referred for Her Majesty's Assent. It was submitted to the Queen in Council on 24th June and received Royal Assent. The "Act to establish a Constitution for South Australia and to grant a Civil List to Her Majesty" came into force on 24th October 1856.

The principal provisions of the Act were as follows—

1. Parliament was to consist of two Houses—a Legislative Council and a House of Assembly.
2. The Legislative Council was to have 18 members, to be elected by adult males possessing certain property qualifications.
3. The House of Assembly was to have 36 members, to be elected on the basis of manhood suffrage.
4. The life of the House of Assembly was to be three years.
5. All Bills for appropriating revenue or for imposing new taxes were to originate in the House of Assembly.
6. Power to appoint to all public offices was to be vested in the Governor acting with the advice and consent of the Executive Council.
7. Any Bill for an Act to alter the constitution of the Legislative Council or the House of Assembly had to have its second and third readings passed by an absolute majority of the total membership of each House.

The Constitution Act of 1855-1856 which inaugurated the system of Responsible Government in South Australia remains the basis of the State's present day Constitution Act, 1934-1965.

VICE-REGAL REPRESENTATION

Since 4th April 1961 Lieutenant-General Sir Edric M. Bastyan, K.C.M.G., K.C.V.O., K.B.E., C.B., has been the Queen's representative in South Australia.

The title of the vice-regal representative has been varied from time to time. The first three holders of the office were styled "Governor and Commander-in-Chief", the next two, "Lieutenant-Governor", and the following two, "Captain-General and Governor-in-Chief". The title then reverted to its original form until Federation in 1901. Since then, because of the appointment of a "Governor-General and Commander-in-Chief in and over the Commonwealth", the holder of the State office has been described simply as "Governor", and this title is used in the following table, which lists occupants of the office since the foundation of South Australia.

Governors of South Australia

Name	From	To
Captain John Hindmarsh, R.N., K.H.	28th December 1836	16th July 1838
Lt.-Col. George Gawler, K.H.	17th October 1838	15th May 1841
George Grey, Esq.	15th May 1841	25th October 1845
Lt.-Col. Frederick Holt Robe	25th October 1845	2nd August 1848
Sir Henry E. F. Young	2nd August 1848	20th December 1854
Sir Richard G. MacDonnell, C.B.	8th June 1855	4th March 1862
Sir Dominick Daly	4th March 1862	19th February 1868
Rt. Hon. Sir James Fergusson, BART.	16th February 1869	18th April 1873
Sir Anthony Musgrave, K.C.M.G.	9th June 1873	29th January 1877
Lt.-Gen. Sir Wm. F. D. Jervis, G.C.M.G., C.B.	2nd October 1877	9th January 1883
Sir Wm. C. F. Robinson, G.C.M.G.	19th February 1883	5th March 1889
Rt. Hon. Earl of Kintore, G.C.M.G.	11th April 1889	10th April 1895
Sir Thomas F. Buxton, BART., G.C.M.G.	29th October 1895	29th March 1899
Rt. Hon. Hallam, Baron Tennyson, K.C.M.G. .	10th April 1899	17th July 1902
Sir George R. Le Hunte, K.C.M.G.	1st July 1903	18th February 1909
Admiral Sir Day Hort Bosanquet, G.C.V.O., K.C.B.	18th February 1909	22nd March 1914
Lt.-Col. Sir Henry L. Galway, K.C.M.G., D.S.O.	18th April 1914	30th April 1920
Lt.-Col. Sir Wm. E. G. Archibald Weigall, K.C.M.G.	9th June 1920	30th May 1922
Lt.-Gen. Sir George T. M. Bridges, K.C.B., K.C.M.G., D.S.O.	4th December 1922	4th December 1927
Brig.-Gen. the Hon. Sir A. G. A. Hore-Ruthven, V.C., K.C.M.G., C.B., D.S.O.	14th May 1928	26th April 1934
Maj.-Gen. Sir W. J. Dugan, K.C.M.G., C.B., D.S.O.	28th July 1934	23rd February 1939
Sir Charles M. Barclay-Harvey, K.C.M.G.	12th August 1939	26th April 1944
Lt.-Gen. Sir C. W. M. Norrie, K.C.M.G., C.B., D.S.O., M.C.	19th December 1944	19th June 1952
Air Vice-Marshal Sir Robert A. George, K.C.M.G., K.C.V.O., K.B.E., C.B., M.C.	23rd February 1953	7th March 1960
Lt.-Gen. Sir Edric M. Bastyan, K.C.M.G., K.C.V.O., K.B.E., C.B.	4th April 1961	

As titular head of the Government of South Australia the Governor exercises powers, duties, and functions, similar to those of a constitutional sovereign. On the one hand he is indirectly responsible to the Imperial Parliament through the Secretary of State for Commonwealth Relations, and on the other hand he usually acts on the advice of his Ministers, who take the responsibility for their advice. Nevertheless, the Governor retains important spheres of discretionary action and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. To ensure continuity of services, the Governor has power to appropriate up to \$1,200,000 per annum for public service without specific Parliamentary authority.

The Governor's normal term of office is 5 years, but he can be appointed for one or more subsequent terms. At present he is granted a salary of \$15,000 per annum, an expense allowance based on an amount of \$14,000 per annum and altered in accordance with the Consumer Price Index number for Adelaide as the occasion arises, plus an allowance for payment of the salaries of his staff.

In the absence or prolonged illness of the Governor other persons have been appointed to administer the government of the State. These persons have been variously styled "Lieutenant-Governor", "Deputy-Governor", "Deputy Lieutenant-Governor", and "Administrator", and several of them have held office more than once. The 15 persons so appointed have been—

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
George Milner Stephen, Esq.	16/7/1838	17/10/1838	1	—	93
Boyle Travers Finnis, Esq.	20/12/1854	8/6/1855	1	—	170
Lt.-Col. Francis G. Hamley	20/2/1868	15/2/1869	1	—	362
Maj. James Harwood Rocke	6/4/1870	5/5/1870	1	—	29
Hon. Sir Richard D. Hanson, Chief Justice	7/12/1872	9/6/1873	1	—	184
Rt. Hon. Sir Samuel J. Way, BART., Chief Justice	29/1/1877	17/11/1915	65	6	117
Sir William W. Cairns, K.C.M.G.	24/3/1877	17/5/1877	1	—	54
Hon. James P. Boucaut, Judge	26/10/1885	16/9/1897	9	—	263
Hon. William H. Bunday, Judge	30/7/1888	9/8/1888	1	—	10
Hon. Sir G. J. R. Murray, K.C.M.G., LL.M., Chief Justice	25/9/1916	9/2/1942	103	6	47
Hon. Thomas Slaney Poole, M.A., LL.B., Acting Chief Justice	20/3/1925	22/11/1925	2	—	240
Hon. Sir H. Angas Parsons, LL.B., Acting Chief Justice	11/6/1935	19/2/1942	6	—	54
Hon. Sir J. Mellis Napier, K.C.M.G., LL.D., Chief Justice	21/4/1942	24/5/1967	128	7	77
Hon. Sir Herbert Mayo, LL.B., Judge	15/10/1946	9/1/1965	25	—	187
Hon. Sir G. S. Reed, LL.B., Judge....	24/7/1951	4/11/1957	5	—	31

CABINET AND EXECUTIVE GOVERNMENT

In South Australia all Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The Constitution Act of 1855-1856 provided that every Minister must be a Member of either the Legislative Council or the House of Assembly or become a Member within three months of appointment. However, in 1873 an amendment was made to the Act authorizing the Governor to appoint an Attorney-General from outside Parliament; this provision was retained until 1953, and four Attorneys-General were so appointed.

The maximum number of Ministers has been varied from time to time. In 1856 the number was 5; in 1873—6; 1901—4; 1908—6; 1953—8; 1965—9. This is the lowest number of Ministers in any Parliament in the Commonwealth. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to 5 and in 1965 to 6.

The Constitution of 1856 provided for salary payments to Ministers but not to other Members. Salary payments to ordinary Members commenced in 1887. The 1966-67 appropriation for salaries and allowances for nine Ministers is \$44,700 paid in addition to salaries and allowances received by Ministers as Members.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. Not only Government Departments are subject to Ministerial control; statutory authorities also come under some degree of Ministerial or Parliamentary oversight.

Premiers

Since the introduction of responsible government in South Australia the following 35 persons have held the office of Premier—

Premiers of South Australia

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Boyle T. Finnis	24/10/1856- 21/8/1857	—	301
John Baker	21/8/1857- 1/9/1857	—	11
Sir Robt. R. Torrens, G.C.M.G.	1/9/1857- 30/9/1857	—	29
Hon. Sir Richard D. Hanson	30/9/1857- 9/5/1860	2	222
Hon. Thos. Reynolds	9/5/1860- 8/10/1861	1	152
Hon. G. M. Waterhouse	8/10/1861- 4/7/1863	1	269
Francis S. Dutton, C.M.G.	4/7/1863- 15/7/1863; 22/3/1865- 20/9/1865	—	193
Hon. Sir Henry Ayers, G.C.M.G.	15/7/1863- 4/8/1864; 20/9/1865-23/10/1865; 3/5/1867- 24/9/1868; 13/10/1868- 3/11/1868; 22/1/1872- 22/7/1873	4	35
Hon. Sir Arthur Blyth, K.C.M.G., C.B.	4/8/1864- 22/3/1865; 10/11/1871- 22/1/1872; 22/7/1873- 3/6/1875	2	254
Hon. John Hart, C.M.G.	23/10/1865- 28/3/1866; 24/9/1868-13/10/1868; 30/5/1870-10/11/1871	1	339
Hon. Sir James P. Boucaut, K.C.M.G., Q.C. ...	28/3/1866- 3/5/1867; 3/6/1875- 6/6/1876; 26/10/1877- 27/9/1878	3	11
Hon. H. B. Strangways	3/11/1868- 30/5/1870	1	208
Hon. Sir John Colton, K.C.M.G.	6/6/1876-26/10/1877; 16/6/1884- 16/6/1885	2	142
Hon. Sir William Morgan, K.C.M.G.	27/9/1878- 24/6/1881	2	270
Hon. Sir John Bray, K.C.M.G.	24/6/1881- 16/6/1884	2	358
Hon. Sir J. W. Downer, K.C.M.G., Q.C.	16/6/1885- 11/6/1887; 15/10/1892- 16/6/1893	2	239
Hon. Thomas Playford	11/6/1887- 27/6/1889; 19/8/1890- 21/6/1892	3	323
Hon. Sir J. A. Cockburn, K.C.M.G., M.D.	27/6/1889- 19/8/1890	1	53
Hon. Sir F. W. Holder, K.C.M.G.	21/6/1892-15/10/1892; 8/12/1899- 15/5/1901	1	274
Rt. Hon. C. C. Kingston, Q.C., D.C.L.	16/6/1893- 1/12/1899	6	168
Hon. V. L. Solomon	1/12/1899- 8/12/1899	—	7
Hon. J. G. Jenkins	15/5/1901- 1/3/1905	3	290
Hon. Sir Richard Butler	1/3/1905- 26/7/1905	—	147
Thomas Price	26/7/1905- 5/6/1909	3	314
Hon. A. H. Peake	5/6/1909- 3/6/1910; 17/2/1912- 3/4/1915; 14/7/1917- 8/4/1920	6	312
Hon. John Verran	3/6/1910- 17/2/1912	1	259
Hon. Crawford Vaughan	3/4/1915- 14/7/1917	2	102
Hon. Sir H. N. Barwell, K.C.M.G.	8/4/1920- 16/4/1924	4	8
Hon. John Gunn	16/4/1924- 28/8/1926	2	134
Hon. Lionel L. Hill	28/8/1926- 8/4/1927; 17/4/1930- 13/2/1933	3	160
Hon. Sir R. L. Butler, K.C.M.G.	8/4/1927- 17/4/1930; 18/4/1933- 5/11/1938	8	210
Hon. R. S. Richards	13/2/1933- 18/4/1933	—	64
Hon. Sir Thomas Playford, G.C.M.G.	5/11/1938- 10/3/1965	26	126
Hon. F. H. Walsh	10/3/1965- 1/6/1967	2	3
Hon. D. A. Dunstan	1/6/1967-		

Ministry

The Ministry, which was formed on the 1st June 1967 as a result of the resignation by the leader of the previous Ministry, the Honourable Henry Francis Walsh, M.P., is the 61st Ministry to hold office. The members are—

Premier, Treasurer, Attorney-General and Minister of Housing

Hon. Donald Allan Dunstan, Q.C., M.P.

Chief Secretary and Minister of Health

Hon. Albert James Shard, M.L.C.

Minister of Works and Minister of Marine

Hon. Cyril Douglas Hutchens, M.P.

Minister of Social Welfare

Hon. Francis Henry Walsh, M.P.

Minister of Education and Minister of Aboriginal Affairs

Hon. Ronald Redvers Loveday, M.P.

Minister of Local Government, Minister of Roads and Minister of Mines

Hon. Stanley Charles Bevan, M.L.C.

Minister of Labour and Industry and Minister of Transport

Hon. Alfred Francis Kneebone, M.L.C.

Minister of Agriculture and Minister of Forests

Hon. Gabriel Alexander Bywaters, M.P.

*Minister of Lands, Minister of Immigration, Minister of Repatriation and
Minister of Irrigation*

Hon. James Desmond Corcoran, M.P.

PARLIAMENT

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House).

Members, Qualifications, and Privileges

Certain requirements must be met before a person qualifies for membership of the South Australian Parliament. The following persons are not eligible for membership of either House: Judges, Ministers of Religion, persons under the age of 21, aliens, members of the Commonwealth Parliament, persons who are not residents of South Australia, holders of contracts for the Public Service, occupants of offices of profit under the Crown, persons of unsound mind, persons attainted of treason, undischarged bankrupts and insolvent persons, and, amongst others, persons under sentence for any offence punishable by imprisonment for at least a year. Other requirements are different for each House; these are mentioned on pages 68 and 69.

Members for both Houses are elected by secret ballot; the preferential system of voting is used. Each member is required to take an oath or make an affirmation of allegiance to the Crown before being permitted to sit or vote in Parliament. All Members of the Parliament are entitled to such privileges, immunities, and powers as were held by Members of the House of Commons on 24th October 1856, the date on which the Constitution Act came into force.

Franchise

Details of the franchise for the separate Houses are shown on pages 68 and 69.

South Australia was the first of the Australian States to give voting rights to women, and the existence of this provision in this State contributed to the decision to include full adult franchise in proposals for Federation.

Although a resolution favouring the extension of the franchise to women was passed as early as 1885 by the House of Assembly, a number of Bills designed to give effect to this resolution failed to be passed by the required absolute majority of the total number of Members of each of the two Houses of Parliament. In the year 1894, however, a Bill embodying the principle of female suffrage was approved by the required majority in each House and received Her Majesty's Assent on the 21st March 1895. Under the terms of this Act the right to vote at elections for the Legislative Council and the House of Assembly was granted to women subject to the same qualification requirements that applied to men. The franchise thus extended to women was exercised by them for the first time at the general election of 25th April 1896. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary. By the Electoral Act Amendment Act of 1942 voting for the House of Assembly was made compulsory.

Functions of Parliament

The function of Parliament is to legislate for the peace, order, and good government, of the State. Principal among the tasks of Parliament is the raising of revenue and the appropriation of funds for the development and maintenance of the State through its public services.

Legislation may be initiated by any Member in either House except that money bills must be initiated by Ministers of the Crown in the House of Assembly; the Legislative Council may suggest amendments to money bills although it may not effect such amendments itself.

Most bills are initiated by the Government as a result of the deliberations of Cabinet. The Opposition and Independent Members usually confine their activities to examination, criticism, and amendment, of Government measures.

Legislation other than to amend the Constitution of either House may be passed by a simple majority of the votes of the Members present.

Constitutional Amendment

Alteration to the Constitution Act is in the hands of Parliament itself. An alteration to the Constitution of either House requires at the second and third readings of the bill acceptance by a majority of all the Members (not only those present or voting) of each House voting separately.

Deadlocks

A deadlock results from the refusal by the Upper House to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the Lower House has been held between the refusals and that on the second occasion an absolute majority of all the Members of the Lower House voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, provision is made for the dissolution of both Houses or alternatively for the election of two additional Members for each Legislative Council district.

Life of Parliament

The term of office of each Parliament since the establishment of responsible government has been three years except in the case of the twenty-eighth Parliament. By legislation introduced in 1933 the life of the twenty-eighth Parliament was extended to five years. In 1937 the Constitution Act was amended to provide for each subsequent Parliament to have a life of five years. However, the twenty-ninth Parliament repealed this provision and re-introduced three-year Parliaments.

Number of Members and Electorates

Alterations made to the number of Members and number of electorates for each of the two Houses are shown in the following table—

Date	Legislative Council		House of Assembly	
	Members	Electorates	Members	Electorates
1856.....	18	1	36	17
1863.....	18	1	36	18
1875.....	18	1	46	22
1882.....	24	4	46	22
1884(a).....	24	4	52	26
1890.....	24	4	54	27
1902.....	18	4	42	13
1912(b).....	18	4	40	12
1915.....	20	5	46	19
1938.....	20	5	39	39

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth control.

The present allocation of 26 country and 13 metropolitan electorates for the House of Assembly was introduced in 1938. In 1956 alterations were made to the boundaries of electorates, but the number was unaltered. Under the Electoral Districts (Redivision) Act, 1962, a Commission was appointed to investigate and report on the possibility of dividing the State into 20 rural and from 20 to 22 urban electorates. Subsequently the Bill to incorporate the recommendations of the Commission failed to gain an absolute majority in the House of Assembly.

Salaries and Allowances

The annual salary from 1st July 1966 is \$6,500 per member with allowances of \$1,200, \$1,600, or \$1,900 depending on the distance of the Member's electorate from the City of Adelaide. The following additional payments are also made:

Premier and Treasurer—\$5,500, plus Expense Allowance of \$1,500.

Chief Secretary—\$4,100, plus Expense Allowance of \$1,200.

Other Ministers—\$3,500, plus Expense Allowance of \$1,000.

President of Legislative Council and Speaker of House of Assembly—each \$2,100, plus Expense Allowance of \$200.

Chairman of Committees, House of Assembly—\$1,050.

Leader of the Opposition—\$2,500, plus Expense Allowance of \$600.

Deputy Leader of the Opposition—\$800.

Government Whip—\$600.

Opposition Whip—\$600.

Leader of the Opposition in the Legislative Council—\$600, plus Expense Allowance of \$300.

Superannuation

All members are required to contribute to a superannuation fund. The standard contribution to this fund is \$456 per annum, although some current members contribute, under provisions of previous legislation, either \$228 or \$342. According to the annual contribution and the length of service the pension payable varies between \$1,456 and \$4,264 per annum. No member can qualify for a pension until he has served a minimum of 8 years either in one term or as an aggregate of terms.

LEGISLATIVE COUNCIL

Members and Electorates

Each Member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 65, must have attained the age of 30 years, be a British subject or "legal denizen of the State", and have resided in the State for at least three years. For the purpose of electing Members to the Council the State is divided into five electorates each having four Members. Each electorate elects two Members every three years, and each Member occupies his seat for six years. A casual vacancy may occur when a Member dies, or resigns, or ceases to satisfy any qualification for membership. Such a casual vacancy is filled, at a by-election in the particular electorate, for the unexpired portion of the previous Member's term.

It is not unusual for many of the candidates for this House to be returned unopposed at an election.

The first woman Member was elected to this House in 1959.

Franchise

The franchise for the Legislative Council has been varied from time to time since the commencement of responsible government. Under the Constitution Act of 1855-1856 the franchise for the Legislative Council was extended to adult males possessing one of the following property qualifications—

- (a) A freehold of the value of \$100,
- (b) A leasehold of the annual value of \$40, and having three years to run or including a right of pre-emption.
- (c) Occupation of a dwelling house of the annual value of \$50.

The Constitution Act Amendment Act, 1894, which extended the franchise of the Lower House to women, gave them the right to vote also at elections for the Legislative Council, subject to the existing property qualifications applicable to men.

By an Act of 1907 the franchise for the Legislative Council was extended to a number of additional categories of persons. These included occupiers of dwelling houses of an annual rental value of at least \$34, certain holders of Crown leases who were not enfranchised by previous legislation, certain ministers of religion, head teachers of schools, postmasters, railway station masters, and police officers. These persons lost their special franchise when the qualifications of voters for the Legislative Council were again revised in 1913.

The 1913 legislation, which in its essentials remains in force today, provided that the right to vote for the Legislative Council should be granted to "any person who is an inhabitant occupier as owner or tenant of any dwelling house; provided that no person shall be entitled to vote by reason of being a joint occupier of any dwelling house".

The franchise is also extended to certain past and present defence personnel who would not otherwise qualify.

President and Chairman of Committees

At the first meeting of the Council in each Parliament the Members choose one from among their number to fill the position of President and Chairman of Committees. The person so elected is then entitled to a casting vote only.

HOUSE OF ASSEMBLY

Seat of Government

The House of Assembly can be regarded as the more important Chamber in that the Government of the day holds its position as such only so long as it controls a majority in this House. When it no longer controls such a majority in vital issues, particularly "money bills", the Government must resign or go to the polls. Once defeated in the Lower House on a "money bill" the Government is unable to finance the administration of the State.

Franchise and Membership

Members of this House are elected for a maximum period of three years, for single-member districts, on a system of universal adult suffrage of British subjects resident in the State for at least 6 months. Certain present and past defence personnel are enfranchised by a special provision if they would not otherwise be entitled to vote. Subject to the exclusions mentioned on page 65 election to this House is open to those eligible to vote in an election for the House. The seat of a Member becomes vacant in cases similar to those stated for Legislative Councillors and may be filled at a by-election.

The first woman Member was elected to this House in 1959.

Officers and their Functions

A Speaker presides over the House, and his election is the first business when a Parliament first meets. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a casting vote only. There is also a Chairman of Committees elected by the House at the beginning of each Parliament; he presides over the deliberations of the House in Committee and acts as Deputy Speaker when required.

ELECTIONS AND PARTY REPRESENTATION

It appears from the following table that compulsory voting for the Lower House introduced by the Electoral Act Amendment Act of 1942 caused a considerable increase in voting for the Legislative Council.

Voting: South Australian Parliament, 1933 to 1965

Date	Legislative Council				House of Assembly			
	Electors on Roll	Contested Electorates			Electors on Roll	Contested Electorates		
		Electors Enrolled	Electors Voting	Per Cent		Electors Enrolled	Electors Voting	Per Cent
8th April 1933	133,152	39,415	25,309	64.21	338,576	307,285	182,693	59.45
19th March 1938	129,135	129,135	91,165	70.60	364,884	352,423	223,136	63.31
29th March 1941	133,358	115,952	70,660	60.94	378,265	339,263	171,978	50.69
29th April 1944 (a)	142,314	98,482	81,791	83.05	401,747	289,032	255,883	88.53
8th March 1947	155,847	155,847	124,826	80.10	418,308	306,059	285,765	93.37
4th March 1950	161,917	68,347	52,954	77.48	437,832	311,658	290,306	93.15
7th March 1953	168,758	97,968	79,373	81.02	449,630	354,273	336,592	95.01
3rd March 1956	174,241	22,963	16,002	69.69	468,303	299,048	280,811	93.90
7th March 1959	187,248	86,278	70,007	81.14	497,456	426,340	400,531	93.95
3rd March 1962	201,517	118,218	98,786	83.56	531,228	444,197	417,462	93.98
6th March 1965	213,377	186,899	149,910	80.21	562,824	542,436	513,064	94.59

(a) First election under compulsory voting for the House of Assembly.

The following table shows the Party representation in both Houses of the South Australian Parliament resulting from each general election from 1933 and changes since the last general election.

Party Representation, South Australian Parliament, 1933 to 1965

Date	Legislative Council				House of Assembly			
	L.C.L.	A.L.P.	Inde- pendent	Other	L.C.L.	A.L.P.	Inde- pendent	Other
8th April 1933 ..	16	2	1	1(a)	29	6	4	{ 4(a) 3(b)
19th March 1938.	15	2	1	2(c)	15	9	13	2(c)
29th April 1944..	14	4	1	1(c)	21	11	5	2(c)
8th March 1947..	15	5	—	—	20	16	3	—
4th March 1950..	16	4	—	—	23	13	3	—
7th March 1953..	16	4	—	—	23	12	4	—
3rd March 1956..	16	4	—	—	21	14	4	—
7th March 1959..	16	4	—	—	21	15	3	—
3rd March 1962..	16	4	—	—	20	17	2	—
6th March 1965..	16	4	—	—	18	19	2	—
	16	4	—	—	17	21	1	—

Note : L.C.L.—Liberal and Country League ; A.L.P.—Australian Labor Party.

(a) Parliamentary Labor.

(b) Lang Labor.

(c) Independent Labor.

The members of the Legislative Council and the districts they represent are—

To Retire in 1968

Kneebone, Hon. A. F.	(A.L.P.)	Central No. 1
Shard, Hon. A. J.	(A.L.P.)	Central No. 1
Hill, Hon. C. M.	(L.C.L.)	Central No. 2
Rymill, Hon. Sir Arthur	(L.C.L.)	Central No. 2
Jude, Hon. Sir Norman L. . . .	(L.C.L.)	Southern
Springett, Hon. V. G.	(L.C.L.)	Southern
Dawkins, Hon. M. B.	(L.C.L.)	Midland
Story, Hon. C. R.	(L.C.L.)	Midland
Gilfillan, Hon. G. J.	(L.C.L.)	Northern
McEwin, Hon. Sir A. Lyell . . .	(L.C.L.)	Northern

To Retire in 1971

Banfield, Hon. D. H. L.	(A.L.P.)	Central No. 1
Bevan, Hon. S. C.	(A.L.P.)	Central No. 1
Cooper, Hon. Mrs. J. M.	(L.C.L.)	Central No. 2
Potter, Hon. F. J.	(L.C.L.)	Central No. 2
DeGaris, Hon. R. C.	(L.C.L.)	Southern
Kemp, Hon. H. K.	(L.C.L.)	Southern
Hart, Hon. L. R.	(L.C.L.)	Midland
Rowe, Hon. C. D.	(L.C.L.)	Midland
Geddes, Hon. R. A.	(L.C.L.)	Northern
Whyte, Hon. A. M.	(L.C.L.)	Northern

President and Chairman of Committees: Hon. Sir Lyell McEwin.

Leader of the Opposition: Hon. R. C. DeGaris.

Clerk of the Legislative Council: Ball, I. J.

Of the thirty-nine electorates for the House of Assembly thirteen are metropolitan and twenty-six are country. The table below shows the electoral returns for the general election held on 6th March 1965.

House of Assembly: Party Representation, 1965

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	First Preference Votes
<i>Metropolitan—</i>					
Adelaide	16,805	15,436	Lawn, S. J.	A.L.P.	10,444
Burnside	33,660	31,703	Steele, Mrs. J.	L.C.L.	18,394
Edwardstown....	31,908	30,285	Walsh, Hon. F. H.	A.L.P.	17,917
Enfield	39,091	37,167	Jennings, J. J.	A.L.P.	21,951
Glenslg	34,947	33,206	Hudson, H. R.	A.L.P.	16,869
Hindmarsh	22,713	21,401	Hutchens, Hon. C. D.	A.L.P.	16,241
Mitcham	24,868	23,337	Millhouse, R. C.	L.C.L.	15,015
Norwood	20,063	18,741	Dunstan, Hon. D. A.	A.L.P.	10,452
Port Adelaide....	22,533	21,348	Ryan, J. R.	A.L.P.	15,460
Semaphore	23,158	22,114	Hurst, R. E.	A.L.P.	16,430
Torrens	20,013	18,843	Coumbe, J. W. H.	L.C.L.	8,937
Unley	19,498	18,336	Langley, G. R. A.	A.L.P.	9,062
West Torrens ..	35,580	33,463	Broomhill, G. R.	A.L.P.	18,496
<i>Country—</i>					
Albert	7,778	*	Nankivell, W. F.	L.C.L.	*
Alexandra	10,244	9,810	Brookman, Hon. D. N.	L.C.L.	5,557
Angas	6,651	*	Teusner, Hon. B. H.	L.C.L.	*
Barossa	12,399	11,859	Byrne, Mrs. M. V.	A.L.P.	6,015
Burra	5,889	5,646	Quirke, P. H.	L.C.L.	3,467
Chaffey	7,599	7,287	Curren, A. R.	A.L.P.	7,098
Eyre	7,285	6,965	Bockelberg, G. B.	L.C.L.	3,206
Flinders	7,231	6,963	Pearson, Hon. G. G.	L.C.L.	3,678
Frome	5,061	4,675	Casey, T. M.	A.L.P.	2,666
Gawler	27,634	25,967	Clark, J. S.	A.L.P.	16,413
Gouger	9,120	8,701	Hall, R. S.	L.C.L.	5,384
Gumeracha.....	7,159	6,882	Playford, Hon. Sir Thomas	L.C.L.	4,365
Light	5,959	*	Freebairn, J. S.	L.C.L.	*
Millicent	7,168	6,807	Corcoran, Hon. J. D.	A.L.P.	4,160
Mount Gambier..	9,602	9,072	Burdon, A. R.	A.L.P.	5,399
Murray	8,119	7,818	Bywaters, Hon. G. A.	A.L.P.	5,144
Onkaparinga ..	7,147	6,844	Shannon, H. H.	L.C.L.	3,836
Port Pirie	6,573	6,321	McKee, D. H.	A.L.P.	5,468
Ridley	6,943	6,804	Stott, Hon. T. C.	Ind.	4,483
Rocky River	5,783	5,580	Heaslip, J. A.	L.C.L.	3,652
Stirling	7,245	6,989	McAnaney, W. P.	L.C.L.	4,906
Stuart	8,462	7,880	Riches, Hon. L. G.	A.L.P.	6,618
Victoria	7,278	6,925	Rodda, W. A.	L.C.L.	3,511
Walleroo	5,979	5,771	Hughes, L. C.	A.L.P.	3,346
Whyalla	11,253	9,856	Loveday, Hon. R. R.	A.L.P.	7,589
Yorke Peninsula .	6,426	6,262	Ferguson, J. R.	L.C.L.	4,276

Note : A.L.P.—Australian Labor Party ; L.C.L.—Liberal and Country League ; Ind.—Independent.

* Uncontested.

Speaker: The Hon. L. G. Riches.

Chairman of Committees: Lawn, S. J.

Leader of the Opposition: Hall, R. S.

Government Whip: Broomhill, G. R.

Opposition Whip: Steele, Mrs. J.

Clerk of the House of Assembly: Combe, G. D.

REFERENDA

Since the inception of responsible government in South Australia in 1856 six referenda have been held—the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915 and 1965—and nine proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899)—all approved; one related to Parliamentary salaries (1911)—not approved; one related to bar-room closing hours (1915)—favoured 6 p.m. closing; and one related to the establishment of a lottery (1965)—approved.

The last referendum, held in 1965, approved the question “Are you in favour of the promotion and conduct of lotteries by the Government of the State?” with 344,886 electors voting “Yes” and 142,196 electors voting “No”.

ADMINISTRATION

The South Australian Public Service consists of fifty-five departments, many of which are very small. The range of functions of each was shown in pages 59 to 66 of the 1966 South Australian Year Book. The departments have been grouped in the following list to indicate the Ministerial control.

PREMIER, TREASURER, ATTORNEY-GENERAL AND MINISTER OF HOUSING

Hon. Donald Allan Dunstan, Q.C., M.P.

Premier's Department.	Crown Solicitor's Department.
Treasury Department.	Public Trustee Department.
Superannuation Department.	Supreme Court Department.
Motor Vehicles Department.	Adelaide Local Court Department.
Agent-General in England Department.	Adelaide Magistrate's Court Department.
Land Tax Department.	Country and Suburban Courts Department.
Stamp and Succession Duties Department.	Registrar-General of Deeds Department.
Attorney-General's Department.	Electoral Department.
Parliamentary Draftsman's Department.	Coroner's Department.

CHIEF SECRETARY AND MINISTER OF HEALTH

Hon. Albert James Shard, M.L.C.

Chief Secretary's Department.	Prisons Department.
Government Reporting Department.	Hospitals Department.
Audit Department.	Public Service Commissioner's Department.
Government Printing Department.	Department of Public Health.
Police Department.	
Department of the Public Actuary.	

LEGISLATION

During 1966, 89 Public Acts were passed by the State Parliament—23 new Acts and 66 amendments of existing Acts. In 1967, up to the end of the session of Parliament on 23rd March, a further 21 Acts were passed—8 new Acts and 13 amendments of existing Acts.

Details of some of the more important legislation passed during this period are given below.

Legislation passed during 1966

- Aboriginal Lands Trust Act, 1966 (No. 87) established an Aboriginal Lands Trust to ensure land rights to Aborigines of this State.
- Apprentices Act Amendment Act, 1966 (No. 18) amended the Apprentices Act, 1950 and included a provision for the replacement of the Apprentices Board with an Apprenticeship Commission.
- Dentist Act Amendment Act, 1966 (No. 62) amended the Dentists Act, 1931-1960 to enable the training and use of dental nurses under dental supervision in the School Health Service.
- Electrical Workers and Contractors Licensing Act, 1965-1966 (No. 21) provided for the licensing of electrical workers and electrical contractors.
- The Flinders University of South Australia Act, 1966 (No. 23) established and incorporated the Flinders University of South Australia.
- Harbors Act Amendment Act, 1966 (No. 89) amended the Harbors Act, 1936-1962 by abolishing the S.A. Harbors Board and establishing the Department of Marine and Harbors.
- Law of Property Act Amendment Act, 1966 (No. 44) amended the Law of Property Act, 1936-1960 to allow minors over the age of 18 years to enter into contracts with approved authorities to obtain loan moneys to enable them to purchase or erect a dwelling house.
- Lottery and Gaming Act Amendment Act (No. 2), 1966 (No. 46) amended the Lottery and Gaming Act, 1936-1966 to provide for off-course betting by means of totalizators and the payment of stamp duty on the takings of such totalizators.
- National Parks Act, 1966 (No. 77) introduced an Act to enable national parks to be established, developed and maintained for public recreation and to provide for the management, control and conservation therein of animals, plants and land in its natural state.
- Prices Act Amendment Act (No. 2), 1966 (No. 36) amended the Prices Act, 1948-1966 to provide for continuation of price control until December 31st, 1967.
- Prohibition of Discrimination Act, 1966 (No. 82) introduced legislation to prohibit discrimination against persons by reason of their race or colour.
- South-Western Suburbs (Supplementary) Drainage Act, 1966 (No. 25) made provision for the prevention and control of flooding in the south-western suburbs of the metropolitan area and for the authorization of the construction and operation of works connected therewith.

State Lotteries Act, 1966 (No. 54) provided for the promotion and control of lotteries by the Government of the State and also amended the Lottery and Gaming Act, 1936-1966.

Weights and Measures Act Amendment Act, 1966 (No. 26) amended the Weights and Measures Act, 1934-1965 to complement legislation of the Commonwealth and to provide uniformity with legislation passed by other States.

Legislation passed during early 1967

Aboriginal Affairs Act Amendment Act, 1967 (No. 11) amended the Aboriginal Affairs Act, 1962 to provide additional powers to make regulations for the establishment and constitution of aboriginal reserve councils and the definition of their rights, powers and functions.

Adoption of Children Act, 1967 (No. 12) repealed the Adoption of Children Act, 1925-1965 and provided for the recognition in South Australia of adoption orders made in other States and overseas and lays down the general effect of an adoption order.

Births, Deaths and Marriages Registration Act, 1967 (No. 16) enacted legislation to consolidate and amend the law relating to the registration of births, deaths and marriages and to the legitimation of children.

Libraries and Institutes Act Amendment Act, 1967 (No. 13) amended the Libraries and Institutes Act, 1939-1964 by changing the name of the Public Library of South Australia to State Library of South Australia and the title of office of Principal Librarian to State Librarian.

Natural Gas Pipelines Authority Act, 1967 (No. 3) authorized the establishment of a natural gas pipeline authority to be known as the Natural Gas Pipelines Authority of South Australia and conferred on the authority power to construct and operate pipelines for the conveyance of natural gas and derivatives thereof.

Planning and Development Act, 1966-1967 (No. 20) repealed the Town Planning Act, 1929-1963 and enacted legislation to provide for effective town planning throughout the State.

Complete details of Acts passed are contained in the volumes of *Acts of the Parliament of South Australia*.

OVERSEA AND INTERSTATE REPRESENTATION

South Australia maintains an Agent-General's Office at South Australia House, 50 The Strand, London, W.C.2. As official representative of the State it is the function of the Agent-General to work in close co-operation with the High Commissioner for Australia, to keep the Government informed of political and economic developments overseas, to promote trade with the United Kingdom and other countries, and to act as agent for the State in the United Kingdom. Mr. K. L. Milne is the present Agent-General.

The South Australian Tourist Bureau maintains offices at 390 George Street, Sydney, N.S.W., and at 8 Royal Arcade, Melbourne, Victoria, to foster and facilitate tourist travel to South Australia.

CONSULS AND TRADE COMMISSIONERS

There are twenty-one countries represented in South Australia by consuls, vice-consuls, consular agents, consul-generals or deputy high commissioners.

- Austria*: John A. Nelson, Consul^(a)
Belgium: Robert E. Porter, Consul
Denmark: Trevor R. Taylor, Consul-General
Dominican Republic: M. L. Lathlean, Consul-General
Finland: Robert N. Irwin, Consul
France: F. C. Buttfield, Consular Agent
Germany: Lewis C. Waterman, Consul
Greece: Vasilie P. Apostol, Consul
Guatemala: R. M. Napier, Consul
Italy: F. Migliorini, Vice-Consul^(b)
Japan: J. Langdon Parsons, Consul
Lebanon: A. M. Hambour, Consul
Liberia: W. B. Coombs, Consul
Netherlands: E. E. McLaughlin, Consul
Norway: John N. Howe, Consul
Peru: M. J. Hill, Consul
Philippines: C. J. Glover, Consul
Portugal: Raymond F. Walters, Vice-Consul
Sweden: Sir Tom E. Barr Smith, Consul
 E. M. A. Nicholson, Vice-Consul
 Jose R. Mussared, Vice-Consul
United Kingdom: L. A. C. Newns, Deputy High Commissioner
United States of America: Thomas A. DeHart, Consul^(b)
 James M. Hawley, Vice-Consul^(b)

(a) Dean of the Consular Corps

(b) *Consul de Carriere*

3.4. SEMI-GOVERNMENTAL AUTHORITIES

A semi-governmental authority may be defined as a "body (other than a local government authority or body whose receipts and payments are included in the public accounts of the Commonwealth, of a State, or of a Territory) created by or under legislation to carry out an activity or activities on behalf of a Government, or a body in which a Government has a controlling interest".

Some authorities such as marketing boards, which are set up by Acts of Parliament, are not regarded as semi-governmental because their activities are carried out on behalf of industries rather than on behalf of any Government.

Most semi-governmental authorities have independent powers for the recruitment of staff. All possess greater administrative and financial autonomy than Government departments but there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by semi-governmental authorities include tertiary education, hospitalization, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course betting and lotteries, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book some reference is made to the activities of most of the semi-governmental authorities which operate in South Australia.

3.5. LOCAL GOVERNMENT

Early History

On 19th August 1840, less than four years after the colony was founded, the first Colonial Municipal Act was passed by Governor Gawler and his Executive Council to provide elective municipal institutions for towns of at least 2,000 inhabitants. The franchise was granted to adult males who at the time of enrolment had resided in the province for at least six months and who owned or occupied any land, house, warehouse, counting house, or shop within the area, provided that the property was valued at not less than \$40 per annum and the voter lived within seven miles of the property. At the first elections for Adelaide, held on 31st October 1840, four aldermen and fifteen councillors were elected, forming the first elected local government body in Australia.

This first attempt at local government proved unsuccessful, and in September 1843 the Adelaide Corporation became legally defunct. The Government controlled the affairs of the city for the next six years until 1849, when the Governor appointed five City Commissioners to take over the City Administration.

In October 1851 five hundred ratepayers petitioned for restoration of the Council; in June 1852 the Municipal Corporation of Adelaide was reformed under the Municipal Corporations Act, 1849.

Local Government Areas—Number, Size, and Status

At present there are 142 local government areas in South Australia, each controlled by a council consisting of members elected by local ratepayers and exercising powers conferred by the Parliament of the State in the Local Government Act, 1934-1966.

The total area incorporated in local government areas is 57,767 square miles; this is only slightly above 15 per cent of the total area of the State but contains almost 99 per cent of the State population.

There are two major types of local government areas—district council areas and municipalities. Usually district council areas consist predominantly of rural land but contain one or more towns. Generally speaking, to qualify for proclamation as a municipality an area must be used predominantly for either residential, business, industrial, or manufacturing purposes (or a combination of those purposes), and be able to support itself financially. Some municipalities are constituted as cities, the qualification being a population of 15,000 persons for metropolitan municipalities (the 21 local government areas forming the statistical metropolitan area prior to June 1966) and 10,000 persons in other "country" areas.

There are 21 metropolitan municipalities of which 14 are cities, 22 other municipalities of which 6 are cities, and 99 district council areas.

The Governor may create, abolish, or vary the size, status, or organization of, any local government area or portion thereof, provided certain requirements are satisfied. Such alterations usually stem from petition by ratepayers or a council.

Functions of Local Government

The Local Government Act, 1934-1966, prescribes most of the "powers and authorities" which each council shall or may exercise "for the good government" and "the management of the affairs" of its area, but some functions devolve from other Acts. To enable it to sue and be sued and to participate in transactions involving the purchase and sale of land and other property each council is constituted as a corporate body.

The functions performed by councils vary somewhat with the area concerned, but there are general functions which are common to them all. Many of these functions receive more detailed attention in the parts of this book dealing with the appropriate subjects, e.g. road construction and maintenance in Part 8.3., Physical Development; health services and Local Boards of Health in Part 6.5., Social Environment, and libraries in Part 6.4., Social Environment. Among the many other functions of local governing authorities are the provision of street lighting, the licensing and inspection of slaughterhouses, the maintenance of cemeteries, the maintenance of foreshores and jetties, the control of the location of industries (especially noisy trades), the prevention of fires within certain areas, and the policing of provisions relating to vermin and weeds.

Organization and Representation

Whereas a municipality must be divided into at least two areas known as wards a district council need not have wards. No council may comprise less than five members, and wards in municipalities must be represented by two councillors. No district council area may be divided into more than 10 wards, and the number of councillors for each ward is established by proclamation.

A candidate for election as a councillor must be an adult British citizen owning or occupying ratable property within the area for which he seeks election, must not be a special magistrate, an undischarged bankrupt, a person holding contract or employment under the council, under sentence for a crime, overdue with his rates and any associated fines, or of unsound mind, and must have consented, in writing, to his nomination.

Each year half the number of councillors retire. In councils with wards one councillor from each ward, the one who has been "the longest in office without re-election", retires; in other councils the councillors who did not retire one year do so the next. In all cases a retiring councillor is eligible for re-election.

Any municipality may apply to add no less than three and no more than six aldermen to its council. The qualifications for councillors apply to aldermen, except that aldermen are not bound by the limits of wards, and an alderman must have served at least one year as a member of the council. Although the functions of aldermen are not specifically defined the concept is that they should impartially consider the interests of the area as a whole and so resolve any conflict which may arise between sectional interests represented by councillors.

The mayor of a municipality is elected annually on the same basis as an alderman. The chairman of a district council is chosen annually by councillors from among their number.

Franchise

Adult British subjects who either own or occupy ratable property within an area are eligible to be enrolled for, and to vote at, elections for that area provided that they are not in arrears with their rates. Companies or corporations owning or occupying ratable property within the area are entitled to nominate up to three persons to vote on their behalf at the elections for that area, depending on the method of valuation; the entitlement is for the nomination of one vote for each \$300 of annual (improved) value or \$2,000 of unimproved (land) value or part of either, up to three voters for any one property. Special provision is also made to allow certain defence personnel to vote.

Officers and their Functions

Each council may appoint any officers it considers necessary to carry out its duties, including special constables to facilitate the maintenance of law and order within its area.

Each council must appoint a town clerk (in a municipality) or a district clerk (in a district council) as the chief administrative officer, and an auditor.

Employment in local government administration is now regarded as a career; most town and district clerks are full-time employees, and councils are required to employ in those positions only those persons who have passed examinations qualifying them for the work. The town or district clerk maintains the voters roll and in many cases is appointed returning officer for elections. The characteristics of particular areas determine to some extent the nature of the duties performed by town and district clerks; they often undertake a very wide variety of functions, especially in smaller areas, where even the part-time employment of specialist officers for particular tasks is not warranted.

The auditor for each council is appointed for a term of two years. He is not eligible for appointment unless he holds a Local Government Auditor's Certificate of competence issued by the Local Government Auditors Examining Committee.

Whenever a council itself undertakes a new assessment of property values within its area it is required under the Local Government Act to appoint a valuator who recommends to the council a valuation of each property for rating purposes. A ratepayer may appeal against a council's valuation of his own property or that of another ratepayer. Instead of undertaking its own assessment of property values it is now not uncommon for a council to adopt the valuations of the Engineering and Water Supply Department (annual or "improved" values) or the State Land Tax Department (unimproved or "land" values). When this is done a council avoids the necessity for employing a valuator but a fee for each valuation is payable to the appropriate department. There is no right of appeal to the council against valuations so based, the right of appeal lying against the departments concerned when they make their valuations.

Finance

Local government authorities derive their revenue from many different sources, including sundry licences and fines, but the principal sources are rates, loans raised against the security of future rates, and Government grants. The relative importance of these sources of revenue varies between areas and through time within areas, *e.g.* in closely settled well developed areas rate revenue is usually predominant; in large sparsely settled areas Government grants, mainly for road works, may at times be the chief item of revenue; in areas being rapidly and extensively developed for housing or industrial purposes both Government grants and loan funds may be prominent.

Commonwealth Government grants are not made direct to local government authorities but are administered by appropriate State Government departments. The most important example of this is the distribution of portion of Commonwealth aid roads grants to local government authorities by the Highways and Local Government Department in conjunction with the State Treasury.

A large proportion of local government expenditure from both loan funds and other revenue is for the construction and maintenance of roads, footpaths, and stormwater drains.

More detailed attention is given to local government finance in Part 12.5.

PART 4

LAND SETTLEMENT

4.1. LAND TENURE

IDENTIFICATION OF LAND AND REGISTRATION OF TITLE

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties, these in turn being generally subdivided into smaller units known as hundreds.

The first Surveyor-General, Colonel Light, had been instructed by the Colonization Commissioners to divide the colony into towns and counties, and in 1842 the first nine counties were proclaimed. At the same time the administration was having considerable difficulty in regulating the leasing of unsold lands for pasturage. To assist it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds in use in some counties in England was adopted.

The boundaries of early counties and hundreds followed natural features. As further counties and hundreds were declared, natural features suitable for boundary delineation were not always available and in most cases the boundaries were set parallel to lines of longitude and latitude.

In 1887 an area of 250,000 acres was declared to provide for the town and irrigation area of Renmark on the River Murray. Similar areas were subsequently surveyed and proclaimed adjacent to other sections of the river.

There are currently 49 counties covering 23% of the State, the last of these being declared in 1933. The counties have an average size of 1,143,000 acres, varying from County Light, north of Adelaide, with 536,960 acres to County Jervois on Eyre Peninsula with 2,368,000 acres.

Counties are generally subdivided into hundreds, although 4 northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of hundreds in a

completely subdivided county varies from 8 in Counties Alfred and Kintore to 34 in County Jervois. New hundreds are created from time to time, the present total being 534.

Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

Land is therefore, for the purposes of title generally identified by the county, hundred, and section, and where appropriate block or allotment within which it falls. Land in towns and in proclaimed irrigation areas may further be identified as falling within that town or area.

Torrens System of Land Registration

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the Real Property Act, 1886-1963. This system, first introduced by the Real Property Act, 1858, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the colony.

All land transactions to this date had been conducted by the conveyancing of the general law titles, a procedure which was cumbersome, costly and uncertain, and particularly unsuited to a fledgling colony with a large number of landowners and where land transactions were frequent.

Torrens had previously been Collector of Customs and in this role had been impressed by the relatively simple principles involved in the transfer of shipping property, principles which he argued could be applied to land transactions. His proposals were to lead to similar legislation in the other Australian States, and have subsequently been adopted in other parts of the world.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and the costs and time involved in conveyancing can thus be kept to a minimum.

The Real Property (Registration of Titles) Act, 1945, provided for the small proportion of land then remaining under the general law of conveyancy to be converted to the Torrens System. This transition is still in progress in certain areas.

The table below shows details, extracted from records at the Land Titles Registration Office, of sales of real estate during the five years to 1966.

Sales of Real Estate, South Australia

Year	Number of Sales	Consideration
		\$'000
1962.....	27,613	173,284
1963.....	30,170	205,149
1964.....	34,066	261,410
1965.....	32,758	259,828
1966.....	31,375	258,308

LAND SETTLEMENT
SYSTEMS OF TENURE
HISTORICAL

The sale of Crown land played an important role in the establishment of South Australia. At the time of the first settlement the "Wakefield System" of colonization was held in favour and it was thus planned that the new colony be largely self-supporting with revenue coming from the sale of land. This proposal was agreed to, with the proviso that land to the value of \$70,000 be sold in England prior to settlement. After considerable difficulty 60,595 acres were disposed of for \$72,714.

Early applications for land were made by tendering at a fixed price and 323,000 acres of land had been thus disposed of by 1843 when sales by auction were introduced. By 1857, 1,756,000 acres had been alienated at an average price of \$2.52 per acre.

In 1846, under the Waste Lands Act, land outside the hundreds was leased for pastoral purposes for periods up to 14 years, and leases within the hundreds date from 1850. The term of these leases was extended to 21 years in 1864 and to 42 years in 1890.

Land sales prior to 1869, involving 3,790,185 acres at a total purchase price of \$8,963,612, were conducted on a cash basis. However, in that year sales on credit were introduced, with payments initially spread over 4 years and later extended to 20 years. Land not sold at auctions was offered on 21 year leases, and in the late 1880's leases with a right to purchase and leases in perpetuity were introduced.

From 1886 gold, and from 1888 other metals and minerals, in lands sold by the Government were reserved to the Crown.

Perpetual leases were first introduced in 1888. Early leases provided for a revaluation of rents every 14 years, but in 1893 provision was made for rents to be fixed in perpetuity.

The introduction of the current system of allotting lands in preference to sales by auction led to the appointment of the Land Board in 1886 and the Pastoral Board in 1893.

The principles of closer settlement whereby the Crown repurchases and subdivides suitable lands, were introduced in 1897.

With the introduction in 1903 of agreements to purchase, a form of tenure leading to freehold, the present day pattern of tenure was completed. Subsequent legislation has been devoted to variations in the basic concepts of freehold, agreement to purchase, perpetual lease, pastoral lease and miscellaneous lease.

LAND ADMINISTRATION

Approximately 90% of the occupied area of South Australia comprises Crown land held under lease and as such is controlled by the Department of Lands. This department is charged with the general administration of Crown lands, and with making available under appropriate tenure newly developed lands and such lands as come into the hands of the Crown by resumption, expiry, surrender or forfeiture of existing tenure. The consent of the Minister of Lands (or the Minister of Irrigation in the case of irrigated lands) is required prior to the transfer, mortgage or sublease of any of the forms of tenure administered by the department.

Land available for leasing is allotted by the Land Board and, in the case of pastoral lands, by the Pastoral Board, who interview applicants and make allotments on merit. The boards also advise the Minister on matters connected with land settlement.

Leases and licences under the various mining Acts are issued and supervised by the Department of Mines, while the Woods and Forests Department and the Engineering and Water Supply Department are responsible for the issuing of leases over reserves and areas under their control.

CURRENT TENURE

In the table below, occupied land in South Australia is classified according to its present form of tenure. Thus "Alienated lands held in fee simple" does not represent the accumulated total of all alienated lands, as certain alienated lands repurchased by the Crown are currently held under leases or agreements to purchase.

At 30th June 1966 land in South Australia was occupied as follows:

	Area Acres	Proportion %
Alienated lands held in fee simple:		
Sold	14,908,225	6.13
Free grants	916,631	0.37
Dedicated	286,051	0.12
Total	16,110,907	6.62
In process of alienation:		
Held under agreements to purchase	390,800	0.16
Area under lease:		
Perpetual	20,677,830	8.50
Pastoral	126,829,719	52.14
Other	2,914,222	1.20
Total	150,421,771	61.84
Total sold, granted and leased	166,923,478	68.62
Salt water lakes and lagoons, and fresh water lakes	7,904,800	3.25
Open for allotment or selection	75,500	0.03
Other vacant land	68,341,022	28.10
Total area of State	243,244,800	100.00

In 1901 the area sold, granted and leased, *i.e.* the area occupied, was 93,666,052 acres, increasing to 141,907,525 in 1924, but falling to 129,411,612 in 1931 due to decreased areas under pastoral lease. Since 1931 there has been a fairly steady increase to the present figure of 166,923,478 acres.

METHODS OF ALIENATING LAND

Sales under Agreement to Purchase

There is provision for Crown lands to be alienated through an agreement to purchase although normally town allotments are not dealt with in this way.

The purchase money is repayable over varying terms from 30 to 64 years and the purchaser must comply with certain special conditions concerning the improvement and the development of the land, including the fencing of the property within the first five years. It is not necessary for an agreement to run the full term as,

subject to the Minister's approval, purchase may be completed after six years provided all such conditions have been complied with. When allotting land, preference is given to the applicant who agrees to reside on the land. No land may be allotted under an agreement to purchase where the resultant total holdings would exceed \$10,000 in unimproved value, or if used for pastoral purposes, where the carrying capacity exceeds 5,000 sheep (10,000 sheep outside the 10 inch rainfall line). Existing agreements may, however, be transferred up to a maximum holding of \$24,000 unimproved value. Land allotted under Agreements to Purchase amounted to 401 acres in 1965-66.

Sales at Auction

Certain Crown lands may be sold at auction for cash. These include town lands, suburban lands exempt from the operations of the Land Board, and Crown lands which have been offered for lease and not taken up within two years. Town lands so sold are subject to limitations on resale and conveyance through mortgage during the first six years, and it is usually conditional that improvements, for an agreed function and of a certain minimum value, be erected within a stipulated period.

Free Grants and Reservations

A free grant of Crown lands may be made for any public purpose. Of the 916,631 acres thus alienated at 30th June 1966, 768,000 acres had been granted for the Weapons Research Establishment.

Lands may also be dedicated and reserved for a variety of purposes such as forest areas, Aboriginal reserves, wild life reserves, parklands, schools and defence establishments.

METHODS OF LEASING AND LICENSING LAND

Leases for Limited Terms

Pastoral lands outside the counties and large areas in the northern counties are held under pastoral leases granted for terms of 42 years (except in the case of previously unoccupied lands when the term is 21 years). Under the conditions of these leases the lessee must expend in improvements a sum as recommended by the Pastoral Board and must comply with certain conditions on stocking. Rent is based on the unimproved value of the land and in the case of a 42 year lease is revalued every 7 years. Such lands may be reallocated to the same lessees on expiry of the existing terms.

Persons may be granted a permit to search for water and if successful may take up a lease of 100 square miles of land. Such leases are granted for 42 years at a nominal rental for the first 10 years and a low rental thereafter. Conditions of stocking are also modified.

In certain circumstances, such as where land has not been surveyed or its potential is uncertain, or where permanent alienation is not desirable, miscellaneous leases are issued for periods up to 21 years. Certain business and industrial sites may also be held under miscellaneous lease. Annual licences may be granted over Crown lands for certain industrial sites, grazing areas, fishermen's residences, holiday shack sites and other approved purposes.

Land reserved for the Woods and Forest Department may be leased for cultivation or grazing purposes for a period not exceeding 42 years. At 30th June 1966, 6,922 acres of forest land were under lease.

Perpetual Leases

Leases in perpetuity may be offered over Crown lands which have been surveyed. The lessee is required to provide boundary fencing and to clear and render available for cultivation a certain proportion of the land within a specified period. Where considered desirable it is conditional that the lessee reside on the property.

No lease may be allotted which would bring the unimproved value of total holdings in excess of \$10,000 except where the land is suitable for pastoral purposes only. Existing leases may, however, be transferred to a landowner up to an accumulated holding of \$24,000 unimproved value.

In certain cases special perpetual leases are available under which no rent is payable for the first four years, and with less than full rent over the next six years.

Sections in government controlled irrigation areas are offered on perpetual lease and, if the land has not been cultivated before, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are to be made and the lessee may be required to reside on the land for nine months of the year. Town allotments in irrigation areas may be offered under perpetual lease either at auction, by calling applications, or may be let on annual licence. Allotments not sold at auction may be sold by private contract.

During 1965-66, 20 acres in irrigation areas were allotted under perpetual leases.

MINING CLAIMS, LEASES AND LICENCES

Mineral Lands

Mineral lands are lands in which the mineral rights are reserved to the Crown and include Crown lands, lands under Crown lease and lands alienated from the Crown after 1886.

Mineral lands which are used as a site for buildings, dams, etc., or which are cultivated, are exempt from mining as are also certain areas which may be exempted either permanently—as with Aboriginal reserves—or temporarily, *e.g.* to facilitate a Department of Mines survey. Public reserves, streets and highways are subject to regulations protecting the public user.

The holder of a miner's right, a document which must be obtained prior to participating in any mining activity (except the search for petroleum) may enter any mineral lands, other than those exempted above, and prospect thereon. Before removing any minerals, however, he must obtain one of three forms of mining tenure—a claim, a lease or a licence. A claim is a form of tenure designed to enable the holder to prove the deposit before applying for a long-term lease.

Application must be made for a lease, however, once the profitability of the mine is established, or in the case of salt and gypsum within 21 days of acquiring a claim. A lease is normally for a period of 21 years, but special mining leases for a maximum term of 2 years may be issued by the Minister, with the conditions of the lease being at his discretion. An annual rent and a royalty on gross profits are paid by the lessee to the Crown. The maximum size of claims and leases and the working conditions imposed thereunder vary with the nature of the mineral.

The use of licences is virtually restricted to oil exploration. All oil and natural gas, whether on mineral lands or not, is the property of the Crown, and separate licences are issued for the phases of exploration, prospecting and mining.

These licences have maximum terms of 5, 5 and 21 years respectively and impose certain conditions to be followed in the search for, and the development of, oil and gas resources. Under an oil mining licence a royalty of 10% of output is payable to the Crown.

Lands with Mineral Rights Alienated

The mineral rights of lands sold by the Crown prior to 1886 were alienated with the land.

The prospecting and mining of such land may be carried out either under a private agreement with the owner or under authorization of a warden of the Department of Mines. Where a lease is issued by the department, the bulk of any rents and royalties collected is paid to the owner.

At the discretion of the Government certain lands may be reserved from mining operations, and other lands are exempted by the nature of their use.

Areas Held under Mining Acts, South Australia

At 30th June

Particulars	1962	1963	1964	1965	1966
			Acres		
Claims	12,148	13,562	12,483	14,298	16,190
Leases	5,351,703	5,739,722	7,881,612	6,606,993 (a)	29,621,476
Oil licences	199,408,640	197,744,640	228,234,240	221,059,840	237,591,040
Total	204,772,491	203,497,924	236,128,335	227,681,131	267,228,706

(a) Lands held under special mining leases accounted for 29,541,120 acres of land occupied under lease at 30th June 1966.

4.2. LAND SETTLEMENT SCHEMES

CLOSER SETTLEMENT

The Minister of Lands may acquire, either by agreement or compulsorily, land for subdivision in the interests of closer settlement. Such land is divided into blocks not exceeding \$14,000 in unimproved value, and offered under conditional agreements to purchase with payment over 35 and 64 year periods.

No land has been purchased for closer settlement since 1952-53, by which time 948,885 acres had been purchased at a cost of \$5,730,400, including 51,872 acres set apart for returned service personnel from the 1914-18 war, 3,214 acres for forest and water conservation purposes and 26,563 acres purchased in connection with the reclamation of River Murray swamp lands.

At the 30th June 1966 a total of 212,145 acres of closer settlement lands were held under agreements to purchase or lease.

MARGINAL LANDS SCHEME

The excessive opening up of the drier marginal lands for wheat growing resulted in many settlers in these areas being forced to leave their holdings, particularly in the 1930's.

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing, and in 1939 the Commonwealth Government established a trust fund to assist development in this direction. The money was used to purchase properties from certain settlers with a view to enlarging the holdings of others, to provide fencing and water supplies and to pay small grants to settlers vacating holdings in which there was no equity. Commonwealth grants totalled \$1,426,000, all of which has been expended.

CROWN LANDS DEVELOPMENT

The Crown Lands Development Act, 1943, administered by the Department of Lands, provides for the development of Crown lands, or lands which the department may purchase, and for the allotment of such lands to suitable settlers.

A substantial proportion of the land under the Act was developed with the object of inclusion in the War Service Land Settlement Scheme. Properties not accepted for the scheme were subsequently allotted under the Act, and since then a number of individual properties have been surrendered to the Crown for development and re-allotment to the former holders.

ASSISTANCE FOR RETURNED SERVICE PERSONNEL

1914-18 War

Following the 1914-18 War the State Minister for Repatriation was authorized to acquire land for the purpose of re-settling discharged servicemen. Such land could be purchased by agreement or acquired compulsorily, whether held in fee simple or under Crown lease. Crown lands could also be set apart for this purpose. The land acquired was subdivided where appropriate and offered under agreement to purchase, perpetual lease or a term lease. Provision was also made for the discharging of existing mortgages on freehold properties already held by ex-servicemen, with fresh mortgages in favour of the Minister of Repatriation.

In all 3,768 ex-servicemen were settled under this Act with 3,008 settling in "dry lands" and 760 in irrigation areas.

1939-45 War and Korea-Malaya Operations

War Service Land Settlement

Under the War Service Land Settlement Scheme, provision was made for the settlement on rural holdings of certain ex-servicemen from the 1939-45 War and Korea and Malaya operations.

Suitable Crown land was made available and other land was acquired. This land was subdivided and developed to a stage where it could be brought into production by the individual settler within a reasonable time. Basic structural improvements were provided and it was then offered to eligible settlers on perpetual lease. Credit facilities are available to these settlers for working capital, the purchase of stock and equipment, and the effecting of further improvements.

During the first year after allotment in the case of "dry lands" settlers, and the first year after an irrigation holding became self-supporting the settler was granted a living allowance and was exempted from the payment of rent or interest in respect of the holding, and of payments on account of principal or interest in respect of advances, other than advances for working capital. Provisions exist for a settler on "dry lands" to convert property to freehold after a period of 10 years by the payment of a fixed purchase price and the repayment of all advances. There is no provision for freeholding in government irrigation areas.

The State Department of Lands administers the War Service Land Settlement Scheme on behalf of the Commonwealth Government. The Commonwealth provides the funds and meets the costs of the scheme with the exception of administration costs and two-fifths of any losses, which sums are met by the State Government.

All large scale development operations under the scheme have now been completed. The principal areas settled are in the South East, on Kangaroo Island, Eyre Peninsula, and in irrigation areas along the River Murray.

War Service Land Settlement, South Australia
Farms Allotted and Total Expenditure to 30th June

Particulars	1950	1953	1956	1959	1962	1965
Farms allotted—						
Number	286	517	718	984	1,015	1,022
Area ('000 acres)	84	219	343	623	671	688
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Expenditure—						
State	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	3,310	4,742	6,612
Commonwealth—						
Acquisition of land	3,026	3,934	4,768	6,358	6,914	6,836
Development and improvement of land	6,384	13,512	19,872	25,414	28,214	29,748
Provision of credit facilities	770	2,620	4,982	8,690	18,852	27,008
Other	194	640	1,668	3,634	6,472	9,454
Total expenditure by Commonwealth	10,374	20,706	31,290	44,096	60,452	73,046
Total expenditure	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	47,406	65,194	79,658

n.a.—Not available.

Loans and Allowances (Agricultural Occupations) Scheme

The Commonwealth Government through the State Bank of South Australia provided financial assistance for the establishment or re-establishment of ex-servicemen in agricultural occupations. Loans were made for a variety of purposes and non-repayable allowances were made where income during the course of re-establishment proved to be inadequate. The payment of allowances and the advancing of new loans ceased in 1956-57 by which date loans totalling \$2,009,096 had been made to 1,288 ex-servicemen, and allowances totalling \$649,218 had been granted to 2,264 ex-servicemen.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of \$416,381 had been made by 30th June 1966.

PRIVATE LAND DEVELOPMENT SCHEMES

The most important private scheme in South Australia has been a project, begun in 1949 by the Australian Mutual Provident Society, involving the development of a considerable area of land in the south-east of the State in what was previously known as the Ninety Mile Desert. The development of this area was made possible by the discovery that the retarded nature of the country was due to certain soil deficiencies, and that this deficiency could be overcome by the addition of trace elements (mainly copper sulphate and zinc sulphate) to the soil.

Large tracts of unimproved land were obtained either by purchasing existing leases or by Crown allotment. Intending settlers were employed by the society in the development work, covering a period of approximately five years, and were then allotted a holding over which they had a perpetual lease title. The society provided finance for the purchase and for stock, plant and working expenses. In all 96,000 acres were taken up by employees of the society.

In addition to the development of land for employees a large area has been handed to various stages of development and sold to the public, sales to the 30th April 1965 amounting to 327,000 acres.

ADVANCES TO THE RURAL SECTOR

Government Advances

In addition to advances made under schemes mentioned above, the State Bank administers certain funds provided by the State for rural development.

Under the Advances to Settlers Act, 1930-1958 the bank makes advances to settlers for a variety of purposes including general improvements, the purchase of livestock and the discharging of existing mortgages. The Loans to Producers Act, 1927-1962 empowers the bank to make advances for certain developmental projects and the purchase of certain capital equipment. The bank also administers acts providing loans for the construction of vermin-proof fencing, general fencing and the laying of water piping.

Advances outstanding at 30th June for the three most recent years are shown in the following table.

Advances to Settlers, South Australia

Particulars	1964	1965	1966
		\$'000	
Closer settlement.....	967	926	892
Soldier settlers (1914-18 war).....	708	641	580
Returned service personnel (1939-45 war).....	12,153	12,816	12,749
Crown lands development.....	709	730	716
Advances to settlers.....	1,000	1,092	1,177
Loans to producers.....	6,004	6,899	7,768
Vermin and fencing advances.....	84	78	77
Total.....	21,624	23,183	23,958

Private Institutional Advances

Many financial institutions advance funds for rural development.

At July 1966 the major trading banks (including the Commonwealth Bank) had advances outstanding to residents of South Australia and the Northern Territory, employed in agriculture, dairying and grazing, of \$52.0 million. At June 1966 branches of major pastoral finance companies located in South Australia had \$44.3 million outstanding on similar advances.

PART 5

POPULATION

5.1. POPULATION GROWTH AND DISTRIBUTION

The population of South Australia had reached 17,366 persons at the first Census on 26th February, 1844. In 1861, 25 years after the first settlers arrived, the population was 126,830 and this figure had more than doubled by the Census in 1881. By 1921 the population was almost 500,000 persons and it is estimated to have reached 1,000,000 persons in January 1963. The population according to the preliminary field count of the Census, 30th June 1966, was 1,090,723 persons.

Population, South Australia, Censuses 1844 to 1966
(Excludes Full-blood Aborigines)

Census Date	Population			Increase since Previous Census		
	Males	Females	Persons	Males	Females	Persons
1844 26th February .	9,686	7,680	17,366	..	..	..
1846 26th February .	12,670	9,720	22,390	2,984	2,040	5,024
1851 1st January ...	35,302	28,398	63,700	22,632	18,678	41,310
1855 31st March....	43,720	42,101	85,821	8,418	13,703	22,121
1861 8th April.....	65,048	61,782	126,830	21,328	19,681	41,009
1866 26th March ...	85,334	78,118	163,452	20,286	16,336	36,622
1871 2nd April	95,236	90,189	185,425	9,902	12,071	21,973
1876 26th March ...	109,841	102,687	212,528	14,605	12,498	27,103
1881 3rd April	145,113	130,231	275,344	35,272	27,544	62,816
1891 5th April.....	161,920	153,292	315,212	16,807	23,061	39,868
1901 31st March....	180,485	177,861	358,346	18,565	24,569	43,134
1911 3rd April	207,358	201,200	408,558	26,873	23,339	50,212
1921 4th April.....	248,267	246,893	495,160	40,909	45,693	86,602
1933 30th June	290,962	289,987	580,949	42,695	43,094	85,789
1947 30th June	320,031	326,042	646,073	29,069	36,055	65,124
1954 30th June	403,903	393,191	797,094	83,872	67,149	151,021
1961 30th June	490,225	479,115	969,340	86,322	85,924	172,246
1966 30th June (a) ..	547,802	542,921	1,090,723	57,577	63,806	121,383

(a) Figures compiled during the taking of the census by field personnel and subject to amendment.

In Censuses to date full-blood aboriginals have been excluded from Census counts. However, the result of the referendum held on 27th May 1967 now empowers the Commonwealth Government to change the Constitution to enable full-blood aboriginals to be counted in future Censuses.

In the next table, increases in the population have been classified as either *natural increase* (the excess of births over deaths) or *net migration* (the excess of arrivals over departures, either from overseas or from interstate). Annual average increases which are given for each ten-year period since 1861-70 and for the five-year period 1961-65 show some important aspects of the development of the State, *viz*:

The net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880's and early 1890's.

The slow growth during the economic depression of the 1930's when natural increase fell to a particularly low level.

The high rate of migration in recent years; the net gain from migration in the period 1951-60 being almost three times as great as any other ten-year period. However, during the five-year period 1961-65 it fell slightly.

Increases in the Population, South Australia

Period	Natural Increase			Net Migration			Total Increase		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Annual Average									
1861-1870	2,052	2,121	4,173	1,003	720	1,723	3,055	2,841	5,896
1871-1880	2,366	2,555	4,921	2,889	1,375	4,264	5,255	3,930	9,185
1881-1890	3,349	3,535	6,884	(-)1,488	(-)1,141	(-)2,629	1,861	2,394	4,255
1891-1900	2,832	3,024	5,856	(-) 973	(-) 567	(-)1,540	1,859	2,457	4,316
1901-1910	2,665	2,745	5,410	(-) 44	(-) 404	(-) 448	2,621	2,341	4,962
1911-1920	3,508	3,614	7,122	366	926	1,292	3,874	4,540	8,414
1921-1930	3,131	3,300	6,431	1,201	714	1,915	4,332	4,014	8,346
1931-1940	(a)1,787	(a)1,929	(a)3,716	(-) 860	(-) 397	(-)1,257	927	1,532	2,459
1941-1950	(a)3,977	(a)4,026	(a)8,003	2,705	1,671	4,376	6,682	5,697	12,379
1951-1960	5,631	5,923	11,554	6,279	5,585	11,864	11,910	11,508	23,418
1961-1965(b)	6,321	6,667	12,988	5,315	6,076	11,391	11,636	12,743	24,379

(a) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase.

(b) Five-year period.

The rate of growth of the population, *i.e.*, the increase during the period expressed as a percentage of the population at the beginning of the period, fluctuated widely prior to 1921 then settled at about 2% per annum. From 1928 to 1940 the rate was less than 1% but since 1947 it has been above 2% in almost every year and it exceeded 3% per annum in the mid 1950's.

The State's rate of growth was slower than the Australian rate in every decade from 1881-90 to 1931-40, but subsequently the steep rise in the rate of net migration has enabled an above-average growth rate to be achieved.

Rate of Increase of Population^(a), South Australia and Australia

Period	South Australia			Australia		
	Natural Increase	Net Migration	Total Increase	Natural Increase	Net Migration	Total Increase
Annual Average						
1861-1870 ..	26.46	10.92	37.38	24.31	12.06	36.37
1871-1880 ..	22.34	19.36	41.70	20.45	10.01	30.46
1881-1890 ..	22.67	(-) 8.66	14.01	19.96	14.23	34.19
1891-1900 ..	16.90	(-) 4.44	12.46	16.91	0.71	17.62
1901-1910 ..	14.70	(-) 1.22	13.48	15.29	1.00	16.29
1911-1920 ..	15.99	2.90	18.89	15.77	4.20	19.97
1921-1930 ..	11.87	3.53	15.40	12.97	5.23	18.20
1931-1940 ..	(b) 6.33	(-) 2.14	4.19	(b) 7.92	0.60	8.52
1941-1950 ..	(b) 12.50	6.83	19.33	(b) 12.04	4.34	16.38
1951-1960 ..	13.81	14.18	27.99	13.71	8.73	22.44
1961-1965(c)	13.75	12.05	25.80	13.38	7.20	20.58

(a) Rate per 1,000 of mean population. (b) See note (a) to previous table. (c) Five-year period.

Estimates of the population for the State and metropolitan area for the last 10 years are given in the following table. The total increase for each year and the rate of growth are also shown.

Estimated Population, South Australia and Adelaide Metropolitan Area
At 31st December

Year	Population Metropolitan Area(a)	State Population				Rate of Growth %
		Males	Females	Persons	Total Increase for Year	
1956....	526,400	436,807	425,145	861,952	27,291	3.27
1957....	541,300	448,411	437,841	886,252	24,300	2.82
1958....	554,300	458,401	449,652	908,053	21,801	2.46
1959....	570,300	471,868	462,629	934,497	26,444	2.91
1960....	582,100	483,802	473,220	957,022	22,525	2.41
1961....	590,600	493,284	483,723	977,007	19,985	2.09
1962....	596,600	501,705	493,786	995,491	18,484	1.89
1963....	605,500	512,896	506,327	1,019,223	23,732	2.38
1964....	616,400	527,092	521,266	1,048,358	29,135	2.86
1965....	626,700	541,984	536,934	1,078,918	30,560	2.92
1966....	n.a.	552,407	547,915	1,100,322	21,404	1.98

(a) Prior to 30th June 1966 the Metropolitan Area of Adelaide comprised 21 municipalities. From 30th June 1966 new criteria, based mainly on population density, have been adopted for all capital cities; the boundary for Adelaide has been extended to embrace new areas including Elizabeth, Salisbury and Tea Tree Gully.

n.a.—Not available.

Estimates of population from June 1961 (Census), onwards have been derived by a new method of estimation. The population of the State is now estimated by adding to the population ascertained at the Census the natural increase and the allocation of the net gain to Australia by overseas migration for the State; gains and corresponding losses that result from movement between South Australia and other States are also taken into account, in so far as they are recorded as transfers of residence under child endowment procedures or Commonwealth electoral procedures, supplemented by results of any special count or sample survey. The previous method of estimation was based on the addition to census population, figures of natural increase and all net recorded movement from overseas according to embarkation/disembarkation in this State as well as all net recorded movement by air, rail, sea and bus between this and other States.

These estimates show the annual increase in population as having been maintained at over 20,000 persons except for the years 1961 and 1962. As indicated by these figures, the rate of growth fell during the years 1960-1962, rose during the years 1963-1965 but again fell in 1966.

The estimated mean population for South Australia is calculated for the years ended 30th June and 31st December. Estimates for the last 10 years are shown in the next table.

Estimated Mean Population, South Australia

Year	Year Ended 30th June			Year Ended 31st December		
	Males	Females	Persons	Males	Females	Persons
1957....	437,080	424,330	861,410	443,313	430,888	874,201
1958....	448,723	437,298	886,021	453,681	443,306	896,987
1959....	458,876	449,478	908,354	465,119	455,987	921,106
1960....	471,548	462,071	933,619	477,432	467,429	944,861
1961....	484,055	473,081	957,136	490,484	479,606	970,090
1962....	493,319	483,578	976,897	497,004	488,317	985,321
1963....	501,886	493,873	995,759	507,479	500,062	1,007,541
1964....	513,560	506,725	1,020,285	520,278	513,849	1,034,127
1965....	527,288	521,226	1,048,514	534,404	528,671	1,063,075
1966....	541,613	536,213	1,077,826	547,691	542,666	1,090,357

EARLY HISTORY OF SETTLEMENT

The census of the population of the colony of South Australia in 1844 revealed that over 10,000 of the total population of 17,366 persons were located in or near Adelaide. In 1846 there was a total population of 22,390 persons and approximately 13,000 of these were located in or near Adelaide. Most of the population outside the Adelaide area had settled to the north as far as Port Wakefield, including a settlement at Gawler Town, and to the south to Encounter Bay. By 1846 over 500 persons had settled further south in an area near Rivoli Bay. Population at Port Lincoln in 1844 was 96 persons and increased to 132 persons in 1846. Kangaroo Island had a population of 70 persons in 1846.

The division of some portions of South Australia into counties was made in 1842 and the census in 1851 was recorded on that basis. Nearly all of the counties at that time were in the present Central Division; exceptions were Counties Stanley (Lower North), Russell (Murray Mallee), Robe (South Eastern) and Flinders (Western).

Most of the population in "other areas" was in the Burra mining towns of Kooringa, Redruth and Aberdeen and in the vicinity of Burra Creek.

The discovery of copper near Kapunda (County Light) in 1843 and near Burra in 1845 was one of the first causes of a sudden movement of people to new areas. The construction of the railway to Kapunda also helped to open up the land in the Lower North for agriculture.

In 1861 the main country centres of population included Mount Gambier and Port Lincoln, both of which served as agricultural and commercial centres for their respective regions; Kapunda, Burra and Wallaroo, important copper mining centres; Gawler, a manufacturing and distributing centre at the entrance to the rich Barossa Valley; Goolwa, Port Elliot, Robe, Port Augusta and Port Wakefield, small ports; and Strathalbyn and Mount Barker, agricultural centres.

POPULATION

Population, South Australia

Census 1851

County, District, Etc.	Number of Persons
City of Adelaide	14,577
County Adelaide	29,447
County Hindmarsh	3,121
County Sturt	1,833
County Eyre	361
County Gawler	1,011
County Light	4,396
County Stanley	1,283
County Russell	174
County Robe	1,209
County Flinders	520
Kangaroo Island	87
Yorke Peninsula	122
Other areas	5,559
Total	63,700

The concentration of people in the Adelaide area led to the need for various community services. Water was laid on in 1861 and gas in 1863. Thus began the introduction of factors which assisted in an increasing concentration of the population in and around Adelaide; there were increased comforts and amenities as well as greater opportunities for employment.

At this time the two peninsulas and the northern districts had not been exploited and there were very few settlers in the Murray Valley, the Murray Mallee or on Kangaroo Island. Apart from the pull of the mineral fields the chief population movement was towards the South East and along the rich alluvial inter-ridge plains of the Lower North.

Subsequently the movement of settlers into Eyre Peninsula caused the population to rise from 2,600 persons in 1881 to over 6,000 in 1901 and more than 13,000 by 1911.

In the Murray Mallee, farm settlement similar to that in Eyre Peninsula, together with irrigation settlements at Renmark and other areas in the 1880's and 1890's increased the population to 4,700 persons by 1901 and over 13,000 by 1911. Further settlement, including schemes for settlement of ex-servicemen on irrigation areas, resulted in a population of approximately 23,700 persons by 1921.

The pattern of settlement in South Australia from 1861 had been changed by the opening of the northern wheat lands, the drainage of the South Eastern swamps, the increase in the number of farmers in both Yorke and Eyre Peninsulas and in the Murray Mallee, and the development of irrigation in the Murray Valley, especially in the Renmark-Berri area and along the Lower Murray flats. Port Lincoln and Mount Gambier had increased their importance as distributing centres and Port Pirie, Iron Knob and Whyalla had developed as mining and industrial centres. With improved roads and expansion of railway facilities people were able to move about more rapidly. Settlement had become concentrated more into cities and larger towns. By the 1933 Census the population of South Australia had reached 580,949 persons and of these 312,619 were living in the metropolitan area as defined at that date. Port Pirie with a population of 11,680 persons had the highest population of any town outside the metropolitan area; Mount Gambier had 5,539 and Gawler 4,138 persons.

DISTRIBUTION OF POPULATION

The population of South Australia numbered 1,090,723 persons according to the preliminary field count of the Census, 30th June 1966. A large proportion of this total was located in and near the capital city of Adelaide; 726,930 (66.6%) were in the Adelaide Metropolitan Area; 770,628 (76.5%) in the Adelaide Statistical Division (see map, page 96). At the 1954 Census 67% of the population was living within a 25 mile radius of the City of Adelaide, and this percentage had increased to 69.9% by the 1961 Census, and to an estimated 71.8% at 30th June 1965. Most of the remainder of the population lived in other cities and country towns, or rural properties; small numbers lived in mining centres, forest reserves, small fishing ports, or in construction and maintenance camps in rural areas.

Urban Areas

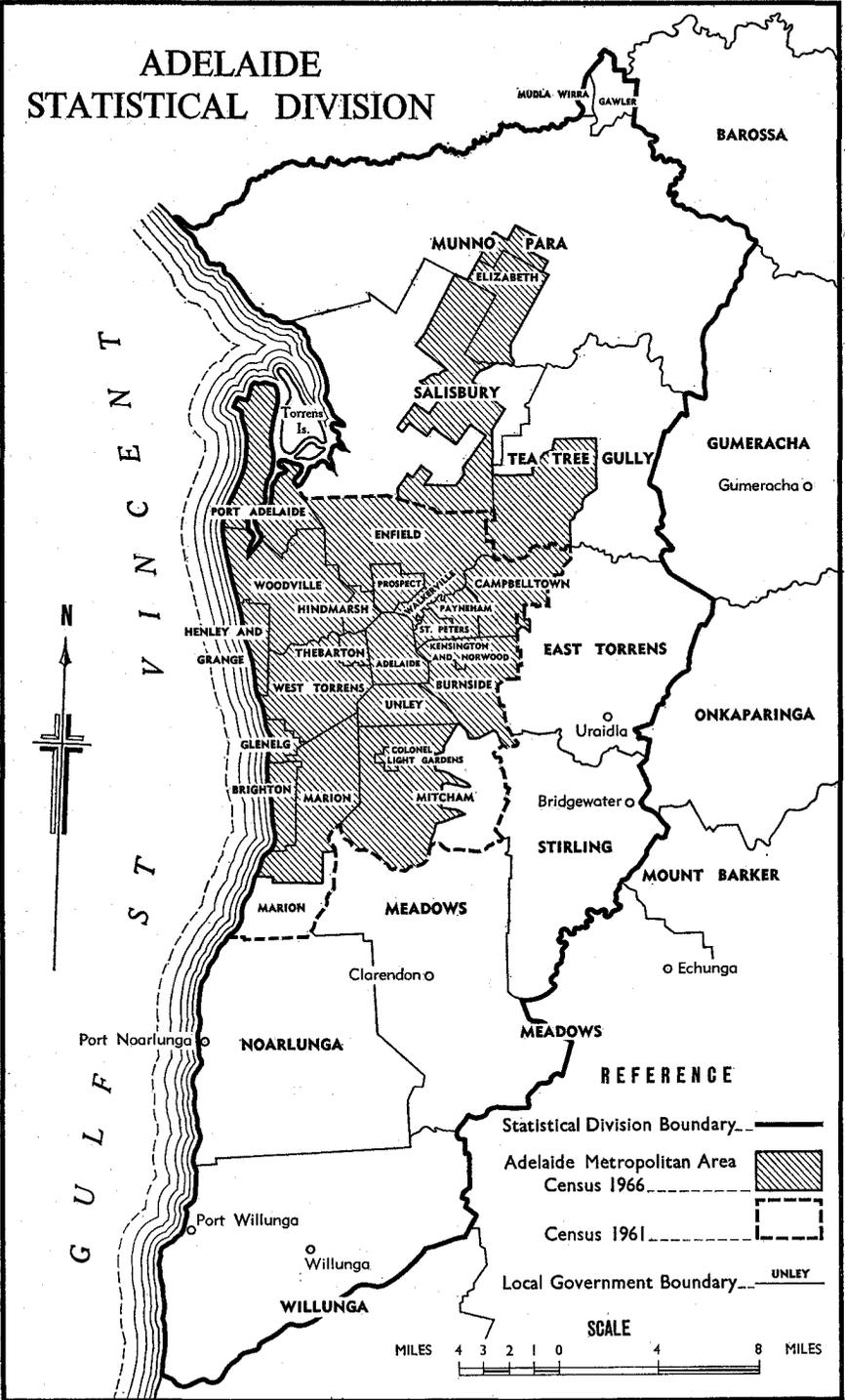
For the purpose of presenting population and dwelling statistics new methods have been adopted in the delimitation of metropolitan and certain other urban centres. These methods were first used for the Census, June 1966, and will apply uniformly throughout Australia.

The basic criterion used is *population density*. The geographic units to be classified according to the density criterion are collector's districts, the smallest units available. These areas vary in size and shape, but as far as possible they have been designed to ensure that significant urban development in large rural collector's districts is split off as a separate collector's district. Particular rules apply to contiguous areas with special functions, such as airports, sporting areas and industrial areas, which do not meet the density criterion. Where there is a gap in urban development which is less than two miles (by the shortest rail or road distance) between the edge of one area of urban development and another, the gap is ignored and the urban areas treated as contiguous; if there is a gap of two or more miles between the two urban areas, those urban areas are treated as separate urban areas even if the gap comprises mainly reserved land or a natural barrier.

Because of practical difficulties (notably lack of time to carry out an extensive examination of each area in order to re-design suitable collector's districts, and the absence of suitable topographic boundaries around small towns) the new criteria at present have not been applied to extra-metropolitan urban centres in South Australia; instead, the following procedures were used.

Municipalities, cities and towns of over 1,000 population have been classified as urban, except where they contain a very large rural component, in which case the urban centres have been delimited from aerial photographs or by field inspection, *e.g.*, Renmark Municipality. Where extensive urban development is known to extend beyond the boundary the extension has been regarded as an integral part of the urban centre and is included, *e.g.*, City of Port Pirie. Other urban centres have been extensively examined on the most recent aerial photographs available and the boundaries set as closely as possible to the periphery of the built-up area without regard to local government boundaries.

In addition, holiday areas are defined as urban if they have 250 or more dwellings (at least 100 of which are occupied on Census night) and the settlement has a recognisable core (as opposed to a straggle of houses along a coastline, for example). The population of such an area is usually at a minimum on Census night because the Census is taken in mid-week and during the winter.



MAP 7

The boundary of an urban centre is, therefore, the peripheral boundary of an aggregate of contiguous urban collector's districts, the densities of which are at least 500 persons per square mile. The boundary is a moving one which reflects the process of urbanisation. The use of objective criteria will enable valid comparisons to be made between one urban centre and another, and between the population for an urban centre at one Census with the populations at succeeding Censuses.

Around Adelaide (and all other capital cities in Australia), two boundaries have been defined. The outer one, which is fixed, circumscribes the area in close economic and social contact with the main city, and which contains the anticipated urban development of the city for a period of at least 20 to 30 years. This boundary defines the Adelaide Statistical Division (see map, page 96). The inner boundary indicates the area which, at the time of the Census, meets the criteria for urban areas described above. From Census to Census, as urbanisation proceeds, this boundary will move outwards to encompass peripheral development. This boundary defines the Adelaide Metropolitan Area. This area currently contains nearly all the metropolitan area as defined at the 1961 Census, and in addition, includes the City of Elizabeth and large portions of Salisbury City and Tea Tree Gully, and a small part of Munno Para and East Torrens District Councils (see map, page 96).

In future the boundaries of all population clusters of 1,000 or more persons, having a minimum density of 500 persons per square mile, will be delimited using the above density criteria.

Urban and Rural Population, South Australia

Censuses 1921 to 1966

Census	Urban				Rural		Total (including Migratory)	
	Metropolitan		Other (a)		Number	Per Cent	Number	Per Cent
	Number	Per Cent	Number	Per Cent				
1921.....	255,375	51.57	41,637	8.41	195,054	39.39	495,160	100.00
1933.....	312,619	53.81	51,456	8.86	214,762	36.97	580,949	100.00
1947.....	382,454	59.20	65,911	10.20	196,007	30.34	646,073	100.00
1954.....	483,508	60.66	110,107	13.82	201,133	25.23	797,094	100.00
1961.....	587,957	60.66	177,380	18.30	200,065	20.64	969,340	100.00
1966 (b) ..	726,930	66.65	173,588	15.92	189,026	17.33	1,090,723	100.00

(a) "Other urban" up to the 1947 Census comprised all municipalities outside the Metropolitan Area. For the 1954 and 1961 Censuses non-municipal towns of 1,000 or more persons were also included, but in 1961 and 1966 municipalities of less than 1,000 persons were excluded. In 1966, four centres viz Goolwa, Port Elliot, Port Broughton and Port MacDonnell, although having a population of less than 1,000, were regarded as urban on a dwelling density basis.

(b) Figures derived from the preliminary field count of the Census and subject to amendment.

In 1921 the rural population was 195,054 and at that time represented 39.4% of the total population (42.1% of males and 36.7% of females). There were 214,762 persons classified as living in rural areas at the 1933 Census but the total had fallen slightly to 200,065 in 1961, and the proportion of the total population was down to 20.6% (21.7% of males and 19.6% of females). A further fall occurred during 1961-1966. According to preliminary Census figures, the total rural population was 189,026 persons at 30th June 1966, and the proportion of the total population had fallen further to 17.3% (18.3% of males and 16.4% of females). In fact the proportion of the population living in rural areas has shown a steady decrease over the period since 1921.

For statistical purposes the settled southern portion of the State is divided into seven statistical divisions, as shown on the map inside the back cover of this volume. The population of each division at the last four censuses is shown in the following table. The figures for Adelaide and Central have been combined for 1947, 1954 and 1961 because the concept of the Adelaide Statistical Division was first introduced at the 1966 Census.

Population of Statistical Divisions, South Australia

Censuses 1947 to 1966

Statistical Division	Population at 30th June				Proportion of State Population			
	1947	1954	1961	1966 (a)	1947	1954	1961	1966
					Per Cent	Per Cent	Per Cent	Per Cent
Adelaide	475,942	591,520	734,446	770,628	73.67	74.21	75.77	70.65
Central				74,132				
Lower North	45,688	50,009	49,898	48,130	7.07	6.27	5.15	4.41
Upper North	18,390	20,946	22,944	22,698	2.85	2.63	2.37	2.08
South Eastern	31,556	42,614	52,241	55,435	4.89	5.35	5.39	5.08
Western	29,174	34,043	42,394	52,591	4.51	4.27	4.37	4.82
Murray Mallee	39,058	47,168	52,048	55,166	6.04	5.92	5.37	5.06
Remainder of State	4,564	8,448	11,431	10,764	0.71	1.06	1.18	0.99
Migratory	1,701	2,346	3,938	1,179	0.26	0.29	0.40	0.11
Total	646,073	797,094	969,340	1,090,723	100.00	100.00	100.00	100.00

(a) Figures based on the preliminary field count and subject to amendment.

Over 80% of the increase in the State's population between 1947 and 1966 has occurred in Adelaide and Central Divisions, and the population of these divisions has increased from 73.7% in 1947 to 77.5% in 1966. Some gain in population was recorded in all Statistical Divisions during this period, but there has been a marked fall in the proportion of the population in Lower North, Upper North and Murray Mallee Divisions. Population in the north of the State is very scattered; the area outside the seven statistical divisions, which covers 78.7% of the total area of the State, contained only 10,764 persons (about 1% of the population) according to preliminary figures of the 1966 Census. Approximately two-thirds of these persons were in either the Weapons Research Establishment area of Woomera-Maralinga, or the three mining towns of Leigh Creek, Andamooka and Coober Pedy.

Population in and near Adelaide

In all, the Adelaide Metropolitan Area contains 26 local government areas (20 complete and 6 part—where necessary local government boundaries are ignored in the application of density criteria). Of these, 16 have been proclaimed as cities. Qualification for city status within the metropolitan area is dependent on the population reaching 15,000 persons, but a subsequent fall in population below this level (as has occurred in the City of Kensington and Norwood) does not involve loss of city status.

Over the last two decades there has been a considerable fall in the population of the City of Adelaide, and lesser falls in all of the older municipalities close to the city, viz Prospect, Hindmarsh, Thebarton, Unley, Kensington and Norwood, St Peters and Walkerville. The greatest proportionate increases in population have occurred in the local government areas of Munno Para, Salisbury, Elizabeth, Enfield (generally north of the city), Campbelltown and Tea Tree Gully (north-east), Marion and Brighton (south-west).

Population, Adelaide Metropolitan Area

Local Government Area	Census 30th June 1961 (a)	Census 30th June 1966 (b)
Adelaide (C.)	23,051	18,580
Brighton (C.)	20,337	22,606
Burnside (C.)	36,153	38,756
Campbelltown (C.)	19,643	31,983
Colonel Light Gardens (M.)	3,671	3,402
East Torrens (D.C.) (Part)	(c)	570
Elizabeth (C.)	(c)	32,948
Enfield (C.)	72,028	80,212
Glenside (M.)	14,492	14,760
Henley and Grange (M.)	11,680	14,153
Hindmarsh (M.)	12,914	11,352
Kensington and Norwood (C.)	13,476	11,927
Marion (C.) (Part)	56,694	66,204
Mitcham (C.) (Part)	38,696	49,294
Munno Para (D.C.) (Part)	(c)	10,265
Payneham (C.)	14,930	16,834
Port Adelaide (C.)	38,923	39,749
Prospect (C.)	22,184	21,396
St Peters (M.)	11,727	11,301
Salisbury (C.) (Part)	(c)	33,897
Tea Tree Gully (D.C.) (Part)	502	20,108
Thebarton (M.)	12,884	12,291
Unley (C.)	40,280	39,706
Walkerville (M.)	4,464	4,587
West Torrens (C.)	40,681	46,201
Woodville (C.)	71,039	73,848
Metropolitan Area	580,449	726,930

(C.)—City; (M.)—Municipality; (D.C.)—District Council.

(a) These figures represent approximately the population that would have been recorded as Metropolitan if the new criteria had been in force at the 1961 Census.

(b) Figures of the preliminary field count of the Census.

(c) Non-metropolitan in 1961.

Although figures for the Metropolitan Area, defined according to the density criteria, are not available for the 1947 and 1954 Censuses, there appears to have been a continual increase in the proportion of the total population residing in the Metropolitan Area. This upward trend is shown in the above table for the 1961-1966 intercensal period. At the 1961 Census, the population of the Metropolitan Area was 580,449 persons, or 59.88% of the total State population and this figure had increased to 726,930 (66.65%), according to the preliminary field count of the Census 1966.

Significant growth has also occurred in the area adjacent to the Metropolitan Area which is included in the Adelaide Statistical Division. The most rapid growth in this non-metropolitan part of the Adelaide Statistical Division during the 1961-66 intercensal period has occurred in Urban Reynella-Port Noarlunga (Noarlunga District Council) and in Urban Crafers-Bridgewater (Stirling District Council).

The following table shows the population of the Adelaide Statistical Division at the 1961 and 1966 Censuses.

Population, Adelaide Statistical Division

Area	Census 30th June 1961 (a)	Census 30th June 1966 (b)
Metropolitan Area	580,449	726,930
Local Government Area—		
Burnside (C.) (Rural)	113	(c)
Campbelltown (C.) (Rural)	1,302	(c)
East Torrens (D.C.) (Rural)	3,664	3,246
Elizabeth (C.)	22,831	(c)
Enfield (C.) (Rural)	476	(c)
Gawler (C.T.)	5,639	5,701
Marion (C.) (Rural)	1,770	744
Meadows (D.C.) (Rural) (d)	2,242	2,825
Mitcham (C.) (Rural)	4,426	171
Mudla Wirra (D.C.) (d)	111	155
Munno Para (D.C.)	3,154	3,974
Noarlunga (D.C.)	5,492	14,155
Salisbury (C.)	12,884	1,842
Stirling (D.C.)	7,075	7,523
Tea Tree Gully (D.C.)	5,308	1,176
Willunga (D.C.) (d)	2,210	2,186
Total	659,146	770,628

(C.)—City; (D.C.)—District Council; (C.T.)—Corporate Town.

(a) These figures represent approximately the population that would have been recorded if the new criteria had been in force at the 1961 Census.

(b) Figures of the preliminary field count of the Census.

(c) Merged with Metropolitan Area.

(d) Part of L.G.A. in Adelaide Statistical Division and part in Central Statistical Division.

Note—Generally, where a decrease in population is shown between 1961 and 1966, part of the relevant area has merged with the Metropolitan Area.

Population Beyond the Adelaide Statistical Division

Whereas in each of the eastern States, New South Wales, Victoria and Queensland, there are at least four centres outside the capital city with a population of more than 20,000 persons, there is only one in South Australia. This city, Whyalla, according to the preliminary field count, had a population of 22,126 persons at 30th June 1966, making it the largest city outside the Metropolitan Area. Early expansion of Whyalla was a direct consequence of it being the closest port to the rich iron ore deposits at Iron Knob, Iron Baron and Iron Monarch. More recently, growth has been accelerated by the construction of a modern steel-making plant which began production in February 1965. The population of Whyalla at the Census, 1961 was 13,711 persons—in five years it has grown by 61.4%.

According to the preliminary 1966 Census figures, there were only three other urban areas outside of the Adelaide Statistical Division, with population in excess of 10,000 persons. These were, Mount Gambier (17,146 persons), the centre of the rich and fertile south-eastern portion of the State, Port Pirie (15,549 persons), the most convenient port for shipping the rich silver-lead-zinc production of Broken Hill (N.S.W.), and Port Augusta (10,128 persons), the site of a large power station which uses Leigh Creek brown coal. Whyalla, Mount Gambier, Port Pirie and Port Augusta have all been proclaimed as cities, as the population of each is above 10,000, the qualifying level for extra-metropolitan towns.



Although there are no other towns of city size outside the Adelaide Statistical Division (Port Lincoln being the next largest with a population of 8,867 persons), there are a number of centres with population between 3,000 and 6,000 persons spread through the settled areas. Growth of these centres between the 1961 and 1966 Censuses is shown in the following table.

Population Growth of Larger Urban Centres^(a), South Australia

Urban Centre	Division	Census		Intercensal Increase Per Cent
		June 1961	June 1966	
Kadina	Lower North	3,102	3,019	-2.68
Mount Gambier	South Eastern	15,388	17,146	11.42
Millicent	South Eastern	3,401	4,528	33.14
Murray Bridge	Murray Mallee	5,404	5,946	10.03
Naracoorte	South Eastern	4,410	4,377	-0.75
Peterborough	Upper North	3,430	3,116	-9.15
Port Augusta	Upper North	9,711	10,128	4.29
Port Lincoln	Western	7,508	8,867	18.10
Port Pirie	Lower North	15,544	15,549	0.03
Renmark	Murray Mallee	2,854	3,047	6.76
Victor Harbor	Central	2,886	3,136	8.66
Whyalla	Western	13,711	22,126	61.37
Woomera-Maralinga	Remainder of State	4,808	4,735	-1.52

(a) Outside of the Adelaide Statistical Division.

Populations of all urban areas (as defined in terms of the density criteria) with 1,000 or more residents are shown in the following table in order of size (the Adelaide Metropolitan Area is excluded).

**Population of Urban Areas, South Australia
Census 1966^(a)**

Urban Area	Population	Urban Area	Population
Whyalla	22,126	Angaston	1,888
Mount Gambier	17,146	Bordertown	1,764
Port Pirie	15,549	Moonta	1,690
Reynella-Port Noarlunga	11,775	Clare	1,584
Port Augusta	10,128	Barmera	1,479
Port Lincoln	8,867	Strathalbyn	1,448
Gawler	6,643	Ceduna	1,405
Murray Bridge	5,946	Penola	1,377
Woomera-Maralinga	4,735	Burra	1,338
Millicent	4,528	Jamestown	1,281
Crafers-Bridgewater	4,471	Crystal Brook	1,232
Naracoorte	4,377	Balaklava	1,199
Victor Harbor	3,136	Kapunda	1,118
Peterborough	3,116	Lobethal	1,098
Renmark	3,047	Keith	1,097
Kadina	3,019	Kingscote	1,074
Loxton	2,424	Kingston (S.E.)	1,066
Berri	2,224	Gladstone	1,036
Walleroo	2,093	Leigh Creek	1,028
Nuriootpa	2,038	Maitland	1,017
Mannum	2,031	Port Elliot (b)	565
Tanunda	1,986	Goolwa (b)	564
Taillem Bend	1,953	Port MacDonnell (b)	531
Mount Barker	1,934	Port Broughton (b)	417

(a) Figures obtained from the preliminary field count of the Census 30th June 1966.

(b) "Holiday Area"—classified as "urban" on a dwelling density basis.

5.2. BIRTHS AND DEATHS

Compulsory registration of births and deaths was first provided in South Australia in 1842 when an Act "for registering Births, Deaths and Marriages in the Province of South Australia" was passed. Current legislation is contained in the Births and Deaths Registration Act, 1936-1962 and the administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages. For registration purposes the State is divided into 22 registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all births and of all deaths registered in the State and each District Registrar maintains in a register duplicate copies of the registrations of births and deaths which occurred in the district under his jurisdiction. Separate registers are kept of still births, which are not included in the registrations or statistics of either births or deaths. A still-born child is defined by the Act as any child which has issued forth from its mother after the twenty-eighth week of pregnancy and which did not at any time after being completely expelled from its mother, breathe or show any signs of life. Compulsory registration of still births was introduced in South Australia in 1937.

The birth of each child whether live-born or still-born is required to be registered by a parent within 42 days of the date of birth. Penalties are provided for failure to register, and the registration of a live birth after the expiration of 42 days after the date of birth requires also the payment of a fee and a declaration in a form prescribed by the Act.

A death is required to be registered within 10 days of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a certificate of registration of death, of a medical certificate of cause of death signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

Births and deaths of Aborigines when registered are incorporated in registers, but are excluded from statistics where there is definite indication that they were of full-blood Aborigines.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the greater allowable period for registration, such variations generally are more apparent in birth than in death figures.

BIRTHS

In the following table, which shows the live birth rate, the masculinity of live births and the totals and rates of still births, a comparison between the births which actually occurred and those which were registered for the last 10 years is also shown.

Live Births and Still Births, South Australia

Year	Total Live Births Occurred (a)	Births Registered						
		Live-born				Still-born		
		Total	Rate (b)	Males	Females	Masculinity (c)	Total	Rate (d)
1957....	19,758	19,536	22.35	10,025	9,511	105.40	297	14.98
1958....	19,883	20,047	22.35	10,181	9,866	103.19	240	11.83
1959....	20,863	20,372	22.12	10,325	10,047	102.77	281	13.61
1960....	21,130	20,966	22.19	10,760	10,206	105.43	280	13.18
1961....	21,360	22,399	23.09	11,402	10,997	103.68	272	12.00
1962....	21,313	21,361	21.68	11,003	10,358	106.23	278	12.85
1963....	21,072	21,367	21.21	11,006	10,361	106.23	262	12.11
1964....	20,785	20,866	20.18	10,849	10,017	108.31	252	11.93
1965....	20,727	20,891	19.65	10,778	10,113	106.58	256	12.11
1966....	(e)20,162	20,319	18.64	10,537	9,782	107.72	237	11.56

(a) Figures for recent years are subject to the addition of a few very late registrations.

(b) Per 1,000 of mean population.

(c) Number of male births per 100 female births.

(d) Per 1,000 of all births (live and still).

(e) Subject to revision.

The birth rate per thousand of the mean population was above 45 in the late 1850's then declined generally to 23.84 in 1903 before improving gradually to reach 28.97 in 1914. The subsequent war years brought about a further decline and except for a temporary revival in 1920 and 1921 the rate continued to fall to 14.13 in 1935, the lowest on record. From then there was a general upward trend to 25.23 in 1947 and since then there has been a falling off which has been more marked in the latest 4 years. The rate in 1965 was 19.65, which was just below the Australian rate of 19.66 and lower than the rate in any other State except New South Wales.

Ex-nuptial Births and Legitimations

The ex-nuptial birth rates in the last 4 years were successively the highest recorded. The rate had been about 3 per 100 births since the early 1920's and did not vary greatly until the late 1950's but has risen in each year since 1959.

The legitimation of an ex-nuptial child upon the subsequent marriage of his or her parents was first provided for in South Australia by the Legitimation Act, 1898, the provisions of which were later incorporated in the Births and Deaths Registration Act, but was possible only if there was no legal impediment to the marriage of the parents at the time of the birth of the child. The Commonwealth *Marriage Act* 1961, which came into operation on 1st September 1963, enables also, upon the subsequent marriage of the parents, the legitimation of a child whose parents were legally unable to marry at the time of the birth of the child. Legitimations under this Act take place whether or not the child was living at

the time of marriage, and the child is considered legitimate from the date of birth or in the case of a child born before 1st September 1963, at that date. The effect of the implementation of this change in legislation is shown in the following table.

Ex-nuptial Live Births and Legitimations, South Australia			
Year	Ex-nuptial Live Births		Legitimations
	Number	Rate per 100 Births	
1957	651	3.33	36
1958	738	3.68	49
1959	745	3.66	51
1960	841	4.01	40
1961	1,026	4.58	76
1962	1,017	4.76	58
1963	1,059	4.96	245
1964	1,239	5.94	450
1965	1,310	6.27	268
1966	1,372	6.75	284

Confinements and Live Births

The next table shows the number of confinements and live births in 1964 and 1965, classified separately for single births and for multiple births in which at least one issue was live-born.

Multiple births occur at a fairly regular rate of a little over 10 cases per 1,000 confinements, although in 1964 the rate fell below this level for the first time since 1950. There is a marked tendency for multiple births to be of the same sex; in 1965 there were 158 cases of twins of the same sex compared with only 65 cases of one male and one female issue.

Confinements^(a) and Live Births: Class of Birth, South Australia

Particulars	1964				1965			
	Confinements (a)	Live Births			Confinements (a)	Live Births		
		Male	Female	Total		Male	Female	Total
Nuptial—								
Single births ..	19,266	10,019	9,247	19,266	19,149	9,895	9,254	19,149
Twins	178	186	169	355	211	201	216	417
Triplets	2	3	3	6	5	8	7	15
Total nuptial ..	19,446	10,208	9,419	19,627	19,365	10,104	9,477	19,581
Ex-nuptial—								
Single births ..	1,217	630	587	1,217	1,283	662	621	1,283
Twins	11	11	11	22	12	9	15	24
Triplets	—	—	—	—	1	3	—	3
Total ex-nuptial	1,228	641	598	1,239	1,296	674	636	1,310
Total	20,674	10,849	10,017	20,866	20,661	10,778	10,113	20,891

(a) Includes only those confinements which resulted in one or more live births.

In the table below confinements and live births in the latest two years have been shown in relation to the age group of the mother.

Confinements^(a) and Live Births: Age Group of Mother, South Australia

Age Group of Mother	1964				1965			
	Confinements (a)	Live Births			Confinements (a)	Live Births		
		Male	Female	Total		Male	Female	Total
10-14	5	3	2	5	3	3	—	3
15-19	1,982	1,051	943	1,994	2,168	1,120	1,064	2,184
20-24	6,646	3,521	3,171	6,692	6,966	3,644	3,386	7,030
25-29	6,004	3,088	2,966	6,054	5,962	3,100	2,923	6,023
30-34	3,461	1,815	1,695	3,510	3,167	1,673	1,541	3,214
35-39	1,941	1,038	930	1,968	1,793	921	901	1,822
40-44	603	318	292	610	562	293	282	575
45-49	32	15	18	33	39	23	16	39
Not stated	—	—	—	—	1	1	—	1
Total	20,674	10,849	10,017	20,866	20,661	10,778	10,113	20,891

(a) Includes only those confinements which resulted in one or more live births.

Nuptial confinements classified according to the relative age groups of the parents, and ex-nuptial confinements classified to the age group of the mother are shown for 1965 in the following table.

Confinements^(a): Relative Ages of Parents, South Australia, 1965

Age Group of Father (Nuptial Births)	Age Group of Mother							Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	
Under 20	294	57	1	—	—	—	—	352
20-24	1,086	2,409	232	10	2	—	—	3,739
25-29	243	3,172	2,670	219	18	3	—	6,325
30-34	37	750	2,106	1,295	173	14	—	4,375
35-39	11	155	629	1,135	822	86	2	2,840
40-44	1	21	122	313	532	244	5	1,238
45-49	1	4	19	66	120	120	13	343
50 and over	—	8	7	18	47	57	16	153
Married mothers	1,673	6,576	5,786	3,056	1,714	524	36	19,365
Unmarried mothers	498	390	176	111	79	38	3	(b) 1,296
Total mothers	2,171	6,966	5,962	3,167	1,793	562	39	(b) 20,661

(a) Includes only those confinements which resulted in one or more live births.

(b) Includes one for which age was not stated.

The following table shows the first live births to married mothers in 1965 classified to age group of mother and duration of marriage. Only existing marriages are taken into account, therefore some inclusions in the table relate to the first birth of an existing marriage to a mother who has had also a child or children by a previous marriage.

**Nuptial First Live Births: Age Group of Mother and Duration of Marriage
South Australia, 1965**

Age Group of Mother	Duration of Existing Marriage																	Total Nuptial First Births (a)
	Months											Years						
	0	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5 and Over	
15-19.	14	34	49	93	145	289	287	105	42	57	35	32	166	34	5	—	—	1,387
20-24.	10	19	24	37	85	179	219	113	104	245	171	163	1,136	546	260	102	47	3,461
25-29.	4	2	7	9	5	14	23	14	22	61	39	45	343	262	160	159	266	1,435
30-34.	—	—	—	2	2	1	5	5	5	16	13	8	83	47	27	24	165	403
35-39.	—	—	2	1	3	3	3	2	3	10	4	2	33	21	12	8	77	184
40-44.	—	—	—	2	—	1	2	—	—	3	3	1	15	7	3	9	27	73
45-49.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Total.	28	55	82	144	241	487	539	239	176	392	265	251	1,776	917	467	302	583	6,944

(a) Live-born children only. In cases of multiple births the eldest live-born child is included.

DEATHS

The following table shows the number of deaths and death rates per 1,000 of the mean population since 1915.

Deaths and Death Rates, South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1915-19	2,613	2,187	4,800	11.91	9.49	10.67
1920-24	2,676	2,225	4,901	10.57	8.80	9.68
1925-29	2,762	2,272	5,034	9.74	8.21	8.98
1930-34	2,671	2,330	5,001	9.21	8.08	8.65
1935-39 (b)	2,929	2,501	5,430	9.89	8.47	9.19
1940-44 (b)	3,348	2,887	6,235	11.07	9.43	10.25
1945-49 (b)	3,389	2,980	6,369	10.48	9.12	9.80
1950-54	3,832	3,191	7,023	10.06	8.56	9.31
1955-59	4,248	3,430	7,678	9.62	7.97	8.80
1960-64	4,585	3,607	8,192	9.20	7.36	8.29
Year						
1961	4,362	3,453	7,815	8.89	7.20	8.06
1962	4,546	3,686	8,232	9.15	7.55	8.35
1963	4,678	3,523	8,201	9.22	7.05	8.14
1964	5,008	3,898	8,906	9.63	7.59	8.61
1965	4,836	3,952	8,788	9.05	7.48	8.27
1966	5,215	4,108	9,323	9.52	7.57	8.55

(a) Per 1,000 of mean population.

(b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

The death rate declined generally from over 15 in the 1860's to 8.44 in 1934 then rose to 11.02 in 1942 from which point there has been a further general decline. The 1961 rate of 8.06 is the lowest recorded in South Australia.

Male and female deaths in certain age groups for each of the last five years are shown in the following table.

Deaths in Age Groups, South Australia

Year	Age at Death								Total Deaths
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and Over	
MALES									
1961....	313	51	79	110	205	403	704	2,497	4,362
1962....	306	44	84	82	189	446	754	2,641	4,546
1963....	265	45	85	83	201	473	825	2,701	4,678
1964....	282	52	113	105	219	409	893	2,934	(a) 5,008
1965....	276	55	91	88	197	522	863	2,744	4,836
FEMALES									
1961....	219	35	33	47	97	226	355	2,441	3,453
1962....	187	27	25	51	115	234	417	2,630	3,686
1963....	223	28	36	39	118	206	362	2,511	3,523
1964....	196	27	46	52	110	230	437	2,800	3,898
1965....	208	42	31	42	124	233	425	2,847	3,952

(a) Includes one death for which age was not stated.

A long established trend of increases in deaths at the higher ages has been offset to some degree by a decrease in those in the younger age groups. The effect of this trend related to the changes in age distribution of the population is illustrated in the next tables, which show age-specific death rates, i.e., deaths in each age group expressed as a rate per 1,000 of the population in that age group. Because age constitution of the population is known accurately only at censuses the periods shown are those with a census date as their approximate centre.

Age-Specific Death Rates: Males, South Australia

Age Group	Death Rate (a)							Reduction Per Cent 1880-82 to 1960-62
	1880-82	1900-02	1920-22	1932-34	1946-48	1953-55	1960-62	
0-4	51.85	32.12	19.98	9.90	8.09	6.41	5.82	89
5-9	3.33	2.81	2.33	1.18	1.00	0.52	0.50	85
10-14	2.59	1.85	1.55	1.08	0.68	0.65	0.46	82
15-19	4.48	2.88	2.41	1.69	1.42	1.50	1.08	76
20-24	4.85	4.19	3.47	2.35	1.44	1.88	1.37	72
25-29	6.32	5.16	3.67	2.51	1.59	1.70	1.59	75
30-34	7.51	5.30	3.97	2.51	1.88	1.57	1.62	78
35-39	9.00	6.77	5.12	3.23	2.41	2.29	2.08	77
40-44	12.25	8.50	6.10	4.73	3.63	3.56	3.43	72
45-49	16.10	10.26	8.37	6.82	6.12	5.48	5.44	66
50-54	17.29	14.19	11.58	9.82	10.74	10.16	9.24	47
55-59	25.28	20.74	18.99	15.11	16.28	15.71	15.75	38
60-64	31.77	30.23	26.02	24.98	26.08	24.33	24.39	23
65-69	46.67	47.24	41.62	36.14	40.08	39.31	37.84	19
70-74	63.52	64.27	62.49	57.07	60.79	62.59	59.47	6
75-79	92.49	89.66	105.50	92.60	97.69	94.55	88.56	4
80-84	138.02	140.35	158.90	147.86	145.56	141.64	135.85	2
85 and over	247.47	246.96	269.50	257.03	248.89	235.84	227.39	8
All ages.....	15.76	12.03	10.75	9.29	10.87	9.80	9.00	43

(a) Average annual number of deaths per 1,000 of population at ages shown.

Age-Specific Death Rates: Females, South Australia

Age Group	Death Rate (a)							Reduction Per Cent 1880-82 to 1960-62
	1880-82	1900-02	1920-22	1932-34	1946-48	1953-55	1960-62	
0-4	45.36	27.20	16.29	8.29	7.12	5.01	3.93	91
5-9	3.28	2.02	2.30	1.04	0.54	0.45	0.35	89
10-14	2.49	1.64	1.32	0.88	0.38	0.42	0.30	88
15-19	4.16	3.47	2.71	1.25	0.75	0.52	0.37	91
20-24	5.59	4.16	2.91	2.36	1.04	0.63	0.58	90
25-29	8.01	5.00	3.95	2.73	1.65	0.85	0.70	91
30-34	7.67	5.66	4.18	2.66	1.91	0.99	0.96	87
35-39	10.29	6.90	5.27	3.85	2.03	1.79	1.33	87
40-44	9.76	7.85	4.99	4.10	3.48	2.56	1.80	82
45-49	11.65	8.20	6.42	5.80	4.59	3.65	3.03	74
50-54	13.09	10.83	9.18	8.06	7.09	5.88	5.22	60
55-59	14.86	14.08	10.65	11.24	10.33	9.04	7.82	47
60-64	24.30	20.45	18.07	17.68	14.97	14.06	12.74	48
65-69	36.27	35.51	33.15	27.16	25.22	23.01	21.05	42
70-74	53.10	53.80	46.20	42.19	42.17	40.35	35.52	33
75-79	93.21	87.96	83.56	75.53	72.07	72.20	58.28	37
80-84	94.83	126.07	131.63	121.15	121.57	109.92	108.61	(b) 15
85 and over	161.90	222.58	232.84	233.59	214.35	215.80	199.38	(b) 23
All ages.....	13.97	10.25	9.00	8.23	9.19	8.31	7.38	47

(a) Average annual number of deaths per 1,000 of population at ages shown.

(b) Increase.

Over the period there was a marked reduction in death rates with greater reduction in female than in male rates in all but the groups aged 80 and over.

CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on International Lists of Causes of Deaths. From time to time revisions to these lists have affected the comparability of the figures. Up to 1949 the effect of these revisions had been negligible but the introduction in 1950 of the Sixth Revision of the International Statistical Classification introduced major changes in the classification which, together with the adoption of more flexible rules for selecting the underlying cause where certificates of cause of death showed more than one cause, affected the comparability of figures for years before 1950 with those for 1950 and later. A complete classification of causes of deaths for each State and Territory of Australia for 1950 according to both the Fifth and Sixth Revisions was published by the Commonwealth Statistician in Demography 1950, Bulletin No. 68.

The Seventh Revision adopted in Australia in 1958 did not affect comparability significantly. International Classification Seventh Revision code numbers have been shown where appropriate in the tables which follow.

In the next table deaths registered in 1965 are shown classified according to the abbreviated list of the Seventh Revision together with the percentage from each cause and the rate per 10,000 of mean population.

Causes of Deaths, South Australia, 1965

Abbreviated Classification (a)	International Classification Code Number	Number of Deaths	Proportion of Total	Rate per 10,000 of Mean Population
			%	
1 Tuberculosis of respiratory system...	001-008	25	0.28	0.23
2 Tuberculosis, other forms	010-019	5	0.06	0.05
3 Syphilis and its sequela	020-029	6	0.07	0.06
6 Dysentery, all forms	045-048	2	0.02	0.02
14 Measles	085	1	0.01	0.01
17 All other diseases classified as infective and parasitic	(b)	17	0.19	0.16
18 Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues	140-205	1,383	15.73	13.01
19 Benign and unspecified neoplasms ..	210-239	14	0.16	0.13
20 Diabetes mellitus	260	152	1.73	1.43
21 Anaemias	290-293	22	0.25	0.21
22 Vascular lesions affecting central nervous system	330-334	1,243	14.14	11.69
23 Non-meningococcal meningitis	340	15	0.17	0.14
25 Chronic rheumatic heart disease	410-416	55	0.63	0.52
26 Arteriosclerotic and degenerative heart disease	420-422	2,858	32.52	26.88
27 Other diseases of heart	430-434	284	3.23	2.67
28 Hypertension with heart disease	440-443	114	1.30	1.07
29 Hypertension without mention of heart	444-447	36	0.41	0.34
30 Influenza	480-483	6	0.07	0.06
31 Pneumonia	490-493	304	3.46	2.86
32 Bronchitis	500-502	163	1.85	1.53
33 Ulcer of stomach and duodenum	540, 541	63	0.72	0.59
34 Appendicitis	550-553	10	0.11	0.09
35 Intestinal obstruction and hernia ...	560, 561, 570	55	0.63	0.52
36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	51	0.58	0.48
37 Cirrhosis of liver	581	57	0.65	0.54
38 Nephritis and nephrosis	590-594	55	0.63	0.52
39 Hyperplasia of prostate	610	18	0.20	0.17
40 Complications of pregnancy, childbirth, and the puerperism	640-689	7	0.08	0.07
41 Congenital malformations	750-759	121	1.38	1.14
42 Birth injuries, postnatal asphyxia, and atelectasis	760-762	73	0.83	0.69
43 Infections of the newborn	763-768	12	0.14	0.11
44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	136	1.55	1.28
45 Senility without mention of psychosis, ill-defined and unknown causes ..	780-795	75	0.85	0.70
46 All other diseases	Residual	709	8.07	6.67
47 Motor vehicle accidents	E810-E835	231	2.63	2.17
48 All other accidents	{ E800-E802, E840-E962 }	261	2.97	2.46
49 Suicide and self-inflicted injury	{ E963, E970-E979 }	136	1.55	1.28
50 Homicide and operations of war	{ E964, E965, E980-E999 }	13	0.15	0.12
Total all causes		8,788	100.00	82.67

(a) No deaths were recorded in 1965 in the following categories—4 Typhoid fever (040), 5 Cholera (043), 7 Scarlet fever and streptococcal sore throat (050, 051), 8 Diphtheria (055), 9 Whooping cough (056), 10 Meningococcal infections (057), 11 Plague (058), 12 Acute poliomyelitis (080), 13 Smallpox (084), 15 Typhus and other rickettsial diseases (100-108), 16 Malaria (110-117), 24 Rheumatic fever (400-402).

(b) No. 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

The following table shows for 1965 the main causes of deaths in selected age groups.

Main Causes of Deaths in Age Groups, South Australia, 1965

International Classification Number	Age Group and Cause of Death	Deaths	Proportion of Total Deaths in Age Groups	
			No.	%
			No.	%
	0-4 Years			
750-759	Congenital malformations	97	20.0	80.2
774-776	Immaturity	67	13.8	100.0
762	Post-natal asphyxia and atelectasis	38	7.9	100.0
480-502, 763	Pneumonia, bronchitis and influenza....	53	11.0	11.1
800-999	Accidental and violent deaths	52	10.8	8.1
760, 761	Birth injuries	35	7.2	100.0
	Other causes	142	29.3	
	5-14 Years			
800-999	Accidental and violent deaths	43	44.3	6.7
140-205	Cancer (all forms)	17	17.5	1.2
750-759	Congenital malformations	9	9.3	7.4
480-502	Pneumonia, bronchitis and influenza....	5	5.2	1.1
	Other causes	23	23.7	
	15-24 Years			
800-999	Accidental and violent deaths	85	64.4	13.3
140-205	Cancer (all forms)	8	6.1	0.6
410-443	Diseases of the heart	2	1.5	0.1
	Other causes	37	28.0	
	25-34 Years			
800-999	Accidental and violent deaths	74	56.9	11.5
140-205	Cancer (all forms)	23	17.7	1.7
410-443	Diseases of the heart	3	2.3	0.1
330-334	Vascular lesions affecting central nervous system	4	3.1	0.3
	Other causes	26	20.0	
	35-44 Years			
800-999	Accidental and violent deaths	86	26.8	13.4
410-443	Diseases of the heart	83	25.9	2.5
140-205	Cancer (all forms)	66	20.6	4.8
330-334	Vascular lesions affecting central nervous system	17	5.3	1.4
480-502	Pneumonia, bronchitis and influenza....	12	3.7	2.5
	Other causes	57	17.7	
	45-54 Years			
410-443	Diseases of the heart	263	34.8	7.9
140-205	Cancer (all forms)	182	24.1	13.2
800-999	Accidental and violent deaths	84	11.1	13.1
330-334	Vascular lesions affecting central nervous system	72	9.5	5.8
480-502	Pneumonia, bronchitis and influenza....	17	2.4	3.6
	Other causes	137	18.1	
	55-64 Years			
410-443	Diseases of the heart	532	41.3	16.1
140-205	Cancer (all forms)	303	23.5	21.9
330-334	Vascular lesions affecting central nervous system	137	10.7	11.0
800-999	Accidental and violent deaths	61	4.7	9.5
480-502	Pneumonia, bronchitis and influenza....	45	3.5	9.5
	Other causes	210	16.3	

International Classification Number	Age Group and Cause of Death	Deaths	Proportion of Total Deaths in Age Groups	Proportion of Total Deaths from the Specified Cause
		No.	%	%
	65-74 Years			
410-443	Diseases of the heart	929	44.5	28.1
140-205	Cancer (all forms)	369	17.7	26.7
330-334	Vascular lesions affecting central nervous system	314	15.0	25.3
480-502	Pneumonia, bronchitis and influenza	110	5.3	23.3
450-456	Diseases of the arteries	47	2.2	20.1
800-999	Accidental and violent deaths	48	2.3	7.5
	Other causes	271	13.0	
	75 Years and Over			
410-443	Diseases of the heart	1,496	42.7	45.2
330-334	Vascular lesions affecting central nervous system	695	19.9	55.9
140-205	Cancer (all forms)	400	11.4	28.9
480-502	Pneumonia, bronchitis and influenza	233	6.7	49.3
450-456	Diseases of the arteries	159	4.5	68.0
800-999	Accidental and violent deaths	92	2.6	14.4
	Other causes	428	12.2	

Mortality in early childhood has been reduced considerably over the years, mainly by improved preventive measures and the use of new drugs. This improvement has increased the number of persons reaching higher ages where the risk from degenerative diseases is greatest; consequently deaths from degenerative diseases now constitute a higher proportion of deaths than formerly.

Infective Diseases

Deaths from certain infectious diseases over the period 1915 to 1964 are shown in the following table.

Deaths from Certain Infective Diseases, South Australia

Period	Respiratory Tuberculosis (001-008)	Typhoid Fever (040)	Scarlet Fever (050)	Diphtheria (055)	Whooping Cough (056)	Acute Poliomyelitis (080)	Measles (085)
Annual Average							
1915-19	339	311	4	94	21	(a)	14
1920-24	330	28	9	70	28	9	7
1925-29	313	12	2	25	13	3	12
1930-34	261	7	2	12	13	3	6
1935-39	211	4	1	27	11	6	2
1940-44	190	3	2	30	10	2	9
1945-49	161	1	1	7	8	9	6
1950-54	81	—	—	1	2	23	3
1955-59	43	—	—	1	1	2	3
1960-64	32	—	—	—	1	1	2

(a) Not separately recorded.

In 1956 a poliomyelitis immunization programme was begun and since then the incidence of and deaths from this disease have declined (see Part 6.6.).

There has been a long term downward trend in deaths from respiratory tuberculosis. This has been assisted by the introduction in March 1952 of compulsory chest X-ray surveys of the population, enabling early detection and therefore more effective treatment of the disease. There were 25 deaths from respiratory tuberculosis in 1965.

Various factors have contributed to the decrease in the incidence of and deaths from infectious diseases generally, such as advances in medical science, improved hygiene, and the general acceptance of immunization of infants and young children against such diseases as diphtheria and whooping cough.

Diseases of the Heart

The following table shows the number of deaths attributed to heart disease and rates per 10,000 of the mean population since 1920.

Deaths from Diseases of the Heart (410-443), South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1920-24	292	249	541	11.52	9.87	10.70
1925-29	314	276	590	11.08	9.95	10.52
1930-34	438	368	806	15.10	12.78	13.94
1935-39	639	498	1,137	21.63	16.88	19.25
1940-44	886	704	1,590	29.29	23.02	26.14
1945-49	1,094	822	1,916	33.84	25.15	29.47
1950-54	1,342	996	2,338	35.22	26.70	31.01
1955-59	1,519	1,111	2,630	34.38	25.81	30.15
1960-64	1,776	1,245	3,021	35.62	25.42	30.56
Year						
1961	1,672	1,160	2,832	34.09	24.19	29.19
1962	1,715	1,301	3,016	34.51	26.64	30.61
1963	1,848	1,166	3,014	36.42	23.32	29.91
1964	1,964	1,390	3,354	37.75	27.05	32.43
1965	1,927	1,384	3,311	36.06	26.15	31.15

(a) Number of deaths per 10,000 of mean population.

The percentage of total deaths classified to heart disease has increased from 11.0% in the period 1920-24 to 36.9% during 1960-64 and over the same period the rate has increased from 10.70 to 30.56. However, apart from the effect of the ageing population, there are other difficult-to-measure factors which have influenced this large increase, viz changes in the mode of certification and classification, and improvement both in diagnosis and certification; therefore a comparison of numbers, rates and percentages of deaths from this cause over the period should be made with caution.

Malignant Neoplasms

For 1950 and subsequent years, deaths from malignant neoplasms (*i.e.*, cancer) include those deaths classified to neoplasms of lymphatic and haematopoietic tissues (including Hodgkin's disease, leukaemia and aleukaemia)—there were 128 so assigned in 1965.

Deaths from Malignant Neoplasms (140-205), South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1920-24	244	232	476	9.65	9.16	9.41
1925-29	291	264	555	10.27	9.54	9.91
1930-34	325	328	653	11.23	11.37	11.30
1935-39	348	362	710	11.77	12.26	12.02
1940-44	363	409	772	12.02	13.35	12.69
1945-49	416	424	840	12.88	12.97	12.92
1950-54	462	483	945	12.11	12.96	12.53
1955-59	565	519	1,084	12.79	12.06	12.43
1960-64	656	617	1,273	13.16	12.60	12.88
Year						
1961	641	581	1,222	13.07	12.11	12.60
1962	683	662	1,345	13.74	13.56	13.65
1963	668	616	1,284	13.16	12.32	12.74
1964	723	644	1,367	13.90	12.53	13.22
1965	722	661	1,383	13.51	12.50	13.01

(a) Number of deaths per 10,000 of mean population.

The table indicates a steady increase in deaths from this cause and the table of age-specific death rates which follows shows how the rate increases with age. Therefore, the increase over the period in the rate at all ages is partly due to the increasing proportion of the population in the higher age groups. Periods shown below are those spanning the past six censuses.

Malignant Neoplasms (140-205): Age-Specific Death Rates, South Australia

Age Group	Death Rate (a)					
	1910-12	1920-22	1932-34	1946-48	1953-55	1960-62
	MALES					
0-4	0.55	0.97	—	0.49	1.18	1.02
5-14	0.17	0.39	0.12	0.51	1.05	0.82
15-24	0.69	0.33	0.31	0.07	1.64	0.86
25-34	0.97	0.89	1.05	1.18	1.21	1.33
35-44	5.45	3.48	3.36	2.57	4.63	4.29
45-54	10.83	13.08	8.65	12.35	10.42	11.57
55-64	39.66	37.75	35.41	32.77	33.43	36.52
65-74	68.58	87.18	89.18	82.62	69.54	83.67
75 and over	84.88	109.91	147.57	148.98	149.45	142.29
All ages	7.70	9.48	11.40	13.60	12.54	12.86
	FEMALES					
0-4	0.28	0.38	0.30	0.41	1.24	0.79
5-14	0.17	0.39	0.13	0.23	0.34	0.79
15-24	0.24	0.49	0.25	0.40	0.72	0.46
25-34	1.30	1.09	1.49	1.74	1.99	2.16
35-44	6.68	6.04	6.32	4.42	5.95	6.66
45-54	16.01	17.53	16.86	15.39	12.67	16.69
55-64	33.00	32.56	34.61	30.12	32.91	28.19
65-74	60.72	63.69	55.98	57.21	52.26	52.24
75 and over	87.80	104.61	115.15	108.52	98.41	99.76
All ages	7.72	9.03	11.37	13.12	12.64	12.68

(a) Average annual number of deaths per 10,000 of population at ages shown.

Deaths from malignant neoplasms in 1965 according to the site of the disease, sex, and in broad age groups are shown in the following table.

**Malignant Neoplasms: Deaths Classified by Site and Sex in Age Groups
South Australia, 1965**

Site of Disease	Sex	Age Group				All Ages
		Under 25	25-44	45-64	65 and Over	
Malignant neoplasm of—						
Buccal cavity and pharynx (140-148)	M	—	—	4	8	12
	F	—	1	2	5	8
Digestive organs and peritoneum (150-159).....	M	1	8	89	141	239
	F	2	12	60	177	251
Respiratory system (160-165) ..	M	1	4	92	86	183
	F	—	—	6	12	18
Breast (170)	F	—	14	40	53	107
Uterus (171-174)	F	—	5	28	28	61
Other female genital organs (175-176)	F	1	4	25	17	47
Male genital organs (177-179) ..	M	—	1	11	72	84
Urinary organs (180, 181)	M	—	5	16	37	58
	F	—	—	4	26	30
Skin (190, 191)	M	2	6	4	5	17
	F	1	4	1	11	17
Brain and nervous system (193)	M	6	4	16	1	27
	F	3	4	14	2	23
Other and unspecified sites (192, 194-199)	M	2	3	21	11	37
	F	2	2	10	22	36
Neoplasms of lymphatic and haematopoietic tissues (200-205)	M	13	5	21	26	65
	F	6	7	21	29	63
Total (140-205)	M	25	36	274	387	722
	F	15	53	211	382	661

Vascular Lesions Affecting Central Nervous System

The increase in both numbers and rates of deaths from vascular lesions of the central nervous system (commonly referred to as a "stroke") is further evidence of the effect of the increased proportion of the population at higher ages. Although the rate generally has fallen since 1954, deaths from this cause still constituted in 1965 nearly 20% of deaths of persons aged 75 years and over. During the period 1920-24 deaths classified to this cause were only 6.7% of all deaths, but during 1960-64 they were 13.9% of all deaths.

Deaths from Vascular Lesions Affecting Central Nervous System (330-334)
South Australia

Period	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
Annual Average						
1920-24	166	162	328	6.55	6.42	6.49
1925-29	171	188	359	6.03	6.80	6.41
1930-34	201	231	432	6.94	8.01	7.47
1935-39	231	294	525	7.84	9.95	8.90
1940-44	271	368	639	8.96	12.03	10.51
1945-49	321	431	752	9.92	13.21	11.57
1950-54	404	553	957	10.62	14.82	12.70
1955-59	481	614	1,095	10.89	14.27	12.55
1960-64	490	645	1,135	9.83	13.17	11.48
Year						
1961	478	638	1,116	9.75	13.30	11.50
1962	494	633	1,127	9.94	12.96	11.44
1963	490	645	1,135	9.66	12.90	11.27
1964	505	692	1,197	9.71	13.47	11.58
1965	548	695	1,243	10.25	13.15	11.69

(a) Number of deaths per 10,000 of mean population.

INFANT MORTALITY

The infant mortality rate, *i.e.*, the number of deaths of children under 1 year to every 1,000 live births, has shown a marked decline from 148.77 in 1875-79 to 19.17 in 1960-64, and the rate of 18.43 in 1965 was the lowest ever recorded in this State. Many factors have contributed to the remarkable improvement in the infant mortality rate, principally measures taken (both legislative and educative) to control preventable diseases and the provision of facilities by the Mothers' and Babies' Health Association for the promotion of child health.

The rate for male infant deaths is consistently higher than for female infant deaths.

Infant Deaths, South Australia

Year	Number of Deaths			Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
1962....	256	153	409	23.27	14.77	19.15
1963....	226	173	399	20.53	16.70	18.67
1964....	232	165	397	21.38	16.47	19.03
1965....	224	161	385	20.78	15.92	18.43
1966....	222	134	356	21.07	13.70	17.52

(a) Number of infant deaths per 1,000 live births.

The table which follows shows infant mortality rates in age groups since 1905.

Infant Mortality Rates: Age Groups, South Australia

Period	Number of Deaths per 1,000 Live Births at Ages—					Total Under 12 Months
	Under 1 Week	1 Week and Under 1 Month	1 Month and Under 3 Months	3 Months and Under 6 Months	6 Months and Under 12 Months	
Annual Average						
1905-09 ..	27.68		11.54	12.40	17.21	68.83
1910-14 ..	28.55		10.81	12.50	15.96	67.82
1915-19 ..	29.88		8.80	9.41	13.76	61.85
1920-24 ..	19.82	8.86	8.26	8.94	12.57	58.45
1925-29 ..	20.35	6.73	5.66	5.93	7.87	46.54
1930-34 ..	18.69	4.89	4.12	4.23	6.12	38.05
1935-39 ..	17.81	3.98	3.65	2.88	4.54	32.86
1940-44 ..	15.75	5.37	4.60	3.83	5.02	34.57
1945-49 ..	15.50	3.52	2.88	2.44	3.01	27.35
1950-54 ..	13.08	2.53	2.25	2.08	2.75	22.69
1955-59 ..	11.81	2.05	2.46	2.41	2.62	21.35
1960-64 ..	11.26	1.92	1.92	2.01	2.06	19.17
Year						
1962.....	11.89	1.55	2.15	1.59	1.97	19.15
1963.....	11.19	1.73	1.63	2.20	1.92	18.67
1964.....	12.03	1.25	2.06	2.06	1.63	19.03
1965.....	11.06	1.53	1.92	1.77	2.15	18.43
1966.....	9.89	1.57	2.07	2.02	1.97	17.52

Improvement has been much greater for deaths of infants a week or more old than for those under 1 week. However, to a large extent the factors influencing mortality in these two groups are different. Deaths of infants under 1 week mainly can be related to pre-natal causes which also have a bearing on still births. Combinations of still birth rates and rates of infant mortality to various ages have been shown in the following table which commences at the first five-yearly period after the introduction of compulsory registration of still births in South Australia. These figures give a clearer indication of the improvement which has been effected in the saving of life.

Infant Mortality and Still Births, South Australia

Period	Still Births Plus Deaths Under 1 Week		Still Births Plus Deaths Under 1 Month		Still Births Plus Deaths Under 1 Year	
	Number	Rate (a)	Number	Rate (a)	Number	Rate (a)
Annual Average						
1940-44 ..	495	41.07	558	46.30	716	59.40
1945-49 ..	613	38.35	668	41.79	798	49.92
1950-54 ..	533	29.44	578	31.92	704	38.88
1955-59 ..	503	25.46	543	27.49	689	34.88
1960-64 ..	510	23.54	551	25.44	679	31.35
Year						
1962.....	532	24.59	565	26.11	687	31.75
1963.....	501	23.16	538	24.87	661	30.56
1964.....	503	23.82	529	25.05	649	30.73
1965.....	487	23.03	519	24.54	641	30.31
1966.....	438	21.31	470	22.86	593	28.85

(a) Per 1,000 of all births (live and still).

The principal causes of infant deaths in 1965 classified according to age group are shown in the following table.

Infant Mortality: Principal Causes in Age Groups, South Australia, 1965

Cause of Death	Age Group					Total Under 12 Months
	Under 1 Week	1 Week and Under 1 Month	1 Month and Under 3 Months	3 Months and Under 6 Months	6 Months and Under 12 Months	
Infective and parasitic diseases (001-138)	—	—	—	—	3	3
Diseases of the nervous system and sense organs (330-398)	—	—	2	1	3	6
Diseases of the respiratory system (including pneumonia of newborn) (470-527, 763)	2	4	9	14	12	41
Intestinal obstruction and hernia (560, 561, 570)	3	—	—	1	—	4
Gastro-enteritis and colitis (including diarrhoea of newborn) (571, 764)	—	2	1	2	7	12
Congenital malformations (750-759)	38	15	12	11	6	82
Birth injuries (760, 761)	34	1	—	—	—	35
Post-natal asphyxia and atelectasis (762)	37	1	—	—	—	38
Immaturity (774-776) (a)	66	1	—	—	—	67
Other diseases peculiar to early infancy (765-773)	51	5	8	5	4	73
All other diseases	—	2	3	1	4	10
Accidents, poisonings, violence (E800-E999)	—	1	5	2	6	14
Total all causes	231	32	40	37	45	385

(a) Immaturity unqualified or with mention of any other subsidiary condition not classified as peculiar to early infancy.

EXPECTATION OF LIFE

The table which follows shows the average expectation of life in Australia at specified ages based on mortality experience during each of the two decades to 1910 and for the three years spanning each of the Censuses of 1921, 1933, 1947, 1954 and 1961.

Expectation of Life, Australia

Age	1891-1900	1901-10	1920-22	1932-34	1946-48	1953-55	1960-62
MALES							
0.....	51.1	55.2	59.2	63.5	66.1	67.1	67.9
10.....	51.4	53.5	56.0	58.0	59.0	59.5	59.9
20.....	42.8	44.7	47.0	48.8	49.6	50.1	50.4
30.....	35.1	36.5	38.4	39.9	40.4	40.9	41.1
40.....	27.7	28.6	30.1	31.1	31.2	31.7	31.8
50.....	20.5	21.2	22.2	22.8	22.7	22.9	23.1
60.....	14.0	14.3	15.1	15.6	15.4	15.5	15.6
70.....	8.9	8.7	9.3	9.6	9.6	9.6	9.8
80.....	5.0	5.0	5.0	5.2	5.4	5.5	5.6
FEMALES							
0.....	54.8	58.8	63.3	67.1	70.6	72.8	74.2
10.....	54.5	56.4	59.2	61.0	63.1	64.8	65.9
20.....	45.7	47.5	50.0	51.7	53.5	55.1	56.2
30.....	37.9	39.3	41.5	42.8	44.1	45.4	46.5
40.....	30.5	31.5	33.1	34.0	34.9	36.0	37.0
50.....	22.9	23.7	24.9	25.6	26.1	27.0	27.9
60.....	15.9	16.2	17.2	17.7	18.1	18.8	19.5
70.....	9.9	10.0	10.4	11.0	11.1	11.6	12.2
80.....	5.5	5.7	5.6	6.0	6.0	6.3	6.7

5.3. MIGRATION

History of Migration

Since the early settlement of the colony of South Australia, increases in the population from migration have occurred in times of increased economic activity whilst loss of population has occurred in times of depression in this State and/or increased economic activity elsewhere.

The discovery of minerals in other States attracted many South Australians to other States. The first major exodus came with the discovery of gold in Victoria in 1851. This was followed in 1884 by a movement across the border into New South Wales to the newly opened silver-lead mines at Broken Hill. The third exodus of people from the State was due to the discovery of gold in Kalgoorlie in Western Australia in the 1890's.

Since 1901 immigrants entered Australia and South Australia in four distinct phases of the assisted migration plan. It is estimated that during the period 1901 to 1952, after making allowances for war losses and those assisted migrants who did not, in the end, remain in Australia, the net number of "assisted" migrants was about twice the number of "unassisted".

As the depression years with which the century opened gave way to a period of more stable economic conditions, assisted migration was resumed about 1906. Immigration gained impetus during the years 1910 to 1912 but the movement was interrupted by war in 1914. After the war, the resumption of assisted migration was accompanied by a flow of unassisted migrants greater than for many decades. This movement was halted by the depression of the 1930's and when reintroduced in 1939 was almost immediately stopped by the outbreak of war in September. In the immediate post-war years, assisted migration was again resumed and the numbers brought to Australia were far greater than for any other comparable period.

South Australia suffered a substantial loss of population through migration in the period from 1928 to the mid 1930's.

Regulation of Immigration Into Australia

Under the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals.

Immigration into Australia is regulated by the *Migration Act* 1958-1966 which came into force on 1st June 1959, and repealed the *Immigration Act* 1901-1949 and the *Aliens Deportation Act* 1948.

The *Aliens Act* 1947-1966 provides that a register of aliens shall be maintained for every State or mainland Territory of the Commonwealth. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration. There were 53,850 aliens registered in South Australia at 31st December 1966.

Legislation and conditions of immigration into Australia are discussed in detail in the Year Book of the Commonwealth of Australia.

Overseas Arrivals and Departures

Since 1924 the movements of overseas travellers have been classified according to declared intention regarding residence into two main categories, short term and long term (including permanent). For short term movements, overseas visitors and Australian residents are identified separately.

The principal categories of travellers according to stated purpose of travel are as follows:

Permanent movement—consisting of persons arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad.

Long term movement—consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for 12 months or more.

Short term movement—consisting of all other movements, including the movement of Australian troops irrespective of period of stay.

Separate figures for permanent and long term movements are not available on a State basis; hence these movements are combined in the table below showing overseas arrivals at, and departures from, South Australia. This table does not include persons who disembarked in other ports in Australia and subsequently settled in South Australia or South Australians who embarked from other ports for overseas. These movements would be included in interstate migration.

Overseas Arrivals and Departures: Intended Term of Residence, South Australia

Year	Long Term and Permanent		Short Term				Total		
	Males	Females	Australian Residents		Visitors		Males	Females	Persons
			Males	Females	Males	Females			
ARRIVALS									
1956....	2,748	2,328	549	731	367	215	3,664	3,274	6,938
1957....	2,642	2,534	504	592	309	211	3,455	3,337	6,792
1958....	2,629	2,904	564	644	454	178	3,647	3,726	7,373
1959....	3,455	3,264	572	469	601	202	4,628	3,935	8,563
1960....	2,990	2,786	671	592	446	218	4,107	3,596	7,703
1961....	3,443	3,365	469	437	465	159	4,377	3,961	8,338
1962....	2,526	2,542	588	624	619	240	3,733	3,406	7,139
1963....	3,275	3,287	671	739	577	296	4,523	4,322	8,845
1964....	5,019	5,101	650	686	632	282	6,301	6,069	12,370
1965....	3,720	3,945	594	692	560	358	4,874	4,995	9,869
DEPARTURES									
1956....	813	785	605	664	581	189	1,999	1,638	3,637
1957....	774	655	431	461	686	146	1,891	1,262	3,153
1958....	1,187	971	695	556	482	189	2,364	1,716	4,080
1959....	1,460	1,123	807	621	673	256	2,940	2,000	4,940
1960....	1,541	1,299	1,211	1,024	621	263	3,373	2,586	5,959
1961....	1,368	1,155	1,226	980	533	233	3,127	2,368	5,495
1962....	1,470	1,359	914	831	717	303	3,101	2,473	5,574
1963....	1,677	1,520	913	901	682	338	3,272	2,759	6,031
1964....	1,724	1,653	1,087	1,131	815	470	3,626	3,254	6,880
1965....	2,010	2,155	1,876	1,411	708	546	4,594	4,112	8,706

NOTE.—Crew members and 'through' passengers (*i.e.* persons remaining on board a ship while in Australian waters or travelling in an aircraft passing through Australia) are excluded.

The number of long-term and permanent arrivals in 1964 (10,120) and departures in 1965 (4,165) were the highest ever recorded in South Australia.

Revised questions for travellers introduced in 1958 have permitted the separation of permanent from other long term movements, and also the identification of former settlers departing among the permanent departures. This information, available for the whole of Australia only, shows that in 1965 there were 14,803 former settlers leaving Australia who stated that they were departing permanently. Of these 7,605 intended to settle in the United Kingdom or Ireland, 2,402 in Europe and foreign countries, 2,103 in New Zealand, and 1,052 in the United States of America. Other residents departing permanently totalled 6,110, of whom 1,221 intended to settle in the United Kingdom or Ireland, 1,779 in New Zealand and 1,085 in Papua and New Guinea.

Assisted Migration

Resumption of migration was the subject of negotiation between the Commonwealth and British Governments towards the end of 1945, and two agreements were signed in March 1946. These agreements, which came into operation on 31st March 1947, provided for free and assisted passages to be granted to British residents desirous of settling in Australia. The Free Passage Agreement, which applied to British ex-servicemen and their dependants was terminated in February 1955. From April 1949, the Assisted Passage Agreement continued in operation under renewal from time to time, and was renewed for five years from 1st April 1967.

Under the existing financial arrangements, the British Government's contribution towards the Assisted Passage Scheme is decided when the agreement is extended, and for the five years from April 1967, was fixed at a maximum amount of \$375,000 a year.

The number of British migrants who came to Australia under the Free and Assisted Passage Agreements during the period January 1947 to June 1965 totalled 594,956 and 62,246 of these stated at the time that their proposed destination was South Australia. Included in the Australian total shown above were 148,255 Commonwealth nominees who comprised workers selected against known and assessed employment demands in Australia.

Since the commencement of the assisted passage schemes in 1947, the migration of unaccompanied children and youths from Britain has been encouraged under the auspices of approved voluntary organizations.

Migration schemes with the governments of other countries have been entered into including the Netherlands scheme in 1951, the Italian, German, Austrian, and Greek schemes in 1952, and others. An agreement to settle displaced persons in Australia was made with the International Refugee Organization in July 1947.

Citizenship and Naturalization

The *Nationality and Citizenship Act* 1948 came into force on Australia Day, 26th January 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the Commonwealth of Nations. All Australian citizens, and the citizens of other countries of the Commonwealth of Nations are declared to be British subjects.

Nationality of Persons Naturalized, South Australia

Nationality	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Austrian	14	24	28	31	114	127	221	112	89	107
Czechoslovakian ...	226	200	137	63	32	20	50	22	11	28
Dutch	238	421	676	603	643	440	907	578	607	836
Estonian	245	216	137	61	48	16	35	8	12	16
German	115	470	655	901	1,244	737	1,094	519	442	614
Greek	85	112	180	311	804	555	882	481	636	472
Hungarian	353	365	183	91	99	66	348	243	154	164
Italian	564	934	1,462	1,282	1,365	1,033	1,574	886	729	986
Latvian	746	712	449	291	190	84	133	47	44	50
Lithuanian	333	394	291	137	74	65	54	24	25	28
Polish	1,144	1,470	1,539	845	513	303	424	279	172	304
Russian	30	84	84	32	23	16	39	51	30	53
Ukrainian	622	730	552	318	193	86	127	89	56	44
Yugoslavian	644	565	454	287	237	181	279	243	233	340
Stateless	167	155	71	49	66	34	63	34	50	61
Other	191	177	199	130	150	83	233	133	165	186
Total	5,717	7,029	7,097	5,432	5,795	3,846	6,463	3,749	3,455	4,289

There were 2,915 naturalization certificates granted in 1964 and 3,623 in 1965. Each certificate covers the person being naturalized and his/her children under the *Nationality and Citizenship Act 1948-1966*.

5.4. CHARACTERISTICS OF THE POPULATION

Statistics relating to characteristics of the population of South Australia are derived from information obtained at each population census. At the 1961 Census, these characteristics included the sex distribution, age distribution, and the conjugal condition of the population. Information was also obtained on the country of birth, period of residence, nationality, religion and occupational status of the population.

Details of the characteristics of the population at the 1966 Census were not available at time of printing but will be included in the 1968 Year Book.

Sex Distribution

The masculinity of the population of South Australia, *i.e.*, the number of males to each 100 females at each census is shown below.

Census Year	Masculinity	Census Year	Masculinity
1844	126.1	1891	105.6
1846	130.4	1901	101.5
1851	124.3	1911	103.1
1855	103.8	1921	100.6
1861	105.3	1933	100.3
1866	109.2	1947	98.2
1871	105.6	1954	102.7
1876	107.0	1961	102.3
1881	111.4	1966	100.9

The masculinity in 1966 for the whole of Australia was 101.4.

At each Census except 1947 the State's masculinity was greater than 100, *i.e.*, there were more males than females in South Australia. The lower rate at the 1947 Census was due in part to the loss of male lives in World War II, while the subsequent increase can be attributed mainly to the predominantly male migration inflow of the early post-war period. This is shown very clearly in the following table which gives masculinity in five-yearly age groups at the four censuses 1933 to 1961. The masculinity rates in the 20-24 and 25-29 age groups fell considerably between 1933 and 1947, but then rose to such an extent that by 1954 they were higher in these age groups than in any other age group.

Masculinity of Population According to Age, South Australia

Censuses 1933 to 1961

Age Last Birthday (Years)	1933	1947	1954	1961
0-4	104.78	104.30	104.46	103.21
5-9	102.80	106.18	104.85	104.98
10-14	102.96	104.60	105.38	105.75
15-19	103.47	100.43	105.27	105.55
20-24	102.09	95.29	113.81	109.21
25-29	106.25	96.70	111.99	110.23
30-34	102.72	99.26	106.65	110.78
35-39	93.22	101.27	105.80	105.31
40-44	97.30	107.23	107.05	104.86
45-49	100.23	99.93	110.99	107.65
50-54	99.04	89.83	104.54	106.49
55-59	98.02	96.52	91.53	105.42
60-64	96.43	93.65	87.94	88.90
65-69	89.36	88.05	87.80	77.48
70-74	90.34	83.07	81.72	78.01
75-79	94.58	77.76	73.53	71.88
80-84	82.90	70.90	66.71	62.44
85-89	70.12	65.19	62.38	59.06
90 and over	63.95	56.17	53.08	40.60
All ages	100.34	98.16	102.72	102.32

The higher male birth rate is responsible for the larger number of males in the younger age groups whilst the higher male death rate is reflected in the very low masculinity ratios of the older age groups.

Age Distribution

Details of the age distribution of the population are of particular importance as, apart from revealing changes which have occurred in the age structure from one census to the next, they also supply basic material for the calculation of fertility rates, morbidity rates, probabilities of survival and annuity rates.

Age distribution of the population at the 1954 and 1961 Censuses is given in the table below. In the seven-year period the population increased by 172,246 persons (or 21.6%) and 101,542 of these were under 21 years of age. Population in the age group 10-14 years increased by 65.7% and in the age group 15-19 years by 57.5%.

Age Distribution^(a) of Population, South Australia
Censuses 1954 and 1961

Age Last Birthday (Years)	30th June 1954			30th June 1961			Increase Persons
	Males	Females	Persons	Males	Females	Persons	
0-4	45,066	43,142	88,208	52,311	50,682	102,993	14,785
5-9	42,292	40,336	82,628	50,927	48,509	99,436	16,808
10-14	30,650	29,086	59,736	50,884	48,119	99,003	39,267
15-19	24,274	23,059	47,333	38,276	36,265	74,541	27,208
20-24	26,431	23,224	49,655	31,538	28,879	60,417	10,762
25-29	32,905	29,381	62,286	29,600	26,852	56,452	(-)
30-34	32,958	30,903	63,861	35,328	31,891	67,219	3,358
35-39	29,718	28,088	57,806	37,175	35,300	72,475	14,669
40-44	29,280	27,351	56,631	32,746	31,229	63,975	7,344
45-49	25,068	22,586	47,654	31,959	29,687	61,646	13,992
50-54	20,671	19,773	40,444	26,240	24,641	50,881	10,437
55-59	16,843	18,401	35,244	20,934	19,857	40,791	5,547
60-64	16,059	18,261	34,320	16,305	18,340	34,645	325
65-69	13,492	15,367	28,859	13,497	17,419	30,916	2,057
70-74	9,230	11,294	20,524	11,003	14,104	25,107	4,583
75-79	5,126	6,971	12,097	6,854	9,535	16,389	4,292
80-84	2,551	3,824	6,375	3,185	5,101	8,286	1,911
85-89	1,013	1,624	2,637	1,167	1,976	3,143	506
90 and over	276	520	796	296	729	1,025	229
Total	403,903	393,191	797,094	490,225	479,115	969,340	172,246

(a) Adjusted for age not stated.

The next table shows that the proportion of the population under 15 years of age continued to fall between 1901 and 1947 but has since risen to approximately the same level as 1911. On the other hand, the proportion 15 years and under 65 years showed a continued increase to 1947 but fell to the 1901 level by 1961. The proportion of the population 65 years and over continued to rise except for a very slight fall in 1961.

Proportional Age Distribution of Population, South Australia
Censuses 1901 to 1961

Census	Males			Females			Persons		
	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
	Per Cent								
1901	36.0	60.0	4.0	35.9	59.8	4.3	35.9	59.9	4.2
1911	31.1	64.4	4.5	31.3	63.8	4.9	31.2	64.1	4.7
1921	32.2	62.8	5.0	31.3	63.5	5.2	31.7	63.2	5.1
1933	26.8	66.6	6.6	26.0	66.6	7.4	26.4	66.6	7.0
1947	25.1	67.0	7.9	23.5	67.0	9.5	24.3	67.6	8.7
1954	29.2	62.9	7.9	28.6	61.3	10.1	28.9	62.1	9.0
1961	31.4	61.2	7.4	30.7	59.1	10.2	31.1	60.1	8.8

POPULATION

The mean or average age of the population of South Australia at the 1947 Census was 33.3 years (males 32.7 and females 33.9), in 1954 was 32.2 years (males 31.5 and females 32.9), and by 1961 had fallen further to 31.3 years (males 30.6 and females 32.1).

Conjugal Condition

The marital status of the population was ascertained at the 1954 and 1961 Censuses, when persons were asked to state whether they were never married, married, married but permanently separated, widowed, or divorced.

In 1961, the number of persons who stated they were never married represented 47.6% of the total population, a small increase on the 45.7% in 1954, which can be explained by a rise in the proportion of the population below marriageable age. Married persons in 1961 were 45.8% of the total as against 47.4% in 1954.

Conjugal Condition of Population, South Australia

Censuses 1954 and 1961

Conjugal Condition	30th June 1954				30th June 1961			
	Males		Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Never married—								
Under 15 years of age	118,008	29.22	112,564	28.63	154,122	31.44	147,310	30.74
15 years of age and over	78,658	19.47	54,980	13.98	93,927	19.16	66,055	13.79
Total	196,666	48.69	167,544	42.61	248,049	50.60	213,365	44.53
Married	189,878	47.01	187,780	47.76	223,321	45.56	220,579	46.04
Married but permanently separated	3,911	0.97	4,181	1.06	5,049	1.03	5,540	1.16
Widowed	10,026	2.48	30,397	7.73	10,303	2.10	35,974	7.51
Divorced	2,901	0.72	3,082	0.79	3,503	0.71	3,657	0.76
Not stated	521	0.13	207	0.05	(a)	(a)	(a)	(a)
Grand total	403,903	100.00	393,191	100.00	490,225	100.00	479,115	100.00

(a) In 1961 conjugal condition was allocated prior to tabulation where this information was not stated.

The proportion of widowed persons fell slightly from 5.1% of the population in 1954 to 4.8% in 1961. In the same period the ratio of widowed females to widowed males increased from 303:100 to 349:100. The disparity between the number of widowed males and widowed females is the result of the greater longevity of females coupled with the usually younger age at marriage, and the greater proportion of widowed males who remarry.

Period of Residence in Australia

The post-war migration flow into Australia is shown by the numbers of persons who have taken up residence in Australia since the late 1940's. The following table gives details of period of residence of such persons residing in South Australia at the 1954 and 1961 Censuses.

Period of Residence in Australia of Persons Residing in South Australia
Censuses 1954 and 1961

Period of Residence	30th June 1954			30th June 1961			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Under 1 year	5,105	3,707	8,812	8,859	6,381	15,240	6,428
1 year and under 2	3,544	2,896	6,440	6,678	5,662	12,340	5,900
2 years and under 3	8,038	4,384	12,422	6,522	6,388	12,910	488
3 years and under 4	6,774	4,724	11,498	4,321	5,178	9,499	(-) 1,999
4 years and under 5	10,528	6,808	17,336	4,969	5,212	10,181	(-) 7,155
5 years and under 6	7,336	4,944	12,280	6,981	5,329	12,310	30
6 years and under 7	2,340	1,410	3,750	6,385	4,886	11,271	7,521
7 years and under 14	19,933	16,130	36,063	40,110	28,776	68,886	62,950
14 years and under 21				1,392	1,247	2,639	
21 years and over	1,361	643	2,004	15,087	12,401	27,488	1,344
Not stated				2,236	1,112	3,348	
Born outside Australia	64,959	45,646	110,605	103,540	82,572	186,112	75,507
Born in Australia	338,944	347,545	686,489	386,685	396,543	783,228	96,739
Total population.	403,903	393,191	797,094	490,225	479,115	969,340	172,246

In 1947 there were 43,552 persons residing in South Australia who were not born in Australia and only about 10% of these had lived in Australia for less than 10 years. By 1954 the number of such persons had risen to 110,605, of whom 65% had resided in Australia for less than 7 years; and by 1961 the number was 186,112, of whom 45% had resided in Australia for less than 7 years and a further 37% for 7 years but less than 14 years.

Country of Birth

At the first census conducted by the Commonwealth in 1911, the people of Australia were asked to state their place of birth. The Australian-born content of the population in South Australia was 85.7% in 1911, 88.3% in 1921, 90.3% in 1933, and 93.3% in 1947. Oversea migration had lowered the proportion of Australian-born persons to 86.1% by 1954, whilst in 1961 the proportion was down to 80.8%. In 1961, 8.1% of the remainder were born in the United Kingdom or the Republic of Ireland. At the earlier censuses this percentage was as high as 11% in 1911 but had fallen to 5.1% by 1947.

Country of Birth of Population, South Australia
Censuses 1954 and 1961

Country of Birth	30th June 1954			30th June 1961			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Australia	338,944	347,545	686,489	386,685	396,543	783,228	96,739
New Zealand	780	745	1,525	936	890	1,826	301
Europe—							
United Kingdom and Republic of Ireland	27,098	23,379	50,477	41,684	37,102	78,786	28,309
Germany	5,338	4,279	9,617	8,345	7,662	16,007	6,390
Greece	1,819	990	2,809	5,341	4,187	9,528	6,719
Italy	8,112	3,721	11,833	15,446	10,784	26,230	14,397
Malta	599	309	908	1,030	732	1,762	854
Netherlands	2,285	1,651	3,936	6,781	5,758	12,539	8,603
Poland	4,481	2,116	6,597	4,471	2,468	6,939	342
Other	11,054	6,268	17,322	14,686	9,415	24,101	6,779
Total Europe	60,786	42,713	103,499	97,784	78,108	175,892	72,393
Other countries	3,393	2,188	5,581	4,820	3,574	8,394	2,813
Total born outside Australia	64,959	45,646	110,605	103,540	82,572	186,112	75,507
Total	403,903	393,191	797,094	490,225	479,115	969,340	172,246

Of persons born in Europe, the greatest numerical increase between 1954 and 1961 was in persons born in the United Kingdom and the Republic of Ireland although higher proportional increases were recorded for persons born in some other European countries, *e.g.*, Germany, Greece, Italy, and the Netherlands.

Nationality

The nationality (or country of allegiance) of the population of South Australia at June 1954 and 1961 is given in the following table. For purposes of this table, Irish nationality is included with British. Decreases in the number of persons of some nationalities in 1961 are due in part to British naturalization of some former aliens.

Nationality (*i.e.*, Allegiance) of Population, South Australia
Censuses 1954 and 1961

Nationality	30th June 1954			30th June 1961			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
British (a)—							
Born in Australia	338,944	347,545	686,489	386,685	396,543	783,228	96,739
Born outside Australia	35,124	28,509	63,633	71,059	57,413	128,472	64,839
Total British	374,068	376,054	750,122	457,744	453,956	911,700	161,578
Foreign—							
Dutch	2,279	1,713	3,992	5,216	4,678	9,894	5,902
German	3,621	2,357	5,978	4,537	3,753	8,290	2,312
Greek	1,272	687	1,959	3,767	3,297	7,064	5,105
Hungarian	788	389	1,177	699	476	1,175	(—) 2
Italian	6,511	2,781	9,292	9,928	7,935	17,863	8,571
Latvian, Lithuanian and Estonian	2,984	2,339	5,323	547	332	879	(—) 4,444
Polish	4,249	2,503	6,752	1,465	926	2,391	(—) 4,361
Ukrainian	1,559	1,103	2,662	373	226	599	(—) 2,063
Yugoslavian	1,578	792	2,370	1,456	857	2,313	(—) 57
Other (including Stateless)	4,994	2,473	7,467	4,493	2,679	7,172	(—) 295
Total foreign	29,835	17,137	46,972	32,481	25,159	57,640	10,668
Total	403,903	393,191	797,094	490,225	479,115	969,340	172,246

(a) Includes Irish.

Persons of British nationality represented 99.7% of the State population in 1947, but the proportion fell to 94.1% by 1954 and was at this same level in 1961.

Religion

Information on the religious affiliations of the population is obtained only at population censuses. There is, however, no legal obligation to answer the question on religion and at the 1961 Census respondents representing 10.59% of the South Australian population chose not to do so.

The Church of England has always had the greatest number of adherents, its relative importance having been fairly consistent since 1866 when it accounted for 31.8% of answers compared with 29.4% in 1961.

Changes in the pattern of religious affiliations appear to some extent attributable to migratory movements. This is particularly noticeable in the case of Catholics (*i.e.*, persons described as either Catholics or Roman Catholics) who accounted for only 14.3% of the answers in 1933 as opposed to 21.1% in 1961, thus reflecting the pattern of post-war migration.

Religions of Population, Censuses 1954 and 1961, South Australia

Religion	Persons		Increase	Proportion of Population	
	1954	1961		1954	1961
				%	%
Christian—					
Baptist	18,797	21,032	2,235	2.36	2.17
Brethren	516	573	57	0.06	0.06
Catholic (a)	81,978	123,424	41,446	10.29	12.74
Catholic, Roman (a)	43,792	59,630	15,838	5.49	6.15
Churches of Christ	19,162	23,906	4,744	2.40	2.47
Church of England	223,319	255,053	31,734	28.02	26.31
Congregational	15,650	17,867	2,217	1.96	1.84
Greek Orthodox	8,607	18,644	10,037	1.08	1.92
Lutheran	42,057	53,947	11,890	5.28	5.57
Methodist	193,234	216,769	23,535	24.24	22.36
Presbyterian	30,778	37,911	7,133	3.86	3.91
Salvation Army	5,823	6,411	588	0.73	0.66
Seventh Day Adventist	1,791	2,547	756	0.22	0.26
Protestant—Undefined	11,449	11,478	29	1.44	1.19
Other Christian	5,587	9,708	4,121	0.70	1.00
Total Christian	702,540	858,900	156,360	88.13	88.61
Non-Christian—					
Hebrew	722	985	263	0.09	0.10
Other	710	1,002	292	0.09	0.10
Total Non-Christian	1,432	1,987	555	0.18	0.20
Indefinite	1,817	2,614	797	0.23	0.27
No religion	1,785	3,234	1,449	0.23	0.33
No reply	89,520	102,605	13,085	11.23	10.59
Total	797,094	969,340	172,246	100.00	100.00

(a) So described in individual census schedules.

Other Characteristics

Some census details of occupation, occupational status and industry are set out in Part 7.1.

PART 6

SOCIAL ENVIRONMENT

6.1. LAW, ORDER AND PUBLIC SAFETY

LAW AND ADMINISTRATION

The law in force in South Australia consists of—

- (i) So much of the common law of England and such English Statute law as came into force on the original settlement of the colony in 1836;
- (ii) Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders, etc., made thereunder;
- (iii) Acts passed by the Parliament of the Commonwealth of Australia within the scope of its allotted powers, together with regulations, rules, orders, etc., made thereunder;
- (iv) Imperial law binding South Australia as part of the British Commonwealth, as part of the Commonwealth of Australia or as a State—subject, since 1931, to the Statute of Westminster. (This relates mainly to external affairs or matters of Imperial concern);
- (v) Case law. (This consists of judicial decisions of the English, Commonwealth, or State Courts, respectively, and represents an important part of the law in force in South Australia.)

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

LEGAL PROFESSION

Legal practitioners in South Australia are admitted to the Bar, after the prescribed academic training and service in articles, as barristers, solicitors, attorneys and proctors. This means that the legal profession is not divided, as it is in the eastern States. A practitioner is entitled to pursue any one or more of the four callings.

The legal profession is controlled by the Legal Practitioners Act, 1936-1964. Rules of Court prescribe the conditions of entry to the profession, regulate articles of clerkship and specify the legal examinations which must be passed before admission to practice. Women are eligible for admission. A practitioner duly admitted to practice has the right of audience in all courts of South Australia. The Act provides for the hearing of charges of unprofessional conduct by the statutory committee of the Law Society and for its report to be referred to the Supreme Court which may make any order it thinks fit.

In 1966 there were 381 legal practitioners actually practising in the State—of these 335 were practising in the City of Adelaide.

LEGAL DEPARTMENT

In South Australia the Attorney-General is a Minister of State Parliament. There is a Crown Solicitor who, under the Attorney-General, acts as legal adviser to the Government.

The Attorney-General is charged with the conduct of business relating to the Supreme Court, the officers of the Crown Solicitor's Department (which includes the Crown Prosecutor), the Parliamentary Draftsman and court reporters as well as Statute Law consolidation and certain Acts, including the Criminal Law Consolidation Act. He also advises Ministers on questions on which his legal opinion is required, initiates and defends proceedings by and against the State and determines whether informations should be laid in cases of indictable offences.

The Attorney-General supervises the working of inferior courts and the operations of the various officers connected with the Supreme Court. He administers Acts of Parliament relating to justices, coroners, lands titles, registration of firms, companies and deeds, licensing and the Electoral Department.

SUPREME COURT

The various jurisdictions of the Court are civil, criminal, matrimonial causes and testamentary causes.

Judges of the Supreme Court are appointed by commission of the Governor on the advice of the Executive Council. A person may not be appointed a judge of the Supreme Court unless he is a legal practitioner of ten years' standing.

The Supreme Court Act, 1935-1966, provides *inter alia* for the constitution, jurisdiction, powers and duties, of the Supreme Court and its judges. One of the powers of the judges of the Court of particular importance is that of making Rules of Court regulating the procedure of the Court. In particular the Rules may regulate the admission to practice of practitioners of the Supreme Court and control their conduct. All Rules of Court are published in the *Government Gazette*.

There are at present seven judges of the Supreme Court, comprising the Chief Justice and six puisne judges. A judge holds office until the age of 70 years at a salary fixed by Statute. The Court sits in Adelaide, but holds circuit sessions three times each year at Port Augusta and Mount Gambier.

On 28th February 1967 Doctor J. J. Bray Q.C. was appointed as Chief Justice to succeed the Honourable Sir J. Mellis Napier, K.C.M.G., LL.D., who retired after serving a record term of 43 years on the Supreme Court Bench, 25 of these years as Chief Justice.

Civil and Criminal Jurisdiction

Generally speaking, the Supreme Court has unlimited civil and criminal jurisdiction, limited only in respect of matters which are reserved for the original jurisdiction of federal courts. English practice applies where no contrary provisions exist in the State's Statute law.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury of 12 persons who find as to the facts of the case, the punishment being determined by the judge. Capital punishment applies in the case of murder, treason and certain offences under the Commonwealth *Crimes Act* 1940-1960, and *Crimes (in Aircraft) Act* 1963.

The Court has original jurisdiction over all litigious matters arising in the State except where its jurisdiction is excluded by Statute. Its original jurisdiction is usually exercised by one judge although it is possible in theory to try a civil issue with a jury.

The money value of judgments entered during 1966 either on liquidated claims or claims for unspecified damages was \$2,601,874.

The Court also has power at common law to restrain inferior courts acting in excess of their jurisdiction and may, by order, compel them to enforce a legal right. The Court also acts as a court of appeal from inferior courts. During 1966, the Supreme Court heard 124 appeals from inferior courts. Of these, 76 (of which 35 were allowed) were from decisions of special magistrates and 48 (of which 25 were allowed) were from decisions of justices of the peace.

In proper cases, appeals may be carried from decisions of the Supreme Court to the High Court of Australia, or to the Privy Council.

The following table gives details of persons tried, convicted, and executed for the years 1957 to 1966. In the post-war period to the end of 1966 a total of 24 persons have been sentenced to death in South Australia, 18 of these sentences being subsequently commuted. No female has been executed in the State since 1873.

Supreme and Circuit Courts: Trials, Convictions and Executions, South Australia

Year	Tried		Convicted		Executed
	Males	Females	Males	Females	Males
1957.....	499	22	444	15	—
1958.....	480	24	438	19	1
1959.....	528	17	482	17	—
1960.....	590	27	557	23	—
1961.....	622	17	591	15	—
1962.....	743	24	697	21	—
1963.....	737	35	716	29	—
1964.....	650	21	608	21	1
1965.....	707	28	687	26	—
1966.....	751	19	720	18	—

Details of convictions classified by type of offence are set out below—

Supreme and Circuit Courts: Persons Convicted^(a), South Australia

Type of Offence	1962	1963	1964	1965	1966
Offences against the person—					
Murder and attempted murder	6	2	3	1	2
Other acts causing death, injury or endangering life	28	32	39	34	28
Offences against females	242	182	142	193	189
Unnatural offences	33	33	39	22	22
Other offences against the person	23	12	11	22	9
Total	332	261	234	276	250
Offences against property—					
Robbery	10	10	8	23	8
Breaking and entering	218	274	214	270	312
Embezzlement and stealing by servants ..	15	18	8	9	16
Fraud and false pretences	40	31	23	28	24
Other offences against property	39	45	46	32	52
Total	322	378	299	362	412
Other offences—					
Forgery and offences against the currency .	22	30	29	20	27
Breach of recognizance	13	24	25	14	19
Other	29	52	42	41	30
Total	64	106	96	75	76
Grand total	718	745	629	713	738

(a) In the case of multiple charges, where more than one conviction is recorded, the most serious offence is counted.

Matrimonial Causes Jurisdiction

As in other States, the Supreme Court exercises jurisdiction in matrimonial causes pursuant to the Commonwealth *Matrimonial Causes Act* 1959-1966. The Act superseded the existing State law, making many important changes in the practice and procedure of the Supreme Court in matrimonial causes.

“Matrimonial cause” normally refers to proceedings for a decree of dissolution of marriage; however, the Court also hears proceedings for a decree of nullity of marriage, judicial separation or restitution of conjugal rights.

The jurisdiction of the Supreme Court is co-extensive with the Supreme Courts of the other States: there is no requirement that either or both parties shall be domiciled or resident within the territorial boundaries of the jurisdiction of the court. However, the Court will transfer to the most convenient court any suit for which it considers itself not to be the appropriate court.

Proceedings for a decree of dissolution of marriage, or of nullity of a voidable marriage, can be instituted only by a person domiciled in Australia; while proceedings for a decree of nullity of a void marriage can be instituted by a person domiciled or resident in Australia. The grounds upon which a petition for dissolution of marriage may be granted are set out in Section 28 of the Act, the most important being adultery, desertion for two years, and habitual cruelty. Details of divorces granted and the grounds for divorce are shown in Part 6.8.

At the same time as the proceedings for principal relief, the Court may hear a claim for permanent maintenance and also a claim for custody of children. The powers of the Court in proceedings with respect to the custody, guardianship, welfare, advancement or education of children of the marriage are dealt with in Section 85 which provides that the Court shall regard the interests of the children as the paramount consideration but, subject to that, may make such order as it thinks proper. The Court also has wide powers in respect of the settlement of property.

Testamentary Causes Jurisdiction

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State. Pending a grant of probate or administration, all property of the deceased person is vested in the Public Trustee, and with a few exceptions, the property cannot be dealt with in any way until a grant has been obtained. The Court will not issue a grant until death duty has been paid.

The powers of the Court are exercised by a judge, the Master and the Registrar or Deputy Registrar of Probates. The latter deal with all applications for probate and administration where there is no contention and any matters prescribed by the rules. In cases of doubt or difficulty, the Registrar refers the matter to a Judge in Chambers. The records of the Court are available for public inspection, and copies of wills and other documents may be obtained.

Some statistics of the estates of deceased persons appear on pages 526-528.

LOCAL COURTS

Local courts were first established in South Australia by an ordinance of 1850 and originally had criminal as well as civil jurisdiction.

The Local Courts Act, 1926, effected important alterations in the structure and jurisdiction of local courts by abolishing juries in local courts and also justices as constituent members of courts of full jurisdiction (except on the application of a party), by conferring equitable jurisdiction on the Local Court of Adelaide of Full Jurisdiction, and by giving a full appeal to the Supreme Court on facts as well as on law from all judgments, determinations, and orders of local courts in actions involving over \$60.

Local courts are now established under the Local Courts Act, 1926-1965, and have only civil jurisdiction. They are located in Adelaide and the main country towns, and have jurisdiction in common law claims up to a limit of \$2,500. The Local Court of Adelaide has certain equitable jurisdiction as set out in the Local Courts Act. In addition the Local Court of Adelaide and a number of specified local courts (e.g., Port Adelaide, Port Pirie, Mount Gambier and others) exercise jurisdiction under certain other Acts, the principal of which is the Workmen's Compensation Act.

Claims under \$60 may be heard by a Local Court of Limited Jurisdiction, that is, a local court constituted by two justices of the peace. Claims for a greater amount must be heard by a special magistrate or, in the Local Court of Adelaide, may be heard by the Local Court Judge.

Under Section 28 of the Local Courts Act the Local Court Judge may make Rules of Court for carrying the Act or any other Act conferring jurisdiction upon local courts into effect.

Local Courts: Summary of Transactions, South Australia

Year	Total Claims		Verdicts and Judgments						Service and Execution of Process Act		
	Sum-moneses Issued (a)	Amount Sued For	Verdicts by Trial		Judgment by Default		Total		Sum-moneses for Service out of Jurisdiction	Certificates	
			Number	Amount	Number	Amount	Number	Amount		To Other States	From Other States
		\$'000		\$'000		\$'000		\$'000			
1961.....	106,097	9,060	1,410	313	47,848	3,977	49,258	4,290	2,983	962	202
1962.....	94,566	7,679	1,370	372	46,287	3,760	47,657	4,132	2,728	1,088	230
1963.....	97,038	7,341	1,232	365	46,569	3,719	47,801	4,084	2,617	1,095	266
1964.....	103,218	8,049	1,407	336	53,679	3,933	55,086	4,269	2,487	1,237	269
1965.....	104,297	8,709	1,550	374	45,281	3,219	46,831	3,594	2,214	904	267

(a) Including those withdrawn or settled out of Court.

COURTS OF SUMMARY JURISDICTION

Courts of summary jurisdiction are established in all major towns and hear all criminal cases where the penalty prescribed is imprisonment for two years or less. Their procedure is regulated by the Justices Act, 1921-1960. They are presided over either by a special magistrate or by two justices of the peace, with the more serious causes generally being heard by a special magistrate.

Special magistrates are appointed under the Justices Act, and each appointment must be approved by the Chief Justice. In practice appointees are required to be practitioners of the Supreme Court who have been practising for some years.

Courts of Summary Jurisdiction (Magistrates Courts), South Australia
Persons Convicted, Including Juveniles^(a)

Offence	1961-62	1962-63	1963-64	1964-65	1965-66
Against the person	285	310	355	334	301
Against property—					
Burglary and housebreaking ..	376	471	431	576	696
Larceny (various)	1,705	1,675	1,941	2,479	2,501
Other	1,123	1,008	1,179	1,254	1,369
Against morality	338	360	342	258	313
Against good order—					
Drunkenness	6,178	7,485	6,952	7,110	7,334
Unlawfully on premises	427	386	347	409	460
Vagrancy	391	414	378	435	548
Other	913	939	1,147	1,584	1,803
Other, relating to—					
Road Traffic Act	27,672	31,840	27,645	34,165	40,968
Licensing	1,528	1,610	1,018	788	795
Maintenance Act	1,612	1,545	1,918	2,132	1,760
Police Act	1,060	1,176	946	831	1,008
Local government	6,224	4,150	5,101	4,647	5,833
Australian Broadcasting Act ..	683	1,012	2,284	1,773	2,317
Income tax assessment	744	824	811	523	551
Other	2,272	2,319	3,011	3,314	3,447
Total persons convicted—					
Males	50,926	54,846	52,739	59,219	67,456
Females	2,605	2,678	3,067	3,393	4,548
Total	53,531	57,524	55,806	62,612	72,004

(a) Where multiple charges have been laid against one individual at the same time each type of offence has been counted separately.

Offences under the Road Traffic Act accounted for 57% of total convictions in 1965-66. This compares with 53% in 1958-59, 50% in 1954-55 and 42% in 1950-51.

Of the 4,548 females convicted in 1965-66, 1,667 were convicted of offences under the Road Traffic Act, 217 under the Maintenance Act, 490 under laws relating to local government (largely city parking offences), and 393 were convicted of various forms of larceny.

JUVENILE COURTS

Juvenile courts for the trial of juvenile offenders *i.e.* persons under 18 years of age are presided over by a special magistrate or two justices of the peace who are approved as suitable to exercise this jurisdiction. The courts may try any offence (except homicide) committed by a juvenile. The penalties that may be imposed are a fine, a bond with or without supervision, or committal to the custody and control of the Children's Welfare Department or committal to a training school. Juvenile courts also exercise jurisdiction over destitute, neglected or uncontrolled children and may commit such children to a children's home. The principles upon which a juvenile court must act in making orders in respect of these latter are set out in Section 44 of the Juvenile Courts Act, 1965-1966, which reads in part as follows:

"Before making an order under this section committing a child to an institution, the Court shall have regard to the welfare of the child and the desirability or otherwise of removing him from unsuitable surroundings and making proper provision for his care, training and control."

Juveniles Convicted^(a), South Australia

Offences	1961-62	1962-63	1963-64	1964-65	1965-66
Against the person	38	35	42	44	37
Against property—					
Burglary and housebreaking ..	360	450	420	576	639
Larceny (various)	584	681	759	1,099	1,061
Other	268	255	334	447	343
Against morality	157	186	166	137	180
Against good order—					
Unlawfully on premises	98	132	83	123	116
Other	116	160	233	315	341
Other—					
Road Traffic Act	995	888	1,012	1,853	2,590
Maintenance Act	348	335	398	374	310
Police Act	124	169	195	208	157
Other	223	253	388	272	266
Total juveniles convicted—					
Males	2,948	3,160	3,647	4,937	5,589
Females	363	384	383	511	451
Total	3,311	3,544	4,030	5,448	6,040

(a) Under 18 years. Includes both police and private cases.

The 451 females convicted in 1965-66 included 192 charged under the Maintenance Act; *i.e.* they were girls found to be neglected, destitute or uncontrolled.

LICENSING COURTS

The licensing of hotels, storekeepers, billiard saloons and clubs is governed by the Licensing Act, 1932-1966, which is based on a similar Act of 1917. For the purpose of the Act, the State is divided into a series of districts.

The Licensing Court is presided over by a special magistrate who has been appointed to do this work.

A local option poll is necessary before a new licence can be granted. At the hearing of the application a memorial by resident electors may be presented either in support of or against the application. The court must also consider any objections made in accordance with the Act, *e.g.* that the proposed licensed premises would constitute a disturbance to the peace or would be too near a church or a school, etc.

The Licensing Court also grants permits for restaurants to serve Australian wines with meals during meal hours.

In March 1966 a Royal Commission was appointed "to inquire into and report whether any and what amendments should be made to the law relating to the sale, supply and consumption of intoxicating liquors and to other matters dealt with by the Licensing Act, 1932-1964 and any other Act relating to intoxicating liquors, . . ." On 1st March 1967 a Bill was introduced into Parliament to give effect to most of the recommendations of the Royal Commissioner including changes in the constitution and powers of the Licensing Court, the abolition of local option polls and the extension of trading hours to 10 p.m.

Details of the number of licences operating in recent years are given in the table below. The effect of the local option system in restraining any extension of liquor outlets is reflected in the table. The number of hotel licences has remained virtually unaltered since 1925 and has not been below 580 since 1880 when the State's population (including Northern Territory) was little more than one quarter of the present population.

Hotels and Other Licensed Premises, South Australia

Type of Licence	At 31st December				
	1961	1962	1963	1964	1965
Hotels	584	588	588	589	591
Storekeepers Australian wine	83	83	83	86	86
Storekeepers	45	44	44	50	50
Distiller's storekeepers	18	19	18	19	19
Clubs	32	35	36	41	41
Wine saloons	14	14	14	14	13
Brewers	8	8	8	8	8
Railway refreshment rooms	1	1	1	1	1
Billiards (a)	53	52	51	51	49
Total licences	838	844	843	859	858
Restaurant permits	66	79	88	102	108

(a) Excludes billiard tables at hotels and clubs.

ADOPTION COURTS

Adoption courts are held in Adelaide, Port Adelaide and all major country towns. They are presided over by a special magistrate and two justices of the peace, one of whom must be a woman. The function of these courts is to enquire into the character and standing of persons applying to adopt a child and to decide whether the adoption would be for the benefit of the child. For details of adoptions see the table on page 219.

BANKRUPTCY

Since 1928 bankruptcy has been under federal jurisdiction. Under the Commonwealth *Bankruptcy Act* 1924-1966 South Australia is a bankruptcy "district" and jurisdiction is exercised through the Court of Insolvency of the State of South Australia exercising Commonwealth jurisdiction in bankruptcy.

Bankruptcies: Numbers, Liabilities, Assets, South Australia

Year	Sequestration Orders and Orders for Administration of Deceased Debtors Estates			Compositions, Schemes of Arrangement and Deeds of Assignment			Total Debtors
	Number	Liabilities	Assets	Number	Liabilities	Assets	
		\$	\$		\$	\$	
1962.....	528	1,860,342	917,168	92	1,205,910	898,306	620
1963.....	496	2,062,272	899,036	88	1,401,768	1,210,390	584
1964.....	626	2,539,338	1,260,992	49	543,966	472,612	675
1965.....	543	2,925,218	1,564,316	39	581,544	490,774	582
1966.....	617	2,765,832	1,279,453	31	594,521	342,549	648

JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1965.

With certain exceptions all men over the age of 25 and under 65 who are enrolled as electors for the House of Assembly are qualified and liable to serve as jurors. Men exempted from liability to serve include judges, members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, police officers, doctors, dentists, pharmacists and school masters.

Legislation passed in 1965 provided for women to serve on juries under the same qualifications as men. Automatically exempted are nurses and wives of judges or magistrates, but any other woman may be exempted upon application.

A jurors list is compiled annually for each jurors district by the Sheriff. The jurors summoned to hear and determine an issue are decided by lot. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons.

STATE INDUSTRIAL TRIBUNALS

Industrial arbitration in South Australia was inaugurated in 1894 by the establishment of Boards of Conciliation. Since then the system has undergone fundamental changes from time to time and the present basis is the Industrial Code, 1920-1966. Under the Code the Industrial Commission, Conciliation Committees and Commissioners are established.

For details on the composition of these bodies and their functions see Part 7.2.

LEGAL ASSISTANCE SCHEME

The Poor Persons Legal Assistance Scheme is administered by the Law Society of South Australia Incorporated. It has been in operation since 1933 as a means of providing legal help necessary for persons who would otherwise through lack of money be embarrassed or prevented from the proper assertion of their legal rights.

The basis of the scheme is an agreement between the Government and the Law Society which has given an undertaking that "no person shall be without proper legal assistance if he is deserving of such assistance and would be unable to obtain it without the help of the Society's members". In return, the Government makes an annual grant to the Society (\$20,000 in 1965-66) to cover the administrative expenses in carrying out the scheme. In addition, the Government makes a half-yearly grant out of which members of the profession who undertake assignments under the scheme receive payment of out-of-pocket expenses and a proportionate amount of costs. The last grant in 1966 was \$11,000 representing approximately 24 cents in the dollar.

PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is now regulated by the Administration and Probate Act, 1919-1960.

The office provides a necessary and efficient service to the public in ensuring the safe and economical administration of estates and the protection of infants and absentee beneficiaries in estates administered by private administrators.

Any person may appoint the Public Trustee to be the executor and trustee of a will. He may also appoint him as trustee of any disposition of property creating a trust, other than a trust exclusively for religious purposes.

The Public Trustee, where directed by the Court, becomes administrator of certain deceased estates; acts as guardian of certain infants; controls a protected person's property under the Aged and Infirm Persons' Property Act; and receives, invests and distributes for the benefit of widows and orphan dependants, amounts awarded under the Workmen's Compensation Act.

Under the Mental Health Act, the Public Trustee has control of the estates of patients in Government mental hospitals, and may be appointed to act for the estate of any person found to be of unsound mind.

THE SOUTH AUSTRALIAN POLICE FORCE

Although South Australia was colonized in 1836 there was no police force until 1838. The formation of a police force became necessary following the arrival of former convicts from the eastern colonies, and trouble with natives at Port Lincoln and along the River Murray. The original police force was administered by a board of commissioners until 1840, when the first Commissioner of Police was appointed.

Early mobility depended largely on horses, and it was not until 1922 that the first motor cycles were introduced into the force as a forerunner of the present day motorized components. The system of radio-controlled patrols was introduced in 1948. In addition to the metropolitan network, all country police headquarters and a number of outback stations are in constant radio contact with the central radio room in Adelaide.

Police Personnel^(a), South Australia

As at 30th June

Personnel	1962	1963	1964	1965	1966
Commissioned officers	38	38	39	41	43
Non-commissioned officers	171	187	180	185	186
Constables	1,218	1,177	1,232	1,290	1,322
Women police	39	39	45	42	44
Total active police force	1,466	1,441	1,496	1,558	1,595
Inhabitants per active member ..	672	699	692	683	684

(a) Active police force strength ; excludes trainees, Women Police auxiliaries, civil staff, etc.

Routine maintenance of law and order and reduction of opportunities for criminal activity are the main functions of the Uniformed Branch.

The Traffic Division, while concerned with the general regulation and control of traffic, also aims at reducing the number of road fatalities and injuries. Testing of vehicles for roadworthiness, lecturing on road courtesy and safety, practical driving courses and driving tests for licence applicants are all aimed at greater road safety.

The Criminal Investigation Branch is split into squads each concerned with a particular type of crime. Auxiliary services provided by the *modus operandi*, fingerprint and photographic, scientific, ballistics and handwriting sections are often essential aids in criminal investigation.

Women Police officers have a role in the social welfare of the community which is now well recognized. These officers render assistance to lost and destitute children and endeavour to alleviate domestic suffering and hardship. They are also active in the fight against juvenile delinquency. At the 30th June 1966 there were 44 Women Police officers.

In 1959 a Police Emergency Operations Group consisting of a Cliff Rescue Squad, Underwater Recovery Squad and an Emergency Squad was constituted. The Commissioner of Police is also responsible for the Emergency Fire Services, operations of which are outlined on pages 140-141.

Today, with a proliferation of laws and changing policing techniques, much emphasis is placed on the work of the Training Division. Police cadets (enrolled at 16 or 17 years) are given a three year course of academic and practical instruction at the Fort Largs Training Academy before graduating to active police work. At 30th June 1966 there were 376 police cadets. As well as this initial training, refresher courses keep the members abreast of changing administrative and legal developments, and of changes in policing techniques. Also provided are specialist and higher training courses for senior officers, and each year a number of members attend the Civil Defence School at Mount Macedon, Victoria.

South Australian Police Force, Revenue and Expenditure

Year	Expenditure			Revenue	Net Cost	
	Wages and Salaries	Other	Total		Total	Per Inhabitant
	\$	\$	\$	\$	\$	\$
1961-62	4,264,882	1,469,816	5,734,698	83,794	5,650,904	5.78
1962-63	4,362,816	1,553,850	5,916,666	91,640	5,825,026	5.85
1963-64	4,639,230	1,704,276	6,343,506	98,264	6,245,242	6.12
1964-65	5,229,414	1,791,938	7,021,352	109,774	6,911,578	6.59
1965-66	5,519,200	1,919,496	7,438,696	119,547	7,319,149	6.79

GAOLS AND PRISONS

There were seven gaols and prisons in use in South Australia during the year 1965-66. Adelaide Gaol, a holding centre for remand prisoners and sentenced prisoners serving under 3 months, also houses a women's section. Yatala Labor Prison (8 miles from Adelaide) provides for minimum, medium and maximum security prisoners with sentences from 3 months to life. Gladstone Prison (mid-North), Port Augusta Gaol (North), Mount Gambier Gaol (South East), and Port Lincoln Prison (West Coast), are all medium security institutions. Cadell Training Centre on the River Murray 100 miles from Adelaide is a dual purpose training institution, accommodating 60 selected minimum security trainees and 60 medium security short-term prisoners. In addition there are 7 police prisons strategically situated throughout the State to cater for short-term prisoners.

A new prison has been built at Port Lincoln to replace the old gaol. Extensions at Yatala for a further 60 minimum security prisoners were nearing completion at 30th June 1967. Erection of accommodation at Cadell for an additional 50 minimum security trainees was commenced in June 1967. A new women's prison is to be built at the suburb of Northfield to replace the present women's section at the Adelaide Gaol. Plans are still in hand for the building of a new gaol at Port Augusta.

In common with other States and countries the emphasis in South Australia is on rehabilitation. With this end in view officers are carefully selected and undergo an intensive training course before being appointed to the prison service. Refresher and advanced training courses are held continuously to keep officers informed on penological matters. A large variety of trades and industries is available throughout the institutions enabling prisoners to be trained for ultimate outside employment. Education courses at all levels are available at no cost; special classes are held for migrants and illiterates; medical, dental, psychological, and psychiatric services are also provided. A classification committee ensures that prisoners are correctly assessed for education, employment, and other training purposes, etc. and group counselling is practised in all institutions. Chaplains, the Prisoners' Aid Association and other voluntary organizations willingly assist the prison administration in a wide range of matters affecting the well-being and after-care of prisoners and their families.

Two valuable community services rendered by prisoners are the transcription of books into braille for the blind, and the provision of emergency fire service units at three institutions.

In South Australia the terms "parole" and "probation" are synonymous. Prisoners may be released on probation by the courts or released on probation from prison after serving portion of their sentence. Both categories of probationers

come under the supervision of probation officers of the Adult Probation Service. Officers of this service also supervise prisoners released on licence, such as habitual criminals, and those serving life sentences. The Adult Probation Service also prepares pre-sentence reports for the courts.

Gaols and Prisons, South Australia

Year	Total Accommodation for Prisoners	Prisoners Received to Serve Sentence (a) (b)		Daily Average Number of Prisoners under Sentence (a)	
		Males	Females	Males	Females
1961-62	1,015	5,005	149	694	17
1962-63	1,018	4,933	108	652	10
1963-64	1,015	4,314	178	679	16
1964-65	1,022	4,078	125	712	16
1965-66	1,065	4,773	118	678	19

(a) Number of prisoners excludes debtors and Aborigines.

(b) Counted once each time received.

PUBLIC SAFETY

FIRE SERVICES

The Fire Brigades Board

Provision for the establishment and maintenance of fire brigades in South Australia under the control and management of the Fire Brigades Board was first enacted in 1882.

In accordance with its general duty of extinguishing fires and protecting life and property in case of fire, the Board maintains suitably equipped fire brigades in proclaimed fire districts in the Adelaide Metropolitan Area and in 23 country towns. During the year 1965-66 these brigades received 4,288 calls. Some of these brigades are manned by permanent personnel and others by auxiliary firemen, there being at 30th June 1966, 338 officers and firemen and 89 auxiliary firemen.

In addition to its main function, the Board provides a service section for the regular maintenance of private fire equipment installed in public and private premises, and makes its officers available for inspection of premises and for advice on fire protection generally, as well as to demonstrate the use and handling of various types of first aid fire equipment. The Board also provides a burning-off service available in the season to owners of vacant properties, within the areas in which the Board has jurisdiction.

The cost of operating the Fire Brigades Board is borne by proportionate contributions from the State Government (15.7% in 1965-66), insurance companies (60.2%) and municipalities and district councils subject to the Act (24.1%).

South Australian Emergency Fire Services

The South Australian Emergency Fire Services was formed as a branch of Civil Defence during World War II. When Civil Defence was disbanded, redundant trailer pumps were issued to local governing bodies by the State Government and the Emergency Fire Service was developed into a volunteer country fire service, to protect those areas outside of the districts covered under

the Fire Brigades Act. The responsibility and authority for fire prevention and control in these outer areas are vested in local government by the Bushfires Act and Local Government Act.

E.F.S. Headquarters, a branch of the Police Department, functions as a co-ordinating centre. The Director of Emergency Fire Services, responsible to the Commissioner of Police, advises on fire protection problems, conducts competitions and training programmes, and co-ordinates fire-fighters and auxiliaries in major fire control.

Fire equipment purchased by E.F.S. organizations and councils is subsidized by the Bushfires Equipment Subsidies Fund (equal contributions by the State Government and by fire insurers), and government subsidies are provided for maintenance.

South Australian Emergency Fire Services

Particulars	1962	1963	1964	1965	1966
Strength of service at 30th June—					
Affiliated organizations	313	338	345	360	377
Volunteer members	5,500	5,600	6,500	7,000	7,500
Fires attended in twelve months ended 30th June—					
Number of fires—					
Domestic	1,359	645	202	175	220
Rural			1,047	1,084	1,301
Acres destroyed in rural fires .	80,015	25,117	144,931	107,172	155,881
Financial losses—					
Domestic	\$332,846	\$221,938	\$226,612	\$201,448	\$292,230
Rural			\$250,752	\$649,698	\$419,926

LIFE SAVING

The Royal Life Saving Society

The South Australian Branch of the Royal Life Saving Society—Australia was established in 1909 and the formation of clubs at various beaches followed. In 1952 an agreement was made with the Surf Life Saving Association whereby this body undertook responsibility for life saving on ocean beaches, the Royal Life Saving Society retaining responsibility in all other areas of activity.

In South Australia the Society has developed into a large teaching body administered by a State Council, giving instruction to schools and other interested bodies in the various methods of life saving, including the current methods of artificial respiration. This is done through the medium of honorary instructors and examiners. In the winter months the emphasis is on talks and demonstrations on resuscitation, but during the swimming season weekly life saving instruction and examination and the performance of life saving demonstrations are conducted throughout the State. Certificates and medallions are issued to candidates who pass the various examinations. In the 1965-66 season these awards exceeded 26,000.

The honorary work of the Society is financed mainly by grants made by both the Commonwealth and the State Governments, and by donations.

The Surf Life Saving Association

The South Australian State Centre of the Surf Life Saving Association of Australia was formed in 1952, with the co-operation of the South Australian Branch of the Royal Life Saving Society and the Surf Life Saving Association of Australia.

The Henley, Glenelg and Moana Life Saving Clubs formed the nucleus of this body, which now has 16 affiliated clubs situated at Semaphore, Grange, Henley, West Beach, Glenelg, Somerton, Brighton, Seacliff, Christies Beach, Port Noarlunga, Southport, Moana, Chiton Rocks, Port Elliot, Port Lincoln and Whyalla.

Voluntary members give many hours to patrolling their respective beaches each weekend and public holiday from the beginning of November until the end of March. At 30th June 1965 there were 1,289 members in Association clubs. From 1952 to the end of the 1964-65 season 893 rescues were performed with no loss of life on South Australian beaches whilst being patrolled by club members. During this same period many hundreds of persons received first-aid treatment.

The South Australian State Centre receives an annual grant from the State Government and individual clubs have been assisted with subsidies when building their club houses.

"Learn to Swim" Campaign

Vacation swimming classes organized by the Education Department were first established on an extensive scale in January 1956. Thirty-six country and 14 metropolitan swimming centres were set up and over 7,000 children enrolled for instruction. The January "Learn to Swim" campaign has been continued in each subsequent year and has grown steadily: in the summer vacation of 1965-66, 108 country and 41 metropolitan swimming centres were used, and the total student enrolment was over 36,700. Instruction is provided over a period of 10 days by qualified swimming teachers.

Swimming classes have also been conducted in school time since October 1954, and in the summer of 1965-66 some 48,200 children were enrolled in such classes.

The success of the campaign can be illustrated by the fact that of children aged 11 years and over in departmental schools, 80% could swim at least 10 yards in 1966, compared with 59% in 1956.

INDUSTRIAL ACCIDENT PREVENTION

The post war growth of industrial activity in this State was accompanied by an increasing toll of injuries and fatalities sustained during the course of employment. Legislation requires certain minimum standards of safety in working conditions to be provided in various industries, and inspections are made to ensure compliance with legislative requirements. However, legislation and inspection are not the only means of minimizing industrial accidents and in the late 1950's the South Australian Government implemented a programme of education for management, supervisors and employees in accident prevention measures, with the object of making all sections of industry more "safety conscious".

Safety officers employed in the Department of Labour and Industry actively pursue this policy by conducting safety training courses, presenting lectures, screening films and distributing industrial safety pamphlets produced within the department.

In 1963 the Industrial Accident Prevention Society of South Australia was formed in an endeavour to interest management in the need for a planned accident prevention programme and to assist them in undertaking such a programme. These aims are being achieved by safety surveys of factories, the conducting of safety training courses and the distribution of safety publications.

In addition the Safety Engineering Society of Australasia, the Australian Institute of Management (Adelaide Division), the South Australian Institute of Technology and the Commonwealth Department of Labour and National Service make valuable contributions within their particular spheres of activities to the promotion of industrial safety. Further details relating to industrial accidents will be found in Part 7.4.

THE NATIONAL SAFETY COUNCIL (S.A.) INCORPORATED

The National Safety Council had its origin in the Look Both Ways Club, which was formed at the turn of the century for the promotion of greater road safety. The Council was incorporated under its present name in 1930. Its aim is to co-ordinate and pursue means for the prevention of accidents and to educate the public to a greater sense of safety consciousness.

The Council is controlled by a Committee of Management, and has sub-committees concerned with traffic, child and youth, industrial and general safety. In 1965-66 the State Government contributed \$2,250 towards the expenses of the Council which also received \$3,125 from the Commonwealth Government specifically earmarked for road safety practices.

SOUTH AUSTRALIAN ROAD SAFETY COUNCIL

The South Australian Road Safety Council was formed in December 1965 as a result of a decision by State Cabinet. The Council, which has affiliation with the Australian Road Safety Council, has nine members appointed by Cabinet, an independent chairman and representation from the Police Department, the Education Department, the Road Traffic Board, the Local Government Association, the Municipal Association, the Royal Automobile Association of South Australia, the Fire and Accident Underwriters' Association of South Australia and the Trades and Labor Council of South Australia.

During 1965-66 the Council received a \$6,750 grant from the State Government and \$9,375 out of the Commonwealth grant for road safety practices.

6.2. EDUCATION

In South Australia attendance at school is compulsory for children from six to fifteen years of age. Many children, however, commence their formal education at an earlier age than six, either by attending a kindergarten or by enrolling at school after reaching five years of age.

Education at the primary and secondary level is available at State schools, controlled by the Education Department, and at private schools, most of which are denominational. The Education Department also controls the South Australian School of Art and the Apprentice Trade Schools. Roseworthy Agricultural

College is conducted by the Department of Agriculture. The University of Adelaide, the Flinders University of South Australia and the South Australian Institute of Technology are independently controlled but are financially dependent on Government grants.

Facilities for adult education are provided by the Workers Educational Association, the University of Adelaide and the Education Department.

Historical

The first school in South Australia was conducted on Kangaroo Island in 1836. A private venture, it closed after several months through insufficient financial support. In 1835 there had been formed in London the South Australian School Society with the object of establishing infant schools in the new colony. The Society's first and only school opened in Adelaide in 1838, and continued until 1843 when it was relinquished to private interests.

It was not until 1847 that the Government showed its first official interest in education by authorizing the payment of a subsidy to approved teachers of \$2 per pupil per annum. The Education Act of 1851 went further and set up a Central Board of Education with power to license schools and teachers. The Board could also make grants for school buildings and pay salaries of from \$80 to \$200 per annum to licensed teachers.

At this time parents of means customarily sent their children to private schools, of which there were a large number, in most cases under the ownership of private citizens. There were also the church schools including St Peter's School Collegiate (1847), Pulteney Street Church of England Grammar School (1848), Prince Alfred College (1869), and a number of Catholic schools.

The present system of public schools, controlled and supported by the Government, dates from the Education Act of 1875. This Act, for the first time, made attendance at school compulsory. The compulsion, however, applied only to children aged from 7 to 13 years, and required attendance for only 70 days a half-year. Fees ranging from 3c to 8c per week were charged, but exemption from payment was granted in cases of poverty. The payment of fees continued until 1892 for children under 13 years of age, and until 1898 for those aged 13 or more. In 1876 most of the licensed schools were taken over as public schools.

To provide secondary education for girls, the Education Department in 1879 opened the Advanced School for Girls; however, fees were charged and the school was self-supporting. It was not until 1897 that the Education Department opened a secondary school for boys—the Agricultural School, which was closed after five years, and subsequently re-opened in 1903 under the auspices of the School of Mines as the Adelaide Technical High School.

The State's present extensive system of secondary schools dates from 1907 when continuation classes were started at seven country primary schools. In the following year these classes were made district high schools, although still attached to primary schools. In the same year the Adelaide Continuation School was opened, to be amalgamated a few months later with the Advanced School for Girls as the Adelaide High School.

In 1915, following a Royal Commission on Education, attendance at school was made compulsory for 5 days per week for children aged 6 to 14 years. At the same time provision was made for technical education, and for a further expansion of secondary education.

In 1920 the Correspondence School was started, and in 1922 a number of primary schools became higher primary schools, thus making secondary education available in the more remote country areas. The present technical high schools originated in 1925, when many of the large metropolitan primary schools were made central schools, giving courses of secondary education.

The last 25 years have seen a policy of consolidation of country schools; over 600 small schools have been closed and bus services to centrally situated schools provided instead.

Various institutions for tertiary education developed alongside the State school system. In 1861 the South Australian School of Art was founded, coming under the control of the Education Department in 1909. The University of Adelaide was established by Act of Parliament in 1874 and began academic work two years later. In 1885 Roseworthy Agricultural College was opened, and in 1889 the School of Mines and Industries, later to become the South Australian Institute of Technology, was established. The present system of training for apprentices began with the Technical Education of Apprentices Act of 1917.

PRE-SCHOOL EDUCATION

The kindergarten movement in South Australia was founded in 1905. Until the end of World War II kindergartens were primarily designed for the care and education of under-privileged children. Since 1946 they have become generally accepted as a phase of education, with a consequent rapid increase in facilities.

Although a few independent kindergartens are conducted by private individuals, or by private schools, the vast majority of pre-school education is under the supervision of the Kindergarten Union of South Australia (Inc.). This organization has a twofold function: firstly in the training of kindergarten teachers (see page 173, and secondly in the supervision of over 100 kindergartens situated throughout the State.

While the supervision covers various aspects of organization it is largely concerned with the educational programme. As well as encouraging the creative, physical and mental development of the 4-5 years old child the kindergarten prepares him for the experiences of formal schooling. Sessions are generally of 2½-3 hours duration each day, with enrolments limited to 30 pupils per session. In most cases two sessions are held daily thus providing for 60 children.

The Kindergarten Union, while a voluntary organization, receives approximately 60% of its revenue from a State Government grant. Part of this grant is in turn used to subsidize the salaries of teachers at individual kindergartens. However, local committees are responsible for the construction, equipping and maintenance of their own kindergartens, revenue for these purposes coming from either direct contributions or various fund raising activities.

Kindergartens^(a), South Australia

Year Ended	Kinder- gartens (b)	Instruc- tors	Scholars: Average Atten- dance	Receipts			Expenditure		
				Govt Aid	Other	Total	Salaries	Other	Total
	No.	No.	No.	\$	\$	\$	\$	\$	\$
August 1961	111	294	3,995	320,000	213,880	533,880	Not available		
August 1962	114	308	4,008	352,432	228,382	580,814	395,986	219,128	615,114
December 1963 ^(c)	117	319	4,747	498,016	358,724	856,740	499,546	261,600	761,146
December 1964	120	328	4,760	404,514	290,570	695,084	494,770	233,682	728,452
December 1965	121	331	5,109	434,268	305,748	740,016	521,274	225,338	746,612

(a) Administered by the Kindergarten Union from 1962 ; controlled by or affiliated with the Kindergarten Union prior to 1962.

(b) At end of period.

(c) Sixteen months ended December.

GENERAL SCHOOL EDUCATION

The State Government, through the Education Department, provides free facilities for primary and secondary education; however, parents may choose between State and private schools.

The Education Department functions under the Minister of Education. The permanent head of the department is the Director of Education, assisted by a Deputy Director and Superintendents of primary schools, high schools, technical schools, rural schools, and recruiting and training. Northern Territory schools also are controlled by the Education Department on behalf of the Commonwealth Government, with a Superintendent stationed at Darwin.

The work of the schools is materially assisted by the school councils and committees, and also by the mothers' clubs, parents' and friends' associations and welfare clubs. These bodies have for many years been instrumental in raising large sums for the purchase of additional amenities for the schools.

In country areas many children are conveyed to State schools by free bus services provided by the Education Department. At the end of 1966 there were 609 bus services carrying 22,400 pupils daily to 312 schools.

Although private schools largely follow the State schools in their curricula, the Education Department exercises no formal authority over these schools beyond requiring them to submit certain statistical returns.

The Catholic school system is organized on a diocesan basis. South Australia is divided into two dioceses, Adelaide and Port Pirie. Within the former, supervision is exercised by the Archbishop through the Director of Catholic Education and Inspector of Schools; within the latter, by the Bishop through his Inspector of Schools.

Schools

Details of schools operating in South Australia in 1966 are given in the table below. The average size of State schools has increased rapidly since 1940 partly as a result of the consolidation of country schools. The 673 State schools in 1966 compared with 1,043 in 1940 and 1,108 in the peak year of 1935. In 1940 there was an average of 73 pupils to each State school, with this figure increasing to 125 by 1950, 255 by 1960 and 313 by 1966. There has been a similar movement in the average size of private schools.

Schools by Size, South Australia

At 1st August 1966

Pupils on Roll	State Schools					Private Schools
	Primary	Primary-Secondary	Secondary	Special (a)	Total	
Under 21	83	—	—	7	90	8
21 to 35	71	—	—	4	75	9
36 to 100	126	5	1	18	150	37
101 to 200	45	8	9	—	62	49
201 to 300	24	13	12	—	49	27
301 to 400	25	10	10	1	46	18
401 to 600	31	9	18	—	58	12
601 to 800	49	3	15	—	67	9
801 to 1,000	20	1	6	—	27	3
1,001 to 1,200	23	—	6	—	29	—
1,201 to 2,000	10	—	10	—	20	—
Total	507	49	87	30	673	172

(a) Occupation centres, schools at institutions, subsidised schools and schools for Aborigines.

Teachers

The numbers of teachers employed in primary and secondary schools in recent years are shown in the following table. A rapid expansion in the school population in the post-war period necessitated a considerable increase in teaching staff. The 8,189 full-time and 481 part-time teachers at State schools in 1966 compares with 2,634 and 291 in 1946. The number of females employed as teachers has increased more rapidly than males, and whereas females constituted 46% of the full-time teaching staff in State schools in 1946, in 1966 they represented 58%.

Teachers, South Australia

At 1st August	State Schools				Private Schools			
	Full-time		Part-time		Full-time		Part-time	
	Males	Females	Males	Females	Males	Females	Males	Females
1962.....	2,487	3,825	14	418	341	789	53	271
1963.....	2,729	4,166	14	417	361	804	57	262
1964.....	2,977	4,363	23	454	389	842	68	261
1965.....	3,246	4,626	18	450	401	851	64	291
1966.....	3,444	4,745	35	446	419	887	69	302
Type of School— 1966								
Primary.....	1,422	3,169	—	218	45	379	21	107
Prim.-Secondary .	427	350	—	12	238	441	38	169
Secondary.....	1,550	1,123	35	216	136	60	10	25
Special (a)	45	103	—	—	—	7	—	1

(a) Includes occupation centres, schools at institutions, subsidised schools and schools for Aborigines.

Scholars

School enrolments, which had been declining since 1932, started to rise rapidly at the end of World War II, and since 1945 have nearly trebled. Enrolments in recent years, classified by whether attending State or private schools and by age of the scholar, are given below.

Primary and Secondary Scholars, South Australia*At 1st August*

Age	At State Schools				At Private Schools			
	1963	1964	1965	1966	1963	1964	1965	1966
5.....	14,032	15,169	15,884	16,512	2,479	2,392	2,581	2,391
6.....	17,807	18,256	19,452	20,347	3,081	3,208	3,145	3,118
7.....	17,441	18,345	18,656	19,764	3,082	3,098	3,020	3,106
8.....	17,449	18,005	18,810	19,285	2,959	3,114	3,160	3,037
9.....	17,147	17,609	18,443	19,115	2,937	3,109	3,042	3,103
10.....	17,586	17,553	18,072	18,928	3,253	3,080	3,131	3,041
11.....	17,035	17,698	17,947	18,385	3,095	3,192	3,137	3,078
12.....	16,811	17,223	17,894	18,106	3,308	3,278	3,337	3,382
13.....	16,445	16,980	17,451	18,261	3,619	3,561	3,405	3,393
14.....	14,430	16,476	17,078	17,579	3,247	3,397	3,241	3,252
15.....	11,086	11,748	13,093	13,500	2,822	2,779	2,875	2,901
16.....	6,676	6,708	6,829	7,741	2,100	2,042	2,036	2,195
17.....	1,877	2,385	2,428	2,345	847	1,091	1,110	950
18.....	325	459	599	567	202	310	392	240
Total	186,147	194,614	202,636	210,435	37,031	37,651	37,612	37,187

A division of enrolments in 1966 between primary and secondary levels is set out below. In 1945 approximately 17% of total enrolments were at the secondary level; by 1966 this figure had risen to 29%. This table also illustrates the somewhat greater importance of private schools at the secondary level where they account for some 18% of enrolments as opposed to 14% at the primary level.

Primary and Secondary Scholars*At 1st August 1966*

Age	At State Schools			At Private Schools			Total Scholars
	Primary	Secondary	Total	Primary	Secondary	Total	
5.....	16,512	—	16,512	2,391	—	2,391	18,903
6.....	20,347	—	20,347	3,118	—	3,118	23,465
7.....	19,764	—	19,764	3,106	—	3,106	22,870
8.....	19,285	—	19,285	3,035	—	3,035	22,320
9.....	19,115	—	19,115	3,105	—	3,105	22,220
10.....	18,928	—	18,928	3,041	—	3,041	21,969
11.....	18,366	19	18,385	3,068	10	3,078	21,463
12.....	13,426	4,680	18,106	2,417	965	3,382	21,488
13.....	4,146	14,115	18,261	730	2,663	3,393	21,654
14.....	1,204	16,375	17,579	150	3,102	3,252	20,831
15.....	196	13,304	13,500	25	2,876	2,901	16,401
16.....	69	7,672	7,741	1	2,194	2,195	9,936
17.....	55	2,290	2,345	1	949	950	3,295
18.....	82	485	567	—	240	240	807
Total	151,495	58,940	210,435	24,188	12,999	37,187	247,622

PRIMARY EDUCATION

Children normally begin their schooling at the age of 5 years when they enrol for primary education at either a State or private school. Primary education involves a seven year course and concludes with the award of the Progress Certificate in Grade VII.

STATE SCHOOLS

Metropolitan children attend primary schools. Country children normally attend a primary or an area school; however those in remote areas may receive lessons by correspondence.

The following table shows the number of primary and area schools operating in recent years and the number of primary scholars enrolled at State schools.

State Primary Education, South Australia

At 1st August	Schools			Scholars Enrolled					
	Primary		Area (a)	Primary Schools		Area Schools (a)	Correspondence School	Other (b)	Total
	With Infant Dept	Total		Infant Depts	Other				
1962.....	84	526	36	24,628	99,101	9,094	883	1,158	134,864
1963.....	87	518	37	24,940	101,613	9,348	839	1,439	138,179
1964.....	86	516	39	25,034	105,451	9,752	858	1,428	142,523
1965.....	90	520	40	27,136	107,349	9,932	756	1,502	146,675
1966.....	90	507	48	27,735	110,813	10,814	576	1,557	151,495

(a) Includes also special rural schools from 1966. The figures for scholars enrolled include primary scholars only.

(b) Includes Aboriginal schools, schools for handicapped children and high schools (preparatory classes).

Primary Schools

Children begin in either the infant department of a large school or in Grade I of a smaller school, school sizes varying from over 1,000 pupils to as few as ten pupils.

At the beginning of 1966, 90 primary schools had separate infant departments. In these departments the children progress through Grades I and II. It is in the infant departments, and Grades I and II of other primary schools, that children are first formally introduced to books, music, numbers, colour, and form and movement. Rhythm and organized games form an important part of infant activity.

The primary school curriculum is not rigid but specifies a general framework under the headings of English, arithmetic, creative art and craft, and "other life interests" which include social studies, nature study, music, physical education and religious instruction. Within this framework teachers select and arrange studies in the light of their pupils' needs.

School libraries form an integral part of the primary education system, as do also facilities for showing films and for listening to the school broadcasts provided by the Australian Broadcasting Commission. Facilities are also available for physical education and various forms of craftwork.

Area Schools

Area schools, situated in country centres, cater for both primary and secondary pupils. The primary course is similar to that of the primary schools.

Correspondence School

The Correspondence School was started in 1920 to cater for children unable to attend ordinary schools. Most of such children live in remote parts of South Australia and the Northern Territory, but there are others who cannot attend school through invalidity.

Connected with the Correspondence School are the "Schools of the Air" at Ceduna, Port Augusta and Alice Springs which provide two-way radio communication between teacher and pupils and so supplement the correspondence lessons.

At 1st August 1966 there were 283 boys and 293 girls receiving primary education through the Correspondence School.

PRIVATE SCHOOLS

At 1st August 1966, 24,188 children were receiving primary education through private schools. The majority of these children were attending Catholic schools (see table on page 155).

Catholic Schools

Most children under the Catholic school system receive their primary education in parochial schools. At these schools no fees are demanded, but parents are asked to make some voluntary contributions. Such schools are parochial property and the parochial authorities are responsible for the buildings, maintenance and equipment.

Catholic primary schools follow the curricula of the Education Department in the secular subjects and, apart from visits from the Catholic school Inspector, are examined annually by the State school Inspector. Such an examination is necessary for the children in Grade VII, if Progress Certificates are to be granted.

A number of children receive their primary education in the colleges for boys and girls. These colleges are fee-charging.

Other Schools

Primary schools are conducted by the Church of England, the Lutheran Church, and the Seventh-Day Adventists Church. Primary education is also provided in preparatory schools attached to secondary schools run by the Church of England, the Methodist Church and the Presbyterian Church, and at two schools under private ownership.

SCHOOLS FOR HANDICAPPED CHILDREN

The Education Department, through the Psychology Branch, makes provision for children suffering from mental or physical disability. The Psychology Branch provides advice for parents and teachers of backward children and problem children, many of whom are helped in the Opportunity and Remedial Classes conducted at some of the large primary schools. There are also 6 Occupation Centres for children with serious mental deficiency, and a Sheltered Workshop Training Centre for mentally retarded adolescents.

For children with severely defective hearing there are two Speech and Hearing Centres, and there is provision for hard-of-hearing children at ordinary schools. Speech therapists are available to help children with defective speech.

The Education Department conducts schools at Minda Home for the mentally retarded, Townsend House for blind, deaf and dumb children, Somerton Crippled Children's Home and Escourt House convalescent home. The school at the Woodville Spastic Home is privately managed but employs a departmental officer as Head Teacher.

A number of private agencies also provide educational facilities for handicapped children.

SECONDARY EDUCATION

Children who have completed their primary schooling are required by law to attend a secondary school until the end of the term in which they reach their fifteenth birthday. Secondary education may be obtained at either State or private schools.

STATE SCHOOLS

The Education Department provides several kinds of secondary schools. Metropolitan students may choose between high schools and technical high schools, but are required to attend schools within the zone in which they reside. In the country secondary education is provided by high schools in most of the larger towns, and by high or area schools in many of the smaller centres. High schools and area schools do not co-exist in the one centre. There are, however, technical high schools at Mount Gambier and Whyalla, and certain students may use the facilities of the Correspondence School.

High Schools

High schools are provided in the metropolitan area and in most of the larger country towns. These schools are normally co-educational. High schools provide both academic and non-academic courses, with special provision for commercial subjects, and in some cases for instruction in craft subjects. Thus a variety of courses is available.

The general course is primarily concerned with preparing students for the Public Examinations Board (P.E.B.) examinations. A selection from English, mathematics, geography, history, foreign languages, sciences, social studies, drawing, woodwork, home science, physical education and music is the curriculum of most schools, at least for selected classes. Organized sport is available in all schools, and dramatic work, opera, and other musical forms are common activities.

The actual course of study that the student undertakes is largely determined by a series of tests given within the first day or two at school. Students sit for the Intermediate, Leaving, and Matriculation P.E.B. examinations. Matriculation classes are available only at certain high schools.

The commercial course also leads to the P.E.B. examinations and includes book-keeping, typewriting, English, geography, drawing, arithmetic, and in some cases shorthand. Students may sit for the Intermediate and Leaving examinations, and many metropolitan high schools also offer a non-examination course in typing and commercial practice.

Agricultural science is taught in several country high schools. In addition Urrbrae Agricultural High School, in the metropolitan area, provides a secondary education for boys who aim to take up a career connected with agriculture. The school's syllabus includes agricultural science, farm mechanics and field work as well as the normal academic subjects. Students may sit for both the Intermediate and Leaving examinations of the P.E.B.

Alternative courses, which do not lead to the P.E.B. examinations, are available at a number of high schools. These courses, which diverge from the general course at the beginning of the second year, have a strong practical bias. An Education Department certificate is granted on the results of an examination held at the end of the third year.

Technical High Schools

Technical high schools combine academic and practical education. While aiming at a general secondary education for their pupils they put special emphasis on various forms of handwork. These schools are not normally co-educational.

Technical high school courses lead to the award of the Intermediate Technical Certificate of the Education Department at the end of the third year, and either the Leaving Technical Certificate or the Leaving Certificate of the P.E.B. in the fourth year. At Adelaide and Whyalla Technical High Schools students may also sit for the Matriculation examination of the P.E.B. after five years.

Courses at boys' schools include English, science, mathematics, social studies, art and crafts, technical drawing, woodwork and various forms of metalwork. For able students planning to matriculate, additional academic subjects are available. The particular course that a boy undertakes depends on his interests, ability and aptitude, and also on his plans for tertiary education.

Girls' schools teach certain academic subjects, various arts and crafts and commercial practice. All girls' schools teach general science leading to physiology in the third year, and a foreign language is available to selected students. The arts and crafts subjects include art, dressmaking and home management. Commercial training, which commences in the second year, includes shorthand, typing, book-keeping and business practice. Special secretarial courses are available at Leaving Certificate level in a number of schools.

Area Schools

Area Schools are provided in certain country districts not served by High Schools. They cater for both primary and secondary pupils and are co-educational.

In the first year of secondary education at area schools all students take a common course, after which some students study a general course on the same lines as those followed in high schools enabling them to sit for the P.E.B. Intermediate and Leaving Examinations thus leading to matriculation, while other students take a special area school course.

In addition to special courses in English, mathematics, science and social studies, the area school course syllabus includes metalwork, woodwork and art for boys and domestic science, needlework and art for girls. In an increasing number of area schools commercial studies are being introduced, while agricultural science has become a special feature of many of these schools.

In general, third year, and in most schools, fourth year area school courses emphasise rural interests and lead to Intermediate and Leaving Area School Certificates which are awarded by the Education Department.

Special Rural Schools

As from the beginning of 1966 seven "Special Rural Schools" have been established in remote country areas. These schools are intended to supply a limited secondary education in areas where it has been shown that there is an obvious need for secondary education but where the establishment of an area school is not warranted. It is proposed in the first instance in these schools to provide academic studies leading to a P.E.B. Intermediate Certificate as a secondary "top" to a normal primary school.

Correspondence School

Children who are unable to attend any of the aforementioned secondary schools may receive secondary education through the Correspondence School.

Lessons are forwarded to cover nine academic subjects (all to Leaving standard), and also certain drawing subjects. Assistance may take the form of full correspondence or supplementary courses. Supplementary courses are conducted through a primary school Head Teacher, who may, in the case of remoteness from secondary school facilities, conduct grades beyond Grade VII. Correspondence lessons are supplemented by radio lessons from the "Schools of the Air".

At 1st August 1966 there were 47 boys and 67 girls receiving secondary education through full correspondence courses.

State Secondary Schools, South Australia

At 1st August	High		Technical High		Area (a)		Correspondence Pupils Enrolled (b)	Other Pupils Enrolled (c)
	Number of Schools	Number of Pupils Enrolled	Number of Schools	Number of Pupils Enrolled	Number of Schools	Number of Pupils Enrolled		
1962.....	52	29,872	23	11,307	36	3,433	292	123
1963.....	53	31,860	24	11,891	37	3,547	102	149
1964.....	53	33,964	26	14,033	39	3,936	107	178
1965.....	56	36,115	29	15,479	40	4,078	90	199
1966.....	58	37,376	29	17,033	48	4,307	114	110

(a) Includes also special rural schools from 1966.

(b) Full correspondence students only.

(c) Pupils receiving secondary education at primary schools and in institutions.

PRIVATE SCHOOLS

Secondary education is also provided by private schools. These schools, for the most part, are identified with various religious denominations. Private secondary schools normally charge fees; however, a limited number of internal scholarships are available and students may qualify for certain State scholarships. In addition to normal day attendance many private schools offer boarding facilities for country students.

Private schools provide academic courses preparing students for the P.E.B. examinations, and this determines their academic curricula for third and subsequent years. Church schools give religious as well as secular education.

Catholic Schools

The Catholic school system provides secondary education at boarding colleges and day schools in metropolitan and country areas.

A special committee of teachers is responsible to the Director of Catholic Education for drawing up syllabuses and for setting external diocesan examinations in all subjects for first and second year students. Other years follow the P.E.B. syllabuses. Both general and commercial courses are available to students, and home science is taught in some girls' schools. An agricultural college for boys is conducted at Mount Gambier where a theoretical and practical study of agriculture is combined with the regular secondary course.

Generally, Catholic secondary schools are the property of the religious communities who conduct them and are supported by the fees charged.

Other Schools

The Church of England, the Methodist Church, the Lutheran Church and the Presbyterian Church all conduct secondary schools for boys and girls in the metropolitan area. Most schools have facilities for boarders.

At boys' schools, emphasis is on general academic and commercial courses. Scotch College, Mitcham, however, provides agricultural training for boys along with the normal academic subjects. Girls' schools generally provide alternative courses for those students not academically inclined. In addition, all these schools offer a wide range of extra-curricular activities.

There are also two undenominational schools for girls which offer facilities similar to those of the church schools.

Training in typing and shorthand is provided at privately owned business colleges which specialize in this field. A number of these colleges also prepare students in certain P.E.B. subjects.

The following tables give details of private schools and cover both primary and secondary education.

Private Schools^(a), South Australia

Year	Number of Schools	Number of Teachers ^(b)	Scholars on Roll, 1st August				
			Primary		Secondary		Total
			Males	Females	Males	Females	
1962.....	164	1,454	12,223	12,739	5,667	5,773	36,402
1963.....	166	1,484	12,015	12,662	6,109	6,245	37,031
1964.....	170	1,560	12,048	12,713	6,261	6,629	37,651
1965.....	172	1,607	11,979	12,626	6,416	6,591	37,612
1966.....	172	1,677	11,756	12,432	6,429	6,570	37,187

(a) Excluding business colleges.

(b) Includes part-time teachers.

In the table below private scholars are classified according to the denominational affiliation of the school they attended. The predominant contribution of Catholic schools is clearly evident from the table. In 1966 Catholic schools accounted for 82% of primary scholars and 49% of secondary scholars attending private schools.

Scholars at Private Schools, South Australia

At 1st August

Denomination of School	1962	1963	1964	1965	1966
Primary—					
Catholic	20,146	20,167	20,308	20,249	19,843
Church of England	2,008	1,929	1,771	1,753	1,738
Methodist	579	560	567	560	544
Lutheran	862	875	893	871	933
Presbyterian and Baptist/ Congregational	675	626	665	643	629
Seventh Day Adventist	100	103	116	100	91
Undernominal	592	417	441	429	410
Total primary	24,962	24,677	24,761	24,605	24,188
Secondary—					
Catholic	5,606	5,988	6,313	6,314	6,369
Church of England	2,208	2,224	2,290	2,409	2,442
Methodist	1,250	1,337	1,409	1,482	1,516
Lutheran	563	600	603	625	562
Presbyterian and Baptist/ Congregational	1,251	1,332	1,308	1,284	1,255
Seventh Day Adventist	45	43	32	40	38
Undernominal	517	830	935	853	817
Total secondary ...	11,440	12,354	12,890	13,007	12,999

EXAMINATIONS AND SCHOLARSHIPS

Examinations

In addition to internal examinations conducted by the schools there are a number of external examinations which form important stepping-stones in the life of the student.

The Progress Certificate is awarded, upon successful completion of the primary course, as evidence of ability to undertake secondary education. This certificate also qualifies the secondary student for certain educational allowances, as outlined on page 156. At the end of 1966, 21,184 students, approximately 97% of those eligible, received Progress Certificates.

After three years secondary study the student normally sits for the Intermediate examination of the Public Examinations Board, or the Intermediate Technical or Area School examinations of the Education Department. The Leaving, Leaving Technical and Leaving Area School examinations are similarly held at the end of the fourth year.

The Public Examinations Board conducts a further examination at the completion of the fifth year. Prior to 1966 this examination had been known as the Leaving Honours examination and while considered a desirable fore-runner to University study had not been compulsory for entrance to the University, (matriculation being based on the Leaving examination). Commencing with 1966 this examination has become the Matriculation examination.

Candidates for Examinations, South Australia^(a)

Year	Public Examinations Board			Education Department			
	Inter- mediate	Leaving	Leaving Honours	Technical		Area	
				Inter- mediate	Leaving	Inter- mediate	Leaving
NUMBER OF CANDIDATES (b)							
1961.....	9,273	4,662	1,502	1,939	409	Not Available	
1962.....	10,929	5,733	1,766	2,702	444		
1963.....	11,185	6,584	2,267	2,598	528		
1964.....	11,670	7,092	(c) 2,732	2,780	531		
1965.....	11,830	7,586	(c) 2,901	2,994	703	472	126
NUMBER WHO QUALIFIED							
1961.....	5,234	2,707	1,290	1,303	259	144	28
1962.....	5,920	3,366	1,519	1,765	267	167	44
1963.....	5,951	3,742	1,914	1,672	372	201	58
1964.....	6,087	(d) 4,069	2,236	1,747	301	387	78
1965.....	6,323	3,974	2,464	1,890	495	375	109

(a) Includes Northern Territory.

(b) Number who presented themselves in sufficient subjects to be eligible for the certificate in the year shown.

(c) Total number of candidates.

(d) Includes candidates who qualified after supplementary examinations.

Scholarships

The Commonwealth Government, the State Government and various private benefactors provide a variety of scholarships each year for South Australian students.

Scholarships Available at Secondary Level

The Progress Certificate awarded on the completion of primary schooling entitles secondary students, whether at State or private schools, to a book allowance of \$16 per annum for the first three years, and \$18 and \$20 for the four and fifth years respectively. In 1965-66 \$1,161,085 was paid in progress allowances. Students who have to travel considerable distances to the nearest suitable school, or school bus, may also receive travelling expenses or, if forced to live away from home, a boarding allowance. The boarding allowance is \$150 per annum increasing to \$200 in the Matriculation year.

In 1965 the Commonwealth Government introduced a scheme for awarding scholarships to secondary students. Two-year scholarships, of which 977 were available in South Australia in 1967, are awarded on the results of a special Australian Council of Educational Research Examination conducted in July of the third year of secondary education. The scholarships, which are tenable at any approved government or non-government school, are free of a means tests and offer a \$200 living allowance, a \$50 book allowance, and up to \$150 for fees, in each year. Technical scholarships, offering identical benefits to the two-year scholarships and awarded on the A.C.E.R. examination, are tenable in the fourth year of secondary education and in subsequent years at an approved tertiary technical institution. At 30th June 1966 there were 1,737 students studying with the assistance of two-year scholarships, and a further 229 with technical scholarships.

The State Government offers three classes of exhibitions to encourage students to remain at school after the Intermediate (third) year. These exhibitions are

awarded, through the Scholarships Section of the Education Department, on the results of the Intermediate examinations of the Public Examinations Board and the Education Department. A predetermined number of exhibitions are reserved each year for country students. There are 200 Intermediate exhibitions on P.E.B. certificate results, 60 Intermediate Technical exhibitions on Technical certificate results, and 400 Continuation exhibitions on P.E.B. or Area School certificate results awarded annually. Intermediate and Continuation exhibitions pay \$50 for the fourth year and \$60 for the fifth year of secondary education, Intermediate Technical exhibitions pay \$50 for the fourth year only.

The Education Department also awards teaching scholarships (see page 174).

The Commonwealth Government, through the Soldiers' Children Education Scheme, offers assistance at the secondary level to children of ex-servicemen whose death, blindness or total and permanent incapacity was the result of war service. Eligible children, upon reaching 12 years of age, qualify for a fortnightly allowance while attending school. Where appropriate, a living-away-from-home allowance is also paid, and the payment of allowances is subject to satisfactory attendance and progress. At 1st January 1967 allowances were \$1.90, \$2.88 or \$6.32 per week depending on age, if living at home, and \$6.32 or \$9.78 if living away from home. The student receives guidance and advice on his course of studies from the Soldiers' Children Education Board.

Government scholarships are tenable at both State and private schools, however, the latter also award a limited number of internal scholarships carrying free tuition. The Scholarships Section of the Education Department also administers a number of privately endowed scholarships.

Scholarships Awarded at Tertiary Level

The Commonwealth Government, through the Commonwealth Scholarships Board, each year offers Open Entrance scholarships, Later Year scholarships, and Mature Age scholarships to students eligible for, or already undertaking, tertiary education. Certain of these scholarships, which are normally awarded on the Public Examinations Board Matriculation examination results are tenable at the Universities, while others, known as Advanced Education Scholarships, are tenable at the South Australian Institute of Technology, Roseworthy Agricultural College, Education Department Teacher Training Colleges, and the Kindergarten Training College. Later Year scholarships, tenable at the Universities and the advanced education institutions, and Mature Age scholarships tenable at the Universities, are based on tertiary results.

Commonwealth Scholarships, South Australia^(a)

Year	New Awards Accepted			Scholars in Training at 30th June	Expenditure (Year ending 30th June)		
	University	Advanced Education	Total		Fees	Living Allowance	Total
1962.....	<i>n.a.</i>	<i>n.a.</i>	479	1,144	\$ 194,624	\$ 173,614	\$ 368,238
1963.....	<i>n.a.</i>	<i>n.a.</i>	468	1,204	249,038	235,316	484,354
1964.....	<i>n.a.</i>	<i>n.a.</i>	590	1,335	327,474	244,106	571,580
1965.....	<i>n.a.</i>	<i>n.a.</i>	634	1,538	326,226	417,624	743,850
1966.....	821	113	934	1,827	561,161	325,780	886,941

(a) Includes students who live in Northern Territory and sit for the P.E.B. examinations.

n.a.—Not available.

Students awarded a Commonwealth scholarship are entitled to the payment of certain fees and allowances without a means test. In addition, they may be granted a living allowance in accordance with a prescribed means test. At 31st March 1967 the maximum annual allowance was \$559 for a student living at home and \$852.80 for a student living away from home.

Students under the Soldiers' Children Education Scheme may receive a basic allowance of \$10.75 per week while undergoing tertiary education. Additional allowances are paid if living away from home or if supporting a family. All fees are paid and the student is reimbursed for fares, text books and equipment.

Students undergoing industrial training receive a basic allowance of \$2.30 per week plus the other benefits.

Soldiers' Children Education Scheme, South Australia^(a)

Year	Number of Beneficiaries in Training (b)				Expenditure on Benefits		
	Primary and Secondary	Tertiary	Industrial	Total	Allowances	Fees, Books, Equipment and Fares	Total
					\$	\$	\$
1961-62 ..	661	118	91	870	136,824	27,004	163,828
1962-63 ..	689	115	92	896	158,536	33,068	191,604
1963-64 ..	680	118	114	912	184,072	29,452	213,524
1964-65 ..	678	150	127	955	176,722	42,452	219,174
1965-66 ..	482	128	136	746	189,973	43,848	233,821

(a) Includes Northern Territory.

(b) Beneficiaries 12 years and over. Number at end of year.

The University of Adelaide awards a number of prizes, grants and scholarships each year, details of which are given in the Calendar of the University. Many students also receive assistance at the tertiary level through studentships offered by government departments and private firms (for teaching studentships see page 174).

A number of adults receive training through three Commonwealth Training Schemes currently operating in South Australia. The schemes, the Korea and Malaya Training Scheme, the Disabled Members and Widows Training Scheme, and the Social Services Training Scheme, are administered by the Technical Branch of the Education Department.

TERTIARY EDUCATION

THE UNIVERSITY OF ADELAIDE

The University was founded by Act of Parliament in 1874 and began its academic work in 1876. From its inception it admitted women on equality with men. Its original staff was four professors, three part-time lecturers and a registrar-librarian. Students in 1876 numbered 8 undergraduates and 52 others, and the curriculum was confined to arts and science. Within a decade law, music and medicine were added; in 1888 studies in engineering were instituted in collaboration with the South Australian School of Mines and Industries; and at the turn of the century the University broke new ground for Australian universities by founding a conservatorium of music and by instituting studies in commercial

subjects. Between the two wars the Waite Agricultural Research Institute and faculties of dentistry and economics were established, studies in agricultural science and engineering greatly developed, and diploma courses in pharmacy, public administration and physical education instituted.

Forseeing that growth on its small city site would be severely restricted by 1966, the University planned extension of its work to a new site at Bedford Park with a separate staff and over 400 first-year students in arts and science and some postgraduate students in that year. The State Government, however, decided to make the institution at Bedford Park an independent university, and The Flinders University of South Australia was formally constituted on 1st July, 1966.

The governing body of the University of Adelaide is the Council, comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty members elected by the graduates of the University of at least three years' standing, and five members appointed by Parliament. The present Chancellor, Sir Kenneth Wills, was elected in 1966. The principal advisory committees of the Council are the Education Committee and the Finance Committee each of which is appointed by the Council. There is also the usual University structure of faculties, boards of studies and special committees to advise on particular aspects of the University's work.

As can be seen from the following table the University is largely supported by Government grants; they constituted 85% of total revenue and capital receipts for 1965 while student fees yielded less than 13%.

The University of Adelaide^(a), Finance

Particulars	1961	1962	1963	1964	1965
	\$	\$	\$	\$	\$
Revenue					
Government Grants—					
State	2,682,600	2,879,000	3,072,000	3,797,000	4,480,000
Commonwealth	1,679,200	1,843,936	2,005,200	2,407,200	2,769,400
Fees	453,516	490,270	718,410	791,974	1,159,596
Interest and Dividends	79,118	69,070	117,202	104,306	113,564
Other Income	44,216	50,274	69,470	76,750	80,412
Total	4,938,650	5,332,550	5,982,282	7,177,230	8,602,972
Expenditure	4,921,608	5,324,982	6,029,358	7,769,522	7,907,772
Capital Receipts—					
State	668,000	819,000	877,626	1,060,000	185,000
Commonwealth	668,000	819,000	877,626	1,060,000	185,000
Capital Expenditure	993,954	1,275,154	2,488,548	1,667,474	393,128
Net Increase in Endowments	123,104	48,770	67,536	16,754	188,056

(a) Includes Waite Agricultural Research Institute.

In 1966 the University had 11 faculties: arts (10 departments), economics (2), science (13), agricultural science (6), engineering (4), medicine (7), law, music, dentistry, architecture and town planning, and technology and applied science. It also provided diploma courses in physical education, physiotherapy, and public administration. Higher degrees were provided in all faculties except technology.

Intending students are normally required to have passed the Matriculation examination in a prescribed range of subjects. Interstate and overseas students, however, may be accepted on alternative qualifications.

The period of study ranges from three years for certain degree and diploma courses to six years for medicine. In 1966, fees for full-time students varied between \$288 and \$374 per annum and entitled students to tuition and access to the Library and to the various facilities of the University Union and the Sports Association. Students, however, may obtain financial assistance in a number of ways, as detailed on page 157. Provision is also made in certain faculties for part-time students who pay reduced fees.

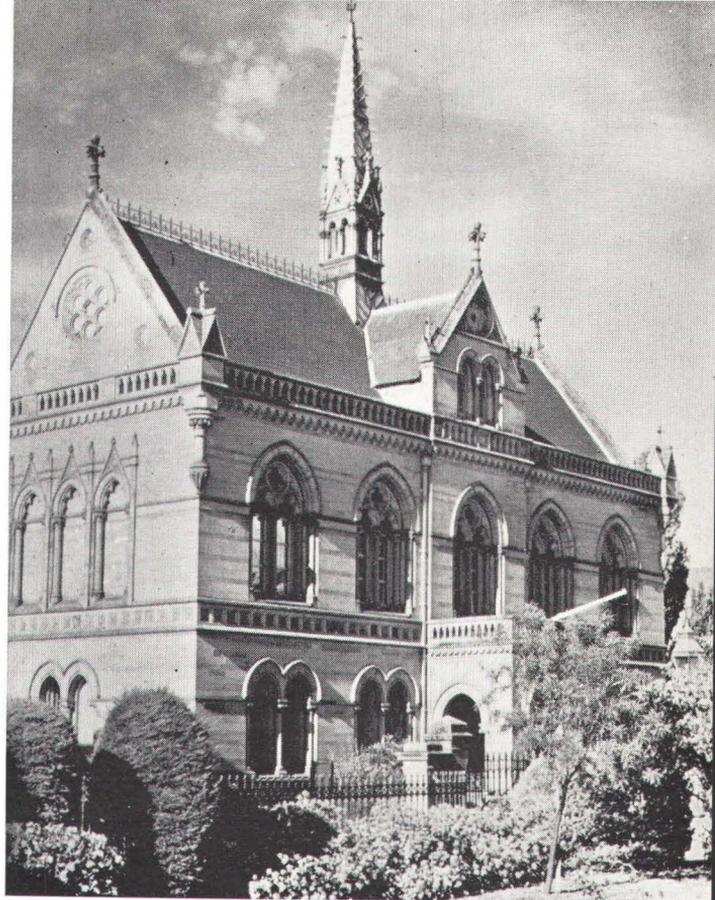
The original full-time academic staff of 4 in 1876 had grown by the end of 1966 to 68 professors, 56 readers, 154 senior lecturers, 183 lecturers, and 75 tutors and demonstrators. Teaching by part-time staff amounted in 1966 to 42,200 hours. Part-time staff were mainly engaged in large first-year classes involving laboratory work, and in the faculties of engineering, medicine and dentistry.

During the last decade significant changes have occurred in the composition of the student body. The proportion of full-time students has steadily risen, and the proportion taking diploma courses and part-time studies steadily declined. The most significant change, however, has been in the numbers of students proceeding to honours and higher degrees; here the rate of growth is double that of undergraduate enrolments. Details of student enrolments are given in the next two tables.

The University of Adelaide, Enrolments^(a)

Course	1962	1963	1964	1965	1966
Higher degree candidates.....	399	464	535	606	649
Undergraduate, diploma, certificate and miscellaneous students—					
Arts	2,170	2,372	2,731	2,770	2,775
Economics	442	458	521	557	539
Science	1,047	1,180	1,297	1,436	1,466
Agricultural science	79	94	89	105	147
Engineering	424	426	430	464	536
Law	225	266	336	382	392
Medicine.....	614	619	640	640	593
Dentistry	100	117	164	188	217
Music	58	54	57	57	60
Technology and applied science	610	643	668	671	783
Architecture	108	126	148	184	196
Physical education	98	133	138	131	150
Social studies	119	118	135	175	106
Physiotherapy	77	85	81	81	91
Pharmacy	215	210	204	202	213
Miscellaneous	39	51	29	9	34
Total	6,824	7,416	8,203	8,658	8,947

(a) Each student is counted once only—in the category appropriate to his/her principal course. Students of the Elder Conservatorium of Music not also enrolled for degree or diploma subjects are excluded.

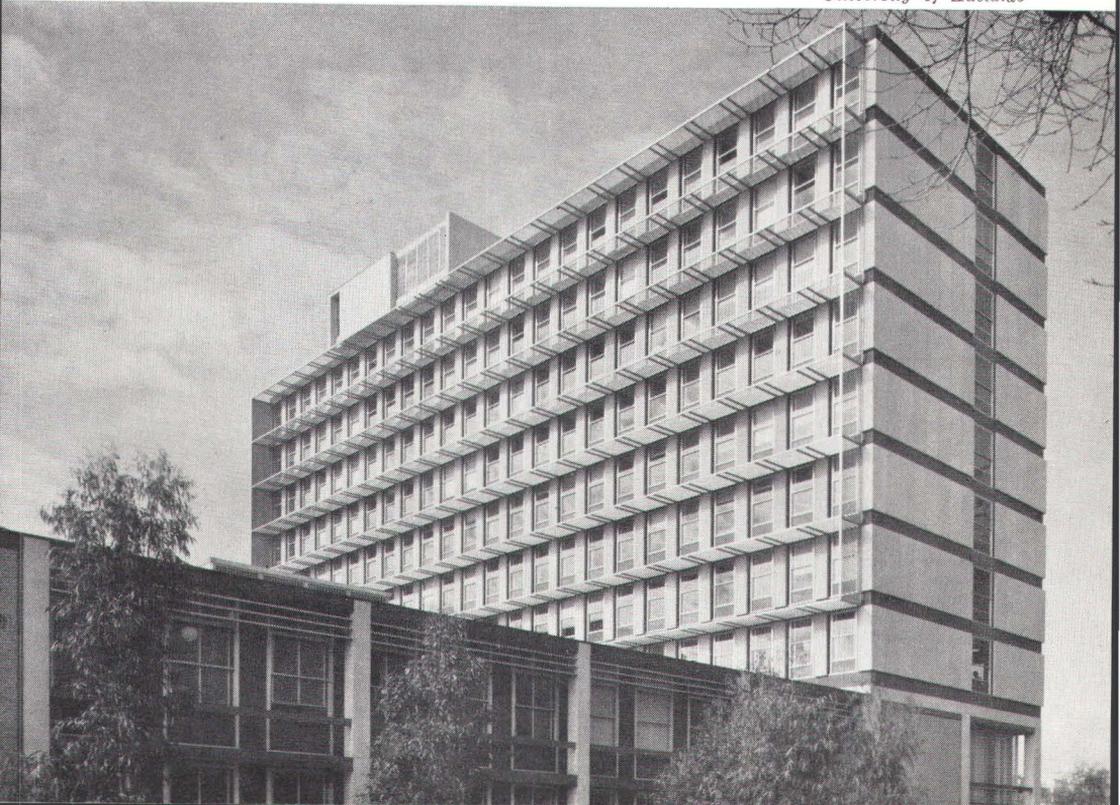


The Mitchell Building—the original building of the University of Adelaide, opened in 1882 and now used for administration

University of Adelaide

The Napier Building of the University of Adelaide accommodates the Faculties of Arts and Economics

University of Adelaide



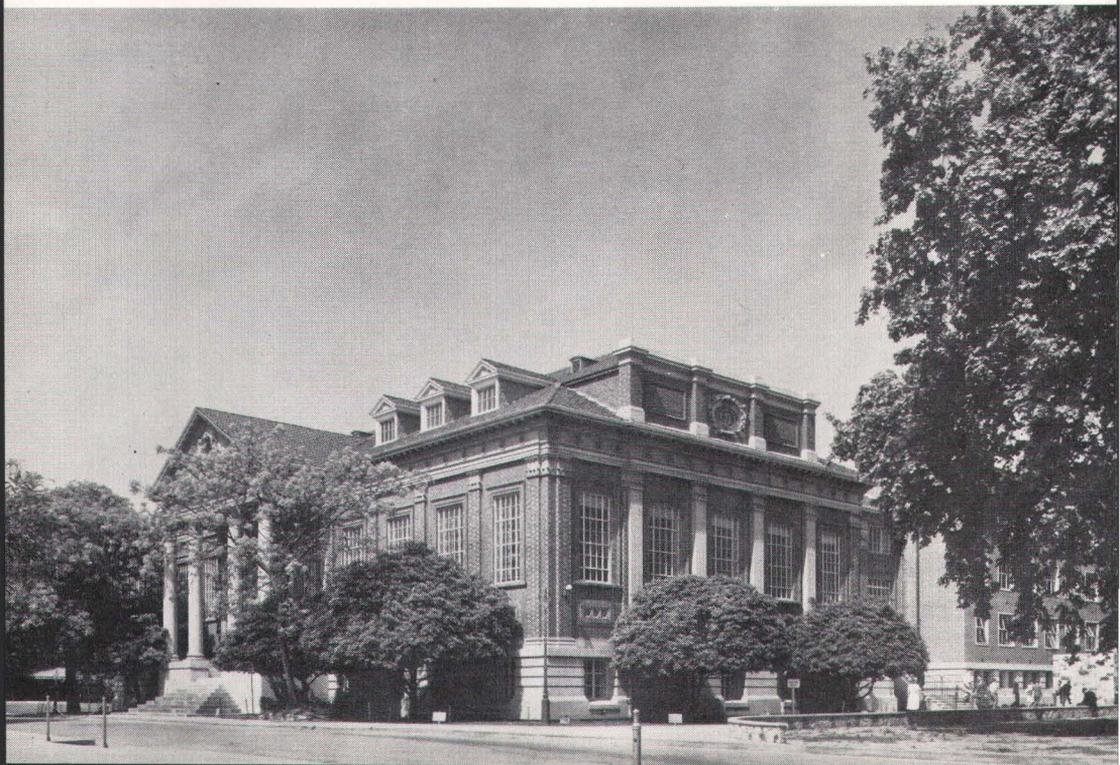


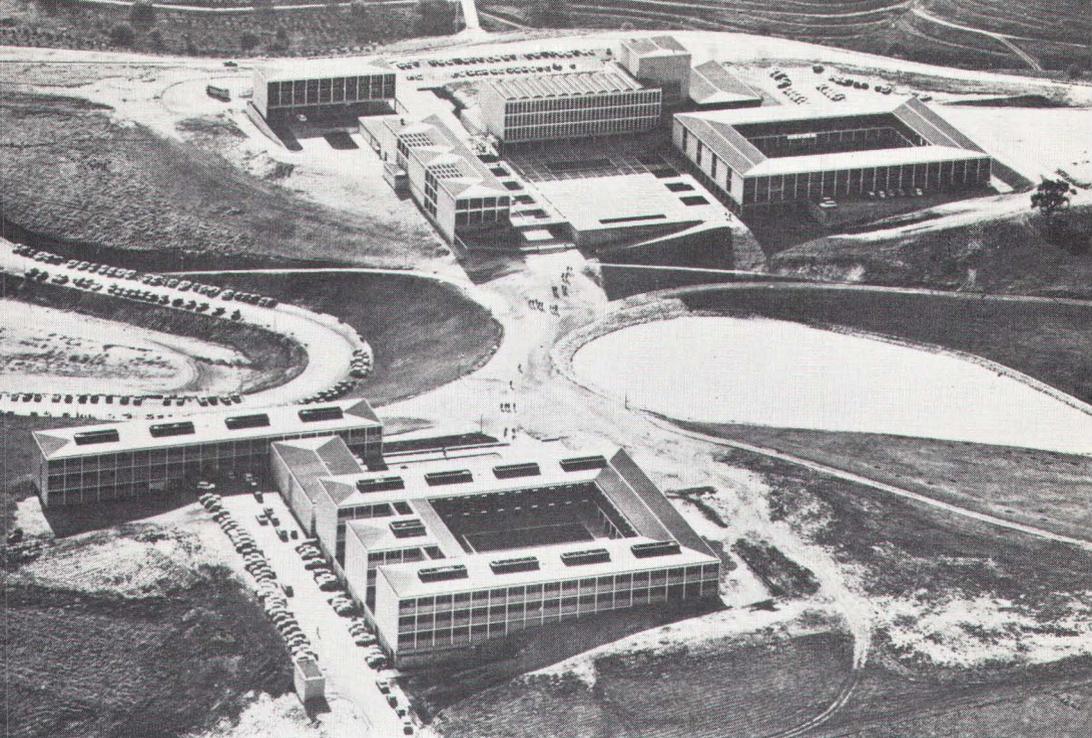
Bonython Hall—the Great Hall of the University of Adelaide

University of Adelaide

The Barr Smith Library of the University of Adelaide

University of Adelaide



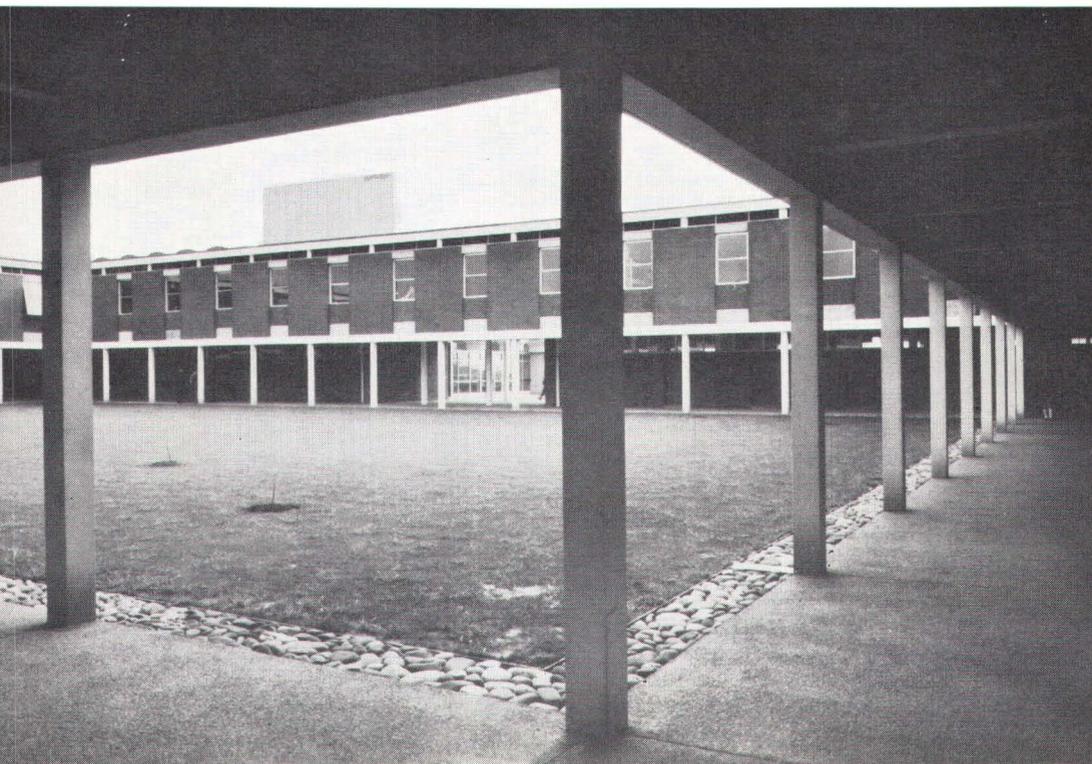


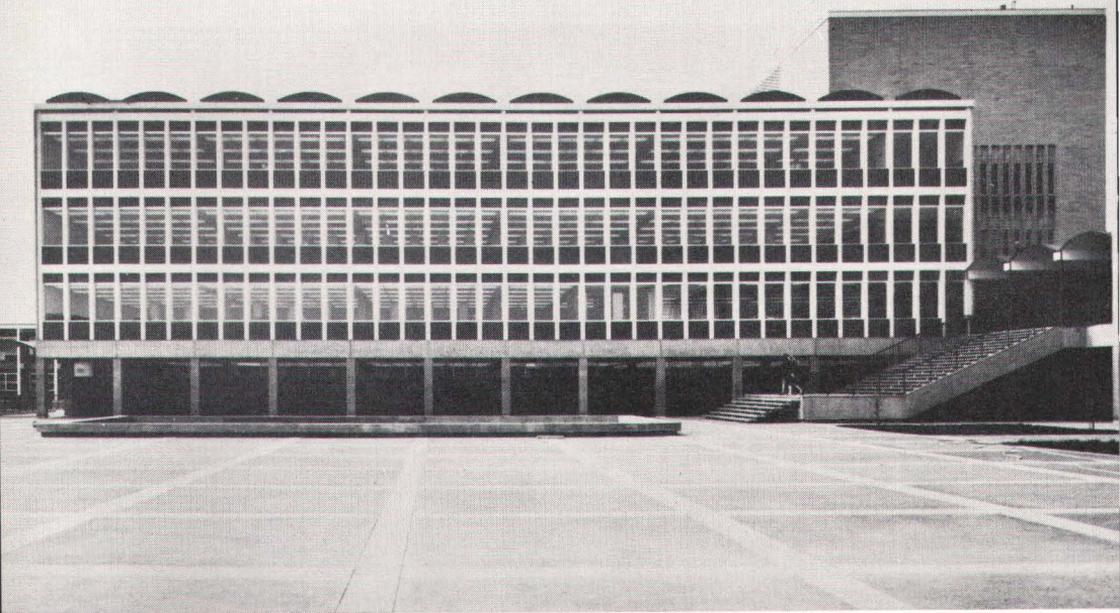
Flinders University

Flinders University—the academic buildings

Courtyard of the School of Language and Literature at Flinders University

Flinders University





Flinders University

Flinders University—the Library

At the Official Opening of Flinders University. Her Majesty Queen Elizabeth, the Queen Mother, with the Chancellor of the University of Adelaide (Sir George Ligertwood) and academic staff.

Adelaide Advertiser



The University of Adelaide, Enrolments^(a), 1966

Course	New Students	All Students			
		Full-time	Part-time	External	Total
Higher degree candidates	40	294	183	172	649
Undergraduate, diploma, certificate and miscellaneous students—					
Arts	578	1,190	1,382	203	2,775
Economics	160	198	336	5	539
Science	415	1,176	289	1	1,466
Agricultural science	57	127	20	—	147
Engineering	176	493	43	—	536
Law	115	323	68	1	392
Medicine	32	593	—	—	593
Dentistry	64	216	1	—	217
Music	12	47	13	—	60
Technology and applied science	219	319	463	1	783
Architecture	46	165	31	—	196
Physical education	59	129	16	5	150
Social studies	—	83	23	—	106
Physiotherapy	17	90	1	—	91
Pharmacy	77	194	19	—	213
Miscellaneous	31	22	12	—	34
Total	2,098	5,659	2,900	388	8,947

a) Each student is counted once only—in the category appropriate to his/her principal course. Students of the Elder Conservatorium of Music not also enrolled for degree or diploma subjects are excluded.

From its inception until the end of 1966 the University had conferred 13,420 degrees and 5,674 diplomas by examination. The growth of the University in recent years is indicated by the number of degrees and diplomas awarded in 1966, about 1,400.

The over-all controlling body of student activities outside the classroom is the Union Council, comprised of representatives of the students, graduates, staff and Council of the University. The Union Council receives the annual fee \$27 (pro-rata for part-time students) payable by all students proceeding to a degree or diploma; from this income it makes grants to the Sports Association for the maintenance of some 33 sporting clubs and to the Students' Representative Council for the support of some 50 student societies. It is also responsible for the Union buildings, including the three refectories and Union Hall. The Union buildings aggregate about 48,500 sq. ft of floor space; the playing fields available to the Sports Association cover about 60 acres.

The residential colleges are independent bodies affiliated with the University. The three colleges for men were founded by churches, but impose no denominational restrictions on admission; the women's college has no denominational affiliation. All four are situated in North Adelaide within easy walking distance of the University. Their names, church affiliations, years of founding and residential capacities are:

St Mark's	Anglican	1925	115 students, 10 tutors
St Ann's	Non-denominational	1947	90 students, 5 tutors
Aquinas	Roman Catholic	1948	85 students, 10 tutors
Lincoln	Methodist	1952	120 students, 9 tutors

It was announced in March 1967 that a fifth residential college, the Kathleen Lumley College, would be established for postgraduate students.

The Library

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, who during the first 25 years of the University's existence provided \$40,000 for books, and of his son, Tom Elder Barr Smith, who provided the first part of the present building at a cost of nearly \$70,000.

The library is open for 72 hours a week during term. Borrowing facilities are available to matriculated students, country students and graduates, and a total of 160,872 personal loans were made in 1966. In addition there were 9,660 loans to other libraries in South Australia and 3,382 loans to libraries outside South Australia. Loans to the library from other libraries numbered 1,284. Branch libraries are located in the medical, law and music schools, and at the Waite Institute—the Medical Library incorporates the Library of the Australian Medical Association.

By the end of 1966 the total library holdings were 428,616 volumes; accessions exceeded 32,000 a year; and serial titles taken continuously numbered 14,664. Expenditure during 1966 was \$543,058 or 6.35% of total University revenue expenditure. Books, journals and binding accounted for more than half. Library staff comprised 12 professionally-qualified librarians, 27 graduates not professionally qualified, and 48 others.

The Waite Agricultural Research Institute

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924. The foundation of the Waite Institute was made possible by a gift of land and property at Glen Osmond together with an endowment from a wealthy pastoralist, Mr. Peter Waite. The Institute has received a number of endowments subsequent to this original gift and these have been used to assist in the establishment of additional laboratories and other research and teaching facilities. A recent gift of 900 acres of land at Mintaro, near Clare, has enabled the development of the Mortlock Experiment Station to commence. This will provide additional field facilities for the Institute, for its research and post-graduate training programmes in the animal, pasture, and crop sciences.

The finance of the Institute is now drawn in large measure from grants made annually by the Commonwealth and State governments, on the basis of recommendations by the Australian Universities Commission. Research programmes at the Institute have also attracted a very satisfactory measure of support from other sources, notably primary industry bodies such as the Australian Wool Board, the Wheat Industry Research Council, Wheat Industry Research Committee of South Australia, Barley Improvement Trust Fund and the Australian Meat Research Committee. About 25% of the total Waite Institute budget of \$1,477,000 in 1967 came from these sources.

The Institute contains the following six departments, each under the leadership of a professor, *viz* Agricultural Biochemistry and Soil Science, Agronomy, Animal Physiology, Entomology, Plant Pathology and Plant Physiology. Until recent years, the Institute has centred its research and teaching activities on the plant and soil sciences. Recognition of the growing importance of the livestock industries in Australia led, a few years ago, to the introduction of animal studies and this development has now been firmly entrenched by the establishment in 1964 of the new Department of Animal Physiology.

The six departments are responsible for teaching the last two years of the four year undergraduate course leading to the degree of Bachelor of Agricultural Science, the first two years being given by appropriate science departments. The

Waite Institute is noted for the development and maintenance of strong post-graduate schools in which students from all over Australia and many countries overseas, particularly British Commonwealth countries, are enrolled.

THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

Preliminary Planning

During 1958 the University of Adelaide began to plan two major new buildings on its existing 30 acre site on North Terrace in the city of Adelaide to accommodate an expected 8,000 students by 1965. It became apparent then that no other large buildings could be erected on the site and that any further expansion would have to take place on another site.

Early in 1961 the South Australian Government indicated that it would make available to the University of Adelaide an area at Bedford Park, of some 370 acres, situated about seven miles from the centre of Adelaide in the foothills of the Mount Lofty Ranges.

The University Council envisaged that Bedford Park would accept first year students from the beginning of the 1966 academic year in the faculties of Arts and Science and that second, third and fourth year work would be progressively added in the succeeding years. In addition the Council determined that Bedford Park would have academic autonomy—the students would graduate with degrees of the University of Adelaide but the professors appointed in charge of disciplines at Bedford Park would be responsible for the design of their own syllabuses, for the structure of the degree courses to be offered, and for the examining.

The University of Adelaide made a submission for financial support for Bedford Park to the Australian Universities Commission early in 1962, including in the submission estimates of recurrent and capital expenditure for the year 1963 and the triennium 1964-66. Towards the end of 1962 the Commission gave approval for the planning of Bedford Park which was facilitated by special grants for 1963 to finance a limited amount of recurrent expenditure and preliminary site works. The institution became known as "The University of Adelaide at Bedford Park".

Details of revenue and expenditure for the period 1963-67 are shown in the following table.

The Flinders University of South Australia, Finance

	1963	1964	1965	1966	1967(a)
Capital Revenue	\$'000				
Government Grants—					
State	81	555	1,755	559	806
Commonwealth	81	555	1,755	553	806
Other	—	16	4	73	—
Total	162	1,126	3,514	1,185	1,612
Current Revenue					
Government Grants—					
State	100	208	382	753	1,237
Commonwealth	52	112	208	458	745
Fees	—	—	—	63	110
Other	—	—	—	1	4
Total	152	320	590	1,275	2,096
Capital Expenditure	162	868	3,741	1,183	1,608
Current Expenditure	154	322	590	1,278	2,096

(a) Estimated.

The Establishment of the Schools

The academic organization was planned in terms of "Schools" instead of faculties or departments, with four schools, Language and Literature, Social Sciences, Physical Sciences, and Biological Sciences, each being the basic academic and administrative unit with one professor from each School to act as the Chairman of the School.

This system was expected to have certain advantages including the creation of a unit with more than one senior member of academic staff, the encouragement of inter-disciplinary work, and the covering of highly specialised or less usual subjects without the creation of separate units for them. In addition it was intended that the Schools would be physical entities and that students would pursue courses mainly in one School with the consequence that this would induce a sense of "belonging" to a school which traditionally has been lacking in students taking courses in several different departments. Although the University had decided on the basic academic structure, the manner in which the Schools were conducted and the nature of the degree courses were left for determination by the professors when they were appointed.

The School of Biological Sciences, in particular, was planned to be highly integrated. There were to be no divisions into the traditional disciplines of botany, zoology, microbiology; the emphasis would be on the manner in which the teaching and research were organized, e.g. cellular biology, molecular biology.

Physical Planning and Development

The site plan⁽¹⁾ which included the siting and massing of the first academic buildings was virtually complete by mid-1963. It was based on the assumption that Bedford Park would ultimately cater for about 6,000 students.

Construction work for site works and services began in October 1963 and continued throughout 1964—roads were constructed, water, gas, electricity and telephone services were installed and playing fields were prepared.

The Superintendent of Grounds took up duty in 1963 and by 1966 some 6,000 trees had been planted, 25 acres of playing fields had been developed, and a nine acre park and lake in the academic area and three courtyards among the buildings had been landscaped.

Erection of the major buildings commenced late in 1964 and were completed progressively over the period October 1965 to February 1966. These buildings were designed to cope with an enrolment of rather less than 1,000 students, but the second stages of some of the buildings are proceeding during 1967. A hall of residence, which had been planned as one of the first buildings to be completed, has been delayed because approval for the necessary expenditure has not yet been given.

(1) The site plan has been published. See Gordon Stephenson and G. J. Harrison, *The University of Adelaide at Bedford Park Site Planning Report* (July, 1964).

The Library

Early in 1963 the Librarian was appointed and the Library opened in 1966 with some 60,000 volumes, with subscriptions to some 1,800 serials and with a staff of 29. At the beginning of the 1967 academic year there were 84,000 volumes, subscriptions to 2,500 serials and a staff of 35.

Academic Disciplines

During 1963 the first six professors were appointed; and a further eight were appointed in the next year. The initial fourteen chairs were English, French, Spanish, History, Economics, Geography, Political Theory and Institutions, Physics, Chemistry (two chairs in the fields of organic chemistry and physical chemistry), Mathematics (in the field of pure mathematics), Biology (three chairs in the fields of genetics, biochemistry and biophysics). Ten additional chairs have since been created. These are Drama, Philosophy, Social Administration, Education, Social Psychology, Mathematics (three chairs in the fields of pure mathematics, applied mathematics and mathematical statistics), Physics (in the field of theoretical physics) and Biology (in the field of microbial genetics). By the beginning of 1967, total full-time academic staff numbered some ninety-five.

The Bedford Park Teachers College

During 1964 discussions took place between the University and the Education Department concerning the relationship of the proposed Bedford Park Teachers College to the University. The Teachers College was to be built on twenty acres of the Bedford Park site earmarked by the Government for that purpose, and most of the students at the Teachers College would be university students. In order to foster a close relationship between the work of the College and the University, the University Council and the Education Department decided to make provision for a joint appointment of Principal of the Bedford Park Teachers College and Professor of Education in the School of Social Sciences. Legislation to enable this arrangement was passed by the South Australian Parliament in 1965, and the Professor-Principal was appointed in 1966.

The Flinders University of South Australia Act

Towards the end of 1965 the South Australian Government decided to make The University of Adelaide at Bedford Park a fully autonomous university under the name "The Flinders University of South Australia", after the great explorer and hydrographer, Matthew Flinders, who had circumnavigated Australia in the years 1801 to 1803, and had sailed, in 1802, in waters overlooked by the Bedford Park site.

The Flinders University of South Australia Act, which came into force on 1st July, 1966 is modelled on The University of Adelaide Act, except for the composition of the Council. The Act places the whole management of the University in the hands of a Council with powers to make Statutes and Regulations subject to the approval of the Governor-in-Council.⁽¹⁾ The Council comprises

(1) After 1971, they will also be subject to the approval of Convocation, which will comprise the graduates of the University and such other members as the Council may determine.

twenty-seven members; the Chancellor, the Vice-Chancellor, the Director of Education, five members of Parliament elected by Parliament, a nominee each of the Chambers of Manufactures and Commerce jointly, the Trades and Labor Council, and the Government, two professors and two non-professorial members of the academic staff, the President of the Students' Representative Council, eight members elected by Convocation (these were elected initially by the corresponding body of The University of Adelaide, with the restriction that four of them were to be members of the academic staff of Flinders), and up to three members co-opted by the Council.

The Council held its first meeting on 11th July 1966, and elected as Chancellor, Emeritus Professor Sir Mark Mitchell (formerly Professor of Biochemistry and deputy Vice-Chancellor of The University of Adelaide, and son of Sir William Mitchell, a former Professor, Vice-Chancellor and Chancellor of The University of Adelaide). Emeritus Professor P. H. Karmel, who had been responsible for the development of Bedford Park since its inception, became Vice-Chancellor.

The University Council is advised by a number of committees—there is no Professorial Board in the traditional sense. The senior academic body, the Academic Committee, advises the Council on all academic matters, and is the channel through which all proposals and recommendations from the Boards of the Schools pass to the Council for approval.

The other two key committees are the Finance and Buildings Committee and the Allocations Committee. The former advises the Council on the financial operations of the University, on terms and conditions of appointment of staff, and on the university site and buildings, while the Allocations Committee fits the requests of the Schools, Library and Administration for development into the available budgetary resources.

The Union, Sports Association and Students Representative Council

The University Council has approved constitutions for the Union, Sports Association and Students Representative Council. The Union Board, which manages the affairs of the Union and makes financial grants to the Sports Association and the Students Representative Council, includes representatives from the University Council, the academic staff and the students. The University also operates a counselling service and a health service.

Degrees offered

The University offers the following degrees: Bachelor of Arts, Bachelor of Economics, Bachelor of Science, Master of Arts, Master of Economics, Master of Science, Doctor of Philosophy, Doctor of Letters and Doctor of Science. In addition there is a postgraduate Diploma in Social Administration.

The structure of the degree courses in Arts and Science differs materially from those in most other Australian universities. The degree courses are built upon the principle of offering the students a choice of a limited number of "programmes", rather than allowing students to aggregate credits for individual subjects chosen within a framework of rules. The programmes are designed so that a student will pursue the major part of his studies within one School.

In Arts, the programmes are based on a study in depth of two disciplines (about two-thirds of the work) together with three cognate courses bearing some relation to the major disciplines. In Science, all students read a common first year (Physics, Chemistry, Biology and Mathematics) and then specialize in a single or double disciplinary programme. In both Arts and Science the students' results are determined on the performance in the year's work as a whole rather than by examinations in individual courses; but special arrangements have been made for part-time students.

Admission to the University

Students must have qualified for matriculation by passing the Matriculation Examination of the Public Examinations Board in a prescribed manner and must be selected by the University. The Matriculation requirements of The University of Adelaide and Flinders University are, at present, identical.

The two Universities have established a Universities Admissions Office to which all students wishing to enter either University must apply for admission. Selection for admission is based, as far as practicable, on academic merit.

Annual fees are \$240 for Arts and Economics students, \$300 for Science students and \$120 for higher degree students. A Union Fee of \$27 is payable annually for membership of the Union and for participation in its activities.

The Horace Lamb Centre for Oceanographical Research

Towards the end of 1965, the University established an oceanographical research centre, which is now known as The Horace Lamb Centre for Oceanographical Research, after the distinguished mathematician who was Professor of Mathematics in The University of Adelaide from 1875 to 1885 and eminent for his work in hydro-dynamics. The Centre provides undergraduate and graduate training in oceanography and its present interests are in physical, chemical and geological oceanography and meteorology. Its investigations are related particularly to some of the problems of the Southern Ocean. The Centre has two field stations, one on the Coorong and the other at Cape du Couedic, Kangaroo Island.

Opening of Flinders University

On the 25th March 1966, Her Majesty Queen Elizabeth The Queen Mother officially opened the University.

The first academic year of the University had begun on 7th March 1966, with enrolments of 382 first-year undergraduates and 35 graduate students. Details of enrolments for the years 1966 and 1967 are shown in the following tables.

The Flinders University of South Australia, Enrolments

Course	1966	1967
Arts	178	386
Science (a)	204	321
Economics	—	46
Higher degree	26	61
Postgraduate diploma	9	15
Total	417	829

(a) Includes 70 and 73 students for 1966 and 1967 respectively transferring to the University of Adelaide at the conclusion of their first year.

The Flinders University of South Australia, Enrolments 1967

At 31st March 1967

Course	New Students	All Students		
		Full-time	Part-time	Total
Arts	261	342	44	386
Science	222	306	15	321
Economics	42	42	4	46
Higher degree	37	43	18	61
Postgraduate diploma	9	8	7	15
Total	571	741	88	829

Future Construction

Current construction includes the second stage of the Library due to be completed in 1967 and extensions to the Union which will be completed in 1968. These facilities are designed to meet the requirements of an estimated 1,150 students in 1968 and 1,400 in 1969.

Extensions to the School of Biological Sciences and the School of Physical Sciences and the erection of a new School of Social Sciences are to be commenced by the end of 1968.

Planning is continuing and, subject to the availability of finance, will provide facilities for approximately 6,000 students in the 1980's.

THE SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

The South Australian Institute of Technology, which pioneered technical education in South Australia, was established in 1889 as the South Australian School of Mines and Industries. The School of Mines, as it became generally known, was set up under an Act of Parliament and rapidly grew in stature and reputation. In 1960, it was renamed the South Australian Institute of Technology.

From earliest times there had been co-operation between the University of Adelaide and the School of Mines, and in 1903 joint engineering courses were established. An important development in the history of technical education came in 1957 with an agreement between these institutions whereby certain courses of study at the School would lead to the Degree of Bachelor of Technology at the University. Other degree courses have subsequently been introduced.

Although independent of the Education Department, the Institute maintains a close and harmonious relationship with the Department, and since 1959 there has been a progressive transfer of control of activities between the two. Classes up to and including matriculation level and some trade classes have been transferred to the control of the Education Department, as was the Adelaide Technical High School in September 1963. This has enabled the Institute to expand its work in the professional and semi-professional fields, including the assumption of control of the technical training centres at Whyalla and Port Pirie in 1962.

The Institute is administered by a council appointed by the Governor. The council has complete authority within the limits of the finance placed at its disposal and for which it is responsible annually to Parliament. The autonomy provided by this feature of sovereign control makes the Institute unique among Australian technical institutes.

In 1966 government aid represented 80% of the Institute's receipts. Financial details for this and earlier years are given in the following table.

South Australian Institute of Technology, Revenue and Expenditure

Particulars	1962	1963	1964	1965	1966
	\$	\$	\$	\$	\$
Receipts—					
Government aid	848,000	1,001,000	1,692,200	1,644,000	2,351,000
Student fees	208,752	289,842	314,288	442,000	488,804
Other	53,810	205,184	414,484	72,000	75,362
Total	1,110,562	1,496,026	2,420,972	2,158,000	2,915,166
Expenditure—					
Salaries	878,434	986,090	1,076,898	1,484,000	1,442,134
Other	127,494	429,718	1,015,654	698,240	1,169,767
Total	1,005,928	1,415,808	2,092,552	2,182,240	2,611,901

A wide range of courses and subjects to varying levels is offered; many courses lead to the award of a degree by the University or a diploma or certificate by the Institute. In 1967 the Institute offered 13 degree courses including engineering courses leading to a degree in technology, courses in chemical technology and metallurgy for a degree in applied science and a degree course in pharmacy.

Diploma and certificate courses applicable to local needs are conducted at the Whyalla division of the Institute and other courses are conducted at Port Pirie and Woomera.

In 1966 the Institute conducted 739 classes in 400 individual subjects.

South Australian Institute of Technology, Students and Staff

Particulars	1961	1962	1963	1964	1965	1966
Students—						
Individual enrolments	10,641	11,170	11,114	10,690	11,239	11,393
Subject enrolments	15,366	16,859	17,073	17,443	18,269	19,370
Teaching staff—						
Full-time.....	125	164	170	139	162	157
Part-time	226	246	268	341	243	272

Of the 11,393 individuals enrolled in 1966, 2,802 were taking professional courses, 626 semi-professional courses and 3,065 technician level courses. The remaining 4,900 students were enrolled in the many single subject classes such as dressmaking, home science, millinery, welding, etc.

The majority of students attending the Institute do so on a part-time basis.

TECHNICAL CORRESPONDENCE SCHOOL

The Technical Correspondence School provides correspondence courses in a wide range of subjects. Students may receive tuition in Public Examination Board subjects, certain University subjects, and in certain subjects analagous to those of the Institute of Technology. The school also provides trade school courses for apprentices, various accounting and commercial courses and a wide variety of specialist and leisure interest courses. Tuition for certain prisoners at Yatala and other gaols is conducted through the school.

In 1966 there were 5,207 persons, including 735 apprentices, enrolled with the Technical Correspondence School.

ROSEWORTHY AGRICULTURAL COLLEGE

Roseworthy Agricultural College was opened to students in 1885 and thus ranks as the oldest of Australian agricultural colleges. Admission is limited to young men over 16 years of age who have reached a satisfactory level of secondary education. There is a strong practical bias to the course and almost half of the graduating students take responsible positions on farming or pastoral properties.

Research and experimental work applicable to the area is conducted and the college is also involved in the production of pure seed of wheat and oat varieties suitable to South Australia. A major wheat and oat breeding programme is also conducted.

The college is situated 32 miles north of Adelaide in better class mallee country, the average annual rainfall being 17.1 inches. The total area of the college farm is 2,573 acres. Buildings, grounds, vineyard and orchard occupy about 100 acres. Nine hundred acres are cropped annually and about 400 acres are fallowed. Jersey, Polled Shorthorn, Merino, Southdown and Berkshire studs are conducted.

A special course in oenology is conducted leading to a Roseworthy diploma. Australia's wine technologists are trained at Roseworthy and a small wine cellar is part of the establishment.

At 30th June 1966 there were 102 students enrolled at the college.

SOUTH AUSTRALIAN SCHOOL OF ART

The South Australian School of Art has the longest continuous history of any technical art school in Australia, having been established as a School of Design in 1861 under the control of the South Australian Society of Arts and transferred in 1909 to the Education Department as the South Australian School of Arts and Crafts. The present name was adopted in 1958. The School conducts full-time courses leading to the Diploma of Art in Fine Arts, Advertising Art and Art Teaching, while classes in related subjects are also provided for part-time students.

The Diploma in Art Teaching is a three year course, the art education section of which is provided at the School of Art. Other diploma courses are of four years with a study of specialized subjects following a common first-year course.

During 1966, 325 full-time diploma students and 699 part-time students enrolled at the School.

TRADE EDUCATION

The Apprentices Act, 1950-1966, requires apprentices to attend schools or undertake correspondence courses for a minimum of three years of their indenture period.

To provide training for apprentices the Education Department has four technical colleges, which embrace nine separate technical institutions (formerly known as trade schools) in the metropolitan area. Classes are also conducted at Port Pirie, Whyalla, Port Augusta and Mount Gambier, and many apprentices are catered for through the Technical Correspondence School.

Although the Act only requires apprentices to attend technical college for three years, facilities are provided for those showing ability to attend for a fourth and fifth year. All metropolitan technical colleges also provide advanced courses for adult tradesmen and others employed in industry.

The technical college curriculum covers 160 subjects related to 45 trades. While many of these subjects form part of the requirements for the Advanced Trade Certificate, the others are designed to meet special demands for training in new processes and techniques.

Trade Education, South Australia
Number of Apprentices Enrolled in December

Schools	1962	1963	1964	1965	1966
Metropolitan technical colleges . .	4,196	4,712	5,553	5,983	6,551
Country technical schools	525	559	619	672	723
Technical Correspondence School (a)	613	652	656	721	735
Total	5,334	5,923	6,828	7,376	8,009

(a) Includes Northern Territory apprentices.

ADULT EDUCATION

Education Department: Adult Education

The Education Department provides adult education for part-time students in country areas through its 11 adult education centres (two of which are in the Northern Territory), the Whyalla Technical High School, and the Port Pirie, Port Augusta and Mount Gambier Technical Colleges—with branch classes conducted in 177 towns. In the metropolitan area classes are held at 23 technical high schools, all the technical colleges, the School of Art and the Adelaide Woodwork School. Adult education is also available through the Technical Correspondence School.

The 360 subjects currently available to adult classes include academic subjects up to matriculation standard and beyond, technical subjects for apprentices and adult tradesmen, commercial and other vocational subjects, art and craft subjects, and a wide range of cultural activities.

Education Department, Adult Education

Number of Subject Enrolments

Centres	1964	1965	1966
Country	13,797	16,629	16,907
Metropolitan—			
South Australian School of Art	627	648	898
Technical Colleges	3,010	2,707	3,577
Technical High Schools	10,037	12,396	13,350
Technical Correspondence School ...	5,159	5,213	5,557
Adelaide Woodwork School	207	274	320
Total	32,837	37,867	40,609

Workers' Educational Association of South Australia

The Workers' Educational Association of South Australia was established in 1914. Patterned on the English W.E.A., it is a voluntary adult education organization which works in close co-operation with the University of Adelaide's Department of Adult Education.

Activities it organizes directly, or in which it provides major assistance to other bodies, include a comprehensive day and evening class programme, postal courses for trade unionists, an international adult and children's film festival, adult education courses on television and a short-period residential college.

It possesses a residential college at Goolwa, an adult education centre in the city, and a bookshop in the University grounds which provides books for University and W.E.A. students.

In 1966 there were 50 classes with a total enrolment of 2,700 students organized independently by the W.E.A., and a further 64 classes with an enrolment of 2,375 were organized by the W.E.A. in association with the University.

University of Adelaide: Department of Adult Education

Adult education classes were started by the University in 1917, and in 1957 a Department of Adult Education was established.

The Department, largely in association with the Workers' Educational Association, provides tutorial classes and lecture classes in a wide range of subjects. A library is available to students of these classes. The Department also organizes study circles, discussions and seminars in a number of subjects, and lectures, discussion groups, music recitals and art exhibitions are arranged in country centres. A summer school for adults is conducted annually.

In 1963 television was introduced as a medium for adult education.

Aggregate enrolments for 1966 were 3,137 in courses, schools and conferences (exclusive of one day schools and single lectures) arranged independently by the Department, and 2,375 in classes arranged jointly with the W.E.A.

Migrant Education

The Education Department on behalf of the Commonwealth Government conducts classes for migrants who have an inadequate command of the English language. These classes are held at many metropolitan and country centres including migrant reception centres. Tuition is also provided through correspondence courses and radio lessons.

A field officer visits individuals and families in their homes or places of employment to acquaint them with the opportunities for learning English, and to offer to enrol them in one of the classes.

In 1966, 3,799 persons enrolled or re-enrolled for English classes and a further 1,693 took correspondence lessons.

TEACHER TRAINING

Kindergarten

The Kindergarten Training College is under the control of the Kindergarten Union of South Australia (Inc.).

Trainees undertake a three year course which includes lectures in a wide variety of subjects in addition to practical experience at kindergartens. Trainees may be granted training allowances by the Kindergarten Union (subject to a bond) or may enter as private students. Upon completion of the course trainees are awarded a diploma.

Trainees also benefit from the facilities of the Lady Gowrie Child Centre which is equipped for observational and experimental work with pre-school children, and is associated with the Kindergarten Union through the Australian Pre-School Association.

Kindergarten Training College, South Australia

At 31st December	Lecturers		Student Teachers
	Full-time	Part-time	
1961 (a)	3	12	64
1962 (a)	4	17	64
1963	5	17	61
1964	5	11	70
1965	5	7	77

(a) At 31st August.

Education Department

The Education Department conducts training schools for teachers at Adelaide Teachers College, Wattle Park Teachers College, Western Teachers College and Bedford Park Teachers College. Courses are related to the various levels of education or to specialized fields. Infant and primary teachers are trained at Wattle Park, Western and Bedford Park Teachers Colleges, specialist secondary teachers at Western and Adelaide Teachers Colleges, and secondary trainees are generally attached to the Adelaide and Bedford Park Teachers Colleges which are situated adjacent to the University of Adelaide and the Flinders University of South Australia respectively.

The normal training period for infant and primary teachers is two years. Certain infant and primary teachers, after having completed their normal training, may attend special courses to equip them for teaching handicapped children. Courses for secondary teachers are usually of four years. In addition to the general secondary course there are also specialist courses for teachers of commercial subjects, agriculture, music, physical education, art, home science and crafts.

External facilities, as well as those of the colleges, are used in the training of teachers. Secondary trainees have the opportunity of completing a university degree, and infant and primary training may involve some study at the University. In addition, the facilities of the Institute of Technology, Roseworthy Agricultural College, Waite Institute, the Elder Conservatorium of Music and the South Australian School of Art are used in the training of specialist teachers. Trainees also attend at certain schools where they observe skilled teachers at work and where they gain practical experience through the preparation and presentation of lessons.

Trainees may enter the colleges as private students; the majority, however, receive free tuition and allowances while training in return for a three year bond with the Education Department. To assist intending trainees in attaining the necessary entrance qualifications the Department offers teaching scholarships.

Students at Teachers Colleges^(a), South Australia

Classification	1962	1963	1964	1965	1966
Infant	333	344	343	351	388
Primary	981	1,056	1,141	1,142	1,150
Secondary—					
General ^(b)	749	832	997	1,070	1,232
Specialist ^(c)	395	503	587	600	676
Total	2,458	2,735	3,068	3,163	3,446

(a) Number of students attending for whole or part of the year.

(b) Includes agriculture and music teachers.

(c) Includes commercial, physical education, craft and art teachers.

Private Schools

In the Catholic school system only one religious order, the Sisters of Mercy, receives its training in South Australia. These Sisters attend the Education Department training colleges and the University of Adelaide. Other teaching personnel receive their training interstate.

Other private schools do not normally train their own teachers but employ persons considered to be suitably qualified.

STATE EXPENDITURE ON EDUCATION

Details of expenditure by the State Government on education in recent years are given below. The considerable increase in annual expenditure shown in the table has been a continuous process since the end of World War II. In 1946-47 Government expenditure from revenue on education was \$4 million with a further \$112,000 of loan funds devoted to the construction and maintenance of schools.

State Expenditure on Education, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
<i>Expenditure from Consolidated Revenue—</i>					
Primary	13,970	15,055	16,562	18,006	19,539
Secondary	6,826	7,838	8,691	9,530	10,573
Technical (a)	5,231	6,039	7,357	8,401	10,010
Kindergarten Union grants .	352	370	390	427	455
University grants	5,542	6,233	7,077	9,254	11,030
Waite Agricultural Research Institute	716	700	824	1,040	1,080
Roseworthy Agricultural College	261	257	271	291	300
Pensions	595	688	773	852	918
Payroll tax	536	598	669	737	818
Miscellaneous	308	336	381	410	329
<i>Buildings—</i>					
Schools (a)	2,033	1,978	2,379	2,197	2,409
Agricultural College	24	52	52	21	12
Sinking fund payment	726	878	1,026	1,167	1,328
Interest on loan expenditure	2,395	2,968	3,404	3,930	4,515
Total expenditure from Consolidated Revenue ..	39,516	43,989	49,856	56,264	63,316
<i>Receipts—</i>					
Education Department	701	783	820	963	975
Agricultural College	85	89	105	103	101
Miscellaneous	5	9	18	37	56
Commonwealth grants to University	2,791	3,139	3,651	5,080	6,240
Total receipts	3,583	4,020	4,594	6,184	7,371
Net expenditure from Consolidated Revenue ..	35,933	39,969	45,260	50,080	55,945
<i>Loan Expenditure—</i>					
<i>Buildings—</i>					
Schools, etc.	11,889	11,940	9,867	11,270	11,781
Agricultural College	6	16	77	45	74
School buses	270	263	268	279	281
Student hostel advances (including buildings)	18	160	346	254	222
Total	12,183	12,379	10,558	11,847	12,358
Less repayments and redemptions	1,085	955	1,081	1,296	1,418
Net debit to loan accounts ..	11,097	11,424	9,477	10,551	10,940

(a) Includes technical high schools and Institute of Technology.

6.3. SCIENTIFIC AND RESEARCH ORGANIZATIONS

THE WEAPONS RESEARCH ESTABLISHMENT

The Weapons Research Establishment, situated at Salisbury, is the largest of three organizations within the Research and Development Branch of the Department of Supply. The Research and Development Branch, with its headquarters in Melbourne, is responsible for research and scientific development in relation to defence, including the operation of the Joint United Kingdom-Australia Weapons Research Project.

The Weapons Research Establishment is concerned with research, development and testing of guided missiles, tracking of satellites and space vehicles, and, through Australia's membership of the European Launcher Development Organization, with the development of a launching vehicle for placing satellites in orbit for peaceful purposes.

The headquarters of the Weapons Research Establishment occupies an area of seven point three square miles at Salisbury, and includes Edinburgh Airfield from which the RAAF carries out the experimental and other flying required for the Establishment's projects. Facilities within the area have been provided for branches of British firms which have contracted with the British Ministry of Technology to develop weapons systems or components.

The Establishment has four main sections—namely, the Trials Wing, the Space Physics Wing, the Weapons Research and Development Wing and the Engineering Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range and the planning, execution and assessment of trials. The Space Physics Wing undertakes the operation of United States satellite and space tracking stations throughout Australia, and conducts research and development in support of the range—including investigations into the characteristics of the upper atmosphere, using sounding rockets. The Weapons Research and Development Wing is concerned primarily with Australian-initiated defence research and weapon development, but assistance is also given with some phases of the Joint Project programme. The Engineering Wing provides the design and workshops effort required to support the work of the Establishment and the Range.

Testing ranges have been established at Woomera, which is approximately 280 miles north-west of Adelaide. A township, together with modern amenities such as hospital, school, kindergarten, community store, swimming pool and all sporting facilities, has been built at Woomera to accommodate the range and allied service personnel and their families. The population is approximately 4,500.

The total strength of Weapons Research Establishment is about 6,000 people, including staff at Salisbury and Woomera and attached Service personnel.

European Launcher Development Organization (ELDO)

By virtue of the major facilities at Woomera for launching space vehicles, Australia has become a member of ELDO, which has been established with the object of developing a launching vehicle for placing satellites in orbit for peaceful purposes. Other members of ELDO are Britain, Belgium, the Federal Republic of Germany, France, Italy and the Netherlands.

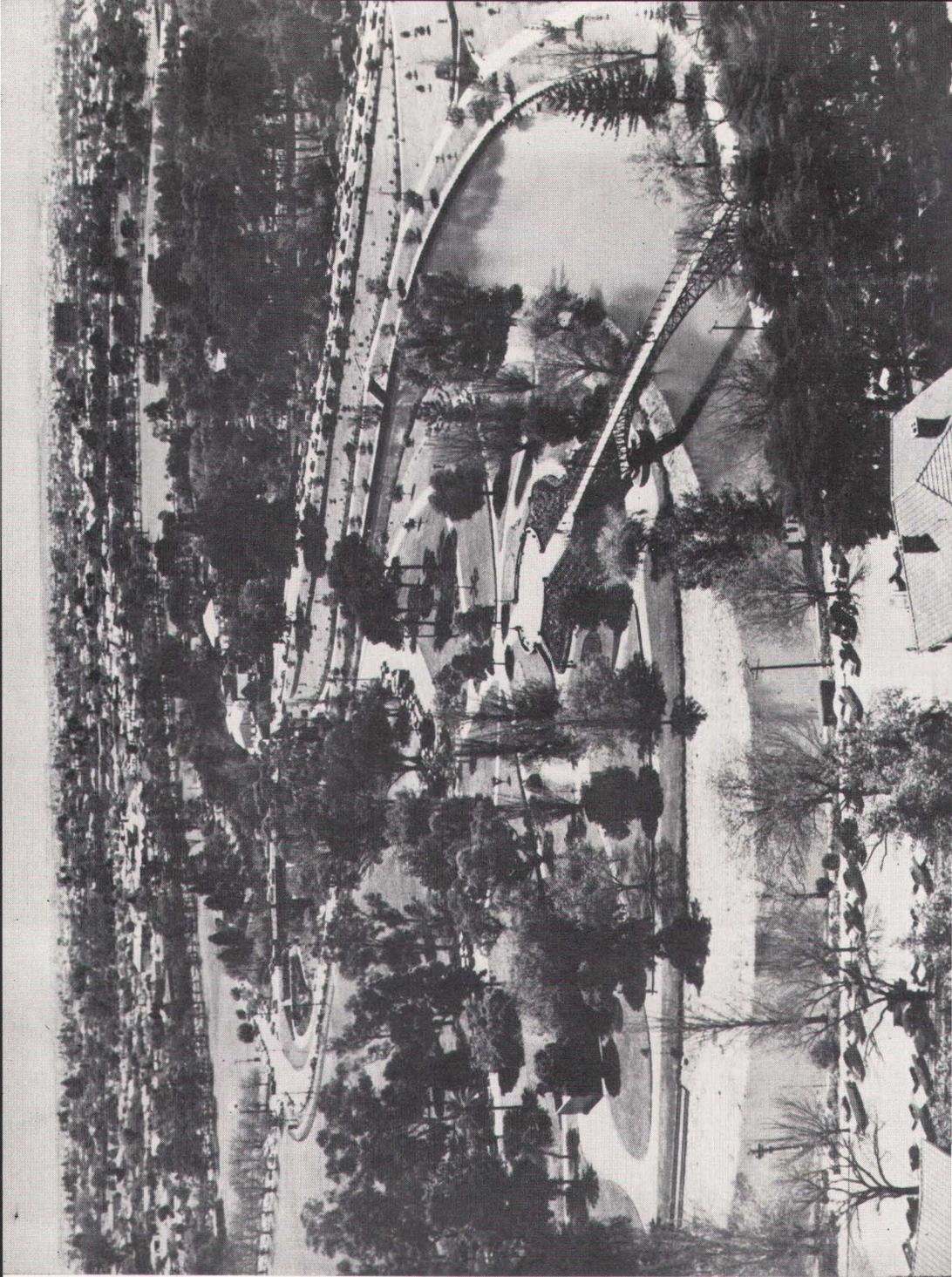
United States Space Projects

Agreements exist between the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia, for scientific purposes, of facilities for space vehicle tracking and data recording.



Delhi Australian Petroleum Ltd

Drilling rig on the natural gas field at Moomba, near Gidgealpa



The River Torrens and park-lands near the University of Adelaide



S.A. Govt Tourist Bureau

Sailing in Gulf St Vincent, off Adelaide—a scene during the 505 Class World Championship in 1966



S.A. Govt Tourist Bureau

Ballet at the Adelaide Festival of Arts 1966—Garth Welch and Marilyn Jones dancing in "Illyria"

A view of the city from the Adelaide Oval

Department of Immigration



Space tracking, telemetry and command stations have been established, or are under construction, at various points in Australia. One such station is operating at Island Lagoon (near Woomera).

All these are an integral part of the world-wide network of tracking and data recording stations being established by the United States National Aeronautics and Space Administration to support its programme for manned space vehicles, scientific satellites and deep space probes.

THE COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

The Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.) is a corporate body established by Act of Parliament. Its first responsibility is to carry out "scientific research and investigations in connection with, or for the promotion of primary or secondary industries in the Commonwealth . . .". The governing body is an executive of five full-time and four part-time members.

The executive is supported by a national advisory council and by a State committee in each State. These advisory bodies are composed of scientists, agriculturalists and industrialists. Council and committee members are frequently consulted, either individually or corporately, by the executive. They also take the initiative in bringing problems to the attention of the executive.

Three of the twenty two C.S.I.R.O. research divisions have their headquarters in South Australia: these are the Divisions of Biochemistry and General Nutrition, Soils, and Mathematical Statistics.

The Division of Biochemistry and General Nutrition's interests extend through the fields of nutritional biochemistry and nutritional physiology. The greater part of its efforts have been concentrated on research associated with sheep nutrition and wool and meat production. The division's work on the role of trace elements in plant and animal nutrition has been of far-reaching consequence. The animal nutrition work has led to practical means of controlling "coast disease" and "phalaris staggers", two common diseases of sheep. Plant nutrition research has shown how added traces of elements such as copper and zinc enable large tracts of country, previously regarded as desert, to be farmed profitably.

The division has its headquarters laboratory in the grounds of the University of Adelaide and a field station at O'Halloran Hill.

The Division of Soils has a headquarters laboratory adjacent to the Waite Institute, in the suburbs of Adelaide. Here the efforts of the Division's soil surveyors are consolidated into detailed maps showing the distribution of soil types in Australia. A good deal of chemical research has been concerned with phosphorus, since Australian soils are almost universally short of this element. Nitrogen-fixing micro-organisms in the soil are singled out for special study by the Division's microbiology group. Soil-water relationships dominate the attention of the Division's physicists; the swelling and shrinking of soils under the influence of water is important, since it can have practical effects on the stability of foundations and the water holding capacity of dams.

The Division of Mathematical Statistics has its headquarters in Adelaide, but its officers are stationed throughout Australia. Many of its officers are located in various other C.S.I.R.O. laboratories, where they contribute through their statistical knowledge to many different research programmes. The Division has developed a number of fundamental research interests of its own, particularly in theoretical and meteorological statistics.

THE INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

The Institute of Medical and Veterinary Science was established by Act of Parliament in 1937 to incorporate the functions of the former Adelaide Hospital Laboratory. Its present main buildings were occupied in May 1939. The war years and those which immediately followed were so abnormal and conditions so difficult that any development which would normally have occurred was delayed severely. The period of relatively great expansion of its services and activities commenced in 1950 and is still continuing today. The increase in work is reflected in the increased number of tests performed by the Institute over the years since its inception. In 1964-65 there were 551,195 tests carried out compared with 175,528 in 1952-53 and approximately 27,000 in 1938-39.

The Institute is administered by a council responsible to the Minister of Health. The Director of the Institute is the chief executive officer of the council.

The Institute provides diagnostic facilities in all branches of clinical pathology for the Royal Adelaide Hospital and other metropolitan and country hospitals, for public health authorities, for industry, and for private practitioners. It also undertakes work in all branches of Veterinary Pathology for the Department of Agriculture, and for veterinary practitioners and stockowners. Research is conducted into selected problems connected with disease in man, and in animals of economic importance. The staff of the Institute takes part in the teaching of the medical sciences to graduates, students and technicians.

The Institute of Medical and Veterinary Science

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65
Staff at end of year—					
Graduate	42	56	58	57	60
Other	148	149	164	182	187
Tests performed	473,808	440,799	447,587	477,555	551,195
Revenue—	\$	\$	\$	\$	\$
State Government grant	422,000	396,000	504,000	574,000	674,000
Fees for laboratory tests	185,960	185,278	191,264	184,216	229,136
Other	22,418	27,512	36,148	32,894	43,760
Total	630,378	608,790	731,412	791,110	946,896
Expenditure—					
Salaries and wages	419,030	452,732	490,458	581,876	658,634
Other	148,762	161,140	178,892	239,494	215,332
Total	567,792	613,872	669,350	821,370	873,966

WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924.

The research projects conducted at the Institute cover a wide range of topics, of which the following are a few examples: relationship of stocking rates to pasture composition and fertilizer practices; the protein chemistry of the wheat grain; the genetics and breeding of cereals and pasture plants; flower and fruit

development in horticultural plants; studies on soil-borne and virus diseases of plants; the nutrition of the honey bee; and the biology and control of the *Sirex* wood-boring wasp.

Further details relating to the Waite Institute may be found on pages 162-163.

6.4. CULTURE AND RECREATION

LIBRARIES

The Public Library

The Public Library of South Australia has its origin in a collection of books assembled in London in 1834, two years before the province of South Australia was founded. The modern character of the Library was established in 1940 when, after the Price Report of 1937, the Library was separated from the Museum and Art Gallery and became a State Government department administered by the Libraries Board of South Australia. At the present time the Library is organized in three divisions—Reference Services, Lending Services and Technical Services.

The Library has a representative basic collection of 19th and 20th century materials in all subjects except medicine and law. It has considerable strength in a number of subjects including South Australian publications, librarianship, wine, Australian Aborigines, River Murray shipping, sailing ships, and 19th century illustrated works on natural history. In addition there is an extensive collection of tape recordings of Australian authors, folksongs and aboriginal music. The Library is an official depository for the publications of the United Nations, Unesco and some of the other specialized agencies, and the publications of the Australian, British, Californian, and Philippine governments.

The oldest section of the Library is the Reference Library which is the central basic collection. Since 1946 the books excepting rare, irreplaceable volumes, have been available for loan. About 5,000 periodicals are taken annually, and the newspaper reading room files 308 foreign and local newspapers. In 1965-66, 49,203 periodicals were lent. Legislation since 1878 provides for the deposit in the Library of copies of all items published in South Australia.

The Research Service, established in 1942, received 2,154 enquiries in 1965-66, mainly from industry. It supplies lists of references and arranges for the borrowing of books and periodicals selected from those lists as well as books and photocopies from interstate and overseas libraries. The service has an extensive collection of trade catalogues. The service also arranges documentary film evenings throughout the year in the lecture room. *Pinpointer*, a monthly index of popular Australian periodicals and *Index to Australian Book Reviews* are published.

In 1919 the Archives Section was established for the collection of original South Australian historical material. In 1925 legislation was passed forbidding the destruction of government documents without reference to the Libraries Board. At the end of June 1966 there were 8,360 feet of occupied shelf space in the Archives. During the year 1965-66, 72,653 items (maps, views, documents and printed sources) were produced for 4,313 enquiries. A journal *South Australiana*, is published twice a year.

The Reference Division also staffs 20 libraries in other government departments.

The Children's Library was established in 1915 and is believed to be the oldest in Australia. The carefully selected books include about 6,000 rare and old books in a special study collection. School classes visit the Library, and talks are given to groups of parents and to various societies.

People living outside the Adelaide metropolitan area are served by the Country Lending Service which began lending books in 1938. This service has 12,173 active borrowers, of whom 7,131 are children. During 1965-66, 18,451 books were despatched in boxes to schools. Books are also lent to associations, clubs and gaols. The service also acts as a central pool for books and a central clearing house for enquiries from local public libraries. About 18,000 requests from these libraries are received each year.

In 1946 the Adelaide Lending Service was opened to serve metropolitan readers. Books were lent to 23,557 borrowers in 1965-66. There are special collections of books in foreign languages. 528 sets of plays were lent to play-reading and acting groups.

Another active section is the Youth Lending Service established in 1957. This caters for the needs of young people between the ages of 13 and 18 years. The service was used by over 11,000 young people in 1965-66. The collection, besides general literature, includes much on hobbies and careers of special interest to adolescents.

The Technical Services Division besides the usual cataloguing and accessions sections includes a bindery which employs more than 50 persons and a large photographic section. Photographic and xerographic copying facilities are available to the public and much work is done for the library itself. In 1962 the Libraries Board began an extensive programme of publishing facsimile editions and other works of Australian interest. Over 120 works have now been published. Long playing records have also been issued. Other publications include several series of *Occasional Papers* in various subject fields, and an annual, *Miscellanea Musicologica*, published in association with the University of Adelaide.

Public Library of South Australia

Year	Reference Library	Children's Library	Country Lending Service (a)	Adelaide Lending Service	Youth Lending Service	Total
At 30th June						
VOLUMES HELD						
1962.....	206,581	26,824	152,990	40,316	11,953	438,664
1963.....	213,779	32,911	173,043	42,434	12,865	475,032
1964.....	220,558	34,178	220,660	44,528	14,254	534,178
1965.....	227,613	35,991	262,036	46,192	14,858	586,690
1966.....	235,715	36,069	301,385	46,877	15,523	635,569
To 30th June						
VOLUMES LENT						
1962.....	62,075	204,798	186,684	253,671	99,610	806,838
1963.....	69,471	225,756	202,689	255,554	110,304	863,774
1964.....	73,454	236,355	208,893	258,487	118,294	895,483
1965.....	78,318	234,797	215,383	266,818	112,397	907,713
1966.....	79,214	208,229	211,842	270,613	102,158	872,056

(a) Volumes held include volumes on loan to local public libraries. In 1966 such loans amounted to 178,142. These have not been included in volumes lent.

The erection of a new building (the original main building was erected in 1884) was completed early in 1967. The first stage is three floors of approximately 2,174,000 cubic feet costing about \$3,000,000. The new building was officially opened as the State Library of South Australia in May 1967.

Local Public Libraries

Local public libraries financed by municipal authorities are subsidized under the Libraries (Subsidies) Act, 1955-1958. With general oversight and planning by the Libraries Board, subsidies (in 1965-66 amounting to \$67,745) are paid on a dollar for dollar basis. Twenty-four libraries, operated by eighteen local government authorities, serving almost half of the population of the State had been established by June 1966. In 1965-66 local public libraries lent 1,457,686 books to 108,911 registered readers. All book stocks (178,142) are interchangeable with a central pool maintained by the Libraries Board.

The Adelaide Circulating Library

The Adelaide Circulating Library also traces its origin to the collection of books dispatched from London shortly after foundation of the State. In 1884 the collection which has grown from this nucleus was divided, the text and reference books going to the newly formed Public Library, and the remaining works constituting the Adelaide Circulating Library.

The Library, which receives a small government grant each year, is controlled by a committee elected by subscribers.

At 30th June 1966 the library contained 75,000 volumes, and subscribers during the year 1965-66 numbered 2,874.

Institute Libraries

In 1884, when the Public Library was established, there were already in existence 108 institutes with a combined membership of 5,000.

Institute libraries are situated in the metropolitan area and in country areas throughout the State. These libraries are largely dependent on members' subscriptions but also receive a government subsidy. Many institutes receive considerable support from local councils.

The Institutes Association of South Australia Inc. acts as a co-ordinating authority and as a purchasing agency for the majority of institutes; these, however, retain complete autonomy, being governed by a committee elected by members.

The borrowing facilities of institute libraries are available only to subscribers, although at some libraries the general public has access to, and the use of, reading facilities. Many libraries cater for children.

The conduct of institutes is regulated by the Libraries and Institutes Act, 1939-1967.

Institute Libraries, South Australia

At 31st December

Particulars	1962	1963	1964	1965	1966
Number of institutes	211	206	204	203	200
Subscribers	24,252	23,453	23,651	23,038	22,563
Number of volumes	764,407	761,761	725,335	751,209	756,671
Volumes circulated during year ..	1,993,456	1,967,099	1,933,184	1,854,057	1,811,704

Other Libraries

Particulars relating to the Barr Smith Library (428,166 volumes) at the University of Adelaide and the Flinders University Library (84,000 volumes) are given on pages 162 and 165 respectively. Other libraries include those of the Royal Society of South Australia (approximately 23,000 volumes), the South Australian Branch of the Royal Geographical Society of Australasia (16,000 volumes) and the Parliamentary Library (60,000 volumes).

MUSEUMS

The South Australian Museum

Founded as a subsidiary of the South Australian Institute in 1856, the South Australian Museum was subsequently administered under the joint Board of the Public Library, Museum and Art Gallery and became a separate government department under the provisions of the Museum Act, 1939. Since then it has continued to develop as the focal point of natural history activities in this State.

Like most public museums, it serves a three-fold purpose—preservation, research and public education.

Several of the collections of specimens and data are outstanding; the collection of Australian ethnological objects being of world renown.

A staff of twelve professional research workers is responsible for the care of the collections, and for undertaking research, both pure and applied, on specimens under their control. This work is published in the *Records of the South Australian Museum*, and in other scientific periodicals.

Public education work includes the presentation of the latest information on the natural history of our unique fauna and flora in public display galleries covering more than 37,000 sq. ft. Educational booklets setting out useful information on a variety of subjects are published and sold to visitors at nominal cost.

Other Museums

A number of historic residences serve as museums. In 1961 the "Old Government House" at Belair was refurbished with relics of the colonial era and opened for public inspection. At "Whalers' Haven", Victor Harbor, a pioneer cottage has been restored and features many relics of early settlement with particular emphasis on the whaling industry. The home of the poet Adam Lindsay Gordon, "Dingley Dell" at Port Macdonnell, is maintained as an historic house and Captain Charles Sturt's original home at Grange was recently opened to the public. Items of local interest are exhibited at the Lobethal Archives and Historical Museum and at the Old Mill Museum at Birdwood.

Various items of maritime association including pictures, models and fittings from early ships are displayed at the Nautical Museum at Port Adelaide.

A number of special museums are maintained at the University of Adelaide for the use of the staff and students and a Museum of Economic Botany is associated with the Botanic Garden.

The National Trust of South Australia

The National Trust of South Australia was established by Act of Parliament in 1955. The Trust is administered by a council and is financed by gifts, legacies and subscriptions.

The Trust encourages the preservation of buildings of architectural and historic interest. It also aims to preserve lands of beauty, such as "Wilabalangaloo", Berri, and to protect and develop the native flora and fauna as at "Watiparinga" Reserve, Eden Hills. The Trust is also interested in preserving areas of scientific

interest, the G. S. Sandison Reserve at Hallett Cove, with its glacial pavements, being such a property. At 30th June 1966 the Trust controlled 23 reserves totalling 1,940 acres.

In 1963 the paddle steamer *Marion* was purchased and refitted by the trust and now floats in the old graving dock at Mannum.

ART GALLERIES

The National Gallery

The National Gallery of South Australia was opened in 1881. The first portion of the present building was completed in 1900 and this was greatly extended in 1936 as a result of a generous gift of \$20,000 from Mr Alexander Melrose and a grant of \$32,000 from the Government. The gallery became a government department under the National Gallery Board in 1940. In 1962 a three storey air conditioned wing was added, which has greatly increased its capacity.

The collections contain a token representation of the art of all periods and include excellent examples of Australian and contemporary British art.

The gallery has benefited by many bequests, the Ragless, Elder, Morgan Thomas, Boxall, David Murray and Mortlock bequests together totalling over \$252,000. Money has also been bequeathed for the Melrose Prize for a portrait or figure composition awarded every fourth year, and the Maude Vizard-Wholohan Prize awarded annually, alternately for a landscape or a figure subject in oils; there are additional Maude Vizard-Wholohan prizes for a water-colour and a print, and a prize for sculpture is awarded from time to time.

Many visiting exhibitions are displayed in the gallery. Lectures and demonstrations are given and collections of pictures and reproductions are circulated in country districts. A quarterly *Bulletin* has been published since 1939. An entirely free reproduction lending service is used by over 300 schools and government departments.

Other Galleries

A number of small commercial galleries present exhibitions throughout the year. One such gallery at Hahndorf is of particular interest through its historic setting.

The Royal South Australian Society of Arts and certain retail stores maintain galleries in which a limited number of exhibitions are held each year.

Beginning with the Citizens' Art Group exhibition in 1954 and the Advertiser exhibition in 1955 there has been growing interest in open air exhibitions as a medium for displaying local art. The 1967 Advertiser exhibition contained 972 exhibits submitted by 889 artists.

MUSIC AND DRAMA

MUSIC

In orchestral performance in South Australia the South Australian Symphony Orchestra maintained by the Australian Broadcasting Commission (see below), plays a leading role. The University Music Society presents approximately 10 subscription concerts each year including orchestral music, chamber music and various solo performances. In addition the Elder Conservatorium of Music arranges free Sunday afternoon concerts, lunch hour recitals by staff members and a number of student concerts including performances by senior and junior orchestras. Other performances include chamber music by local and overseas artists presented by Musica Viva.

The Elizabethan Theatre Trust Opera Company presents seasons of opera in South Australia and local groups active in this field include the Intimate Opera Group and the Gilbert and Sullivan Society. A number of societies and denominational groups make a regular contribution to choral music.

The Australian Broadcasting Commission

In the metropolitan area the South Australian Symphony Orchestra each year gives 30 orchestral subscription concerts, usually with an overseas conductor or soloist—often both—and twelve youth orchestral subscription concerts with overseas and resident conductors and soloists. The A.B.C. also presents a recital series of six concerts by overseas artists and a series of four choral concerts with the Symphony Orchestra and the Adelaide Philharmonic Choir. In addition there are six free orchestral concerts annually, and frequently the A.B.C. presents a series of summer concerts.

During 1966 there were 18 free concerts with the South Australia Symphony Orchestra for schoolchildren in the metropolitan area. Three country centres, Port Lincoln, Mount Gambier and Broken Hill, have their own A.B.C. subscription series of four concerts—one by the South Australian Symphony Orchestra and three by world class recital artists. In addition the Symphony Orchestra goes on tour into the country and during 1966 visited 14 country centres. In all these centres, the orchestra gave at least one free concert for schoolchildren as well as a public concert.

The Elder Conservatorium of Music

A Chair of Music was created at the University of Adelaide in 1884, and in 1898, following an endowment by Sir Thomas Elder, a Conservatorium was established.

The Elder Conservatorium of Music provides a comprehensive course of training for students in degree and diploma courses, and also caters for external students by providing instruction in the various branches of music as single studies. Students undertaking single studies attend certain classes in addition to receiving private tuition.

Concert experience is provided through regular informal concerts and through Students' Concerts, the latter providing experience in public performance.

In 1966 there were 54 students enrolled in the degree course, 61 in the diploma course and 434 students undertaking single studies only.

DRAMA

Adelaide has two major theatres, Her Majesty's and the Majestic; the latter, however, is used only occasionally for live theatre, being a cinema for most of the year. There are in addition four smaller very modern theatres.

There are over 20 amateur theatrical groups operating in South Australia. The Adelaide Repertory Theatre Inc., which, with approximately 2,000 members, claims the largest membership of any amateur theatrical group in the southern hemisphere, has its permanent home at the Arts Theatre.

Many country centres support amateur theatrical groups and a number of these combine annually for the South East Drama Festival.

The Australian Elizabethan Theatre Trust, as well as presenting its own productions in Adelaide and certain country centres, gives some financial and other support to non-professional productions.

THE ADELAIDE FESTIVAL OF ARTS

In seven years the Adelaide Festival, through four festivals, has received much acclaim, not only throughout Australia, but also overseas.

The idea of an Arts Festival was conceived late in 1958 by a group of Adelaide citizens, whose objective was a festival on international lines following generally the example of Edinburgh. Consequently, early in 1959 an administrative body was established which was supported by twelve volunteer committees. The reliance on voluntary effort and the pattern of committee have since remained an integral feature of the festival organization.

Industrial firms and private individuals assisted financially by lodging guarantees while the Commonwealth and State Governments and the Adelaide City Council made substantial contributions.

Although not without disappointments and frustrations, the first festival, held in March 1960 and extending over 14 days, was a reassuring success with total attendances exceeding 300,000. It covered almost every aspect of the arts, with seventy-four performances for adult audiences as well as an element of popular entertainment out of doors.

Subsequent festivals held biennially saw a consolidation of the initial experiment and a broadening of the concepts envisaged. These later festivals benefited from the longer planning periods available, the establishment of a small permanent secretariat and international promotion and publicity programmes. By March 1964, the festival concept had been stabilized. Programmes had been expanded and many ancillary activities had been stimulated. Attendances continued to rise with noticeable increases in the numbers from interstate and overseas.

The Fourth Festival, March 1966

For the first time the Festival was extended to sixteen days and attracted more people than ever before. More than three hundred separate performances within the official programme as well as a large number of other activities provided a vast selection from which the public could choose.

The fourth Festival was more successful financially than its predecessors due to increased revenue from larger attendances and also because of an increase in the number of guarantors.

The linking of National Flower Day with the Festival has proved to be highly rewarding in lending colour and gaiety to the festivities.

Writers' Week brought together, for seminars and public sessions, writers from all over Australia and New Zealand and gained distinction from the presence of the Russian poet Yevtushenko and the English writer, Angus Wilson.

The innovation of opening Elder Park to free nightly entertainment of high quality was very popular and proved to be a successful adjunct to the light entertainment field which included jazz groups and folk singers.

BROADCASTING

The supervision of radio and television broadcasting is a Commonwealth responsibility and is carried out by the Australian Broadcasting Control Board under the *Broadcasting and Television Act 1942-1965*. An office of the board is maintained in South Australia to administer the Act and in particular to supervise the programme content and the technical quality of transmission.

Radio and television stations fall into two categories—national and commercial. National stations are operated by the Australian Broadcasting Commission. These stations do not broadcast advertising material, the Commission being supported by an annual grant from Commonwealth revenue. Commercial stations are operated by companies licensed by the Postmaster-General and derive their revenue from advertising.

All radio and television receivers must be covered by licences issued by the Postmaster-General. Normal annual charges at present are \$5.50 for a listener's licence, \$12.00 for a viewer's licence or \$17.00 for a combined licence, although reduced rates apply to pensioners who satisfy certain conditions and to persons living in remote areas, while licences are granted free of charge to blind persons and to schools. One licence covers all receivers owned by a licensee or his family and normally held at the licensee's address. Special licences are required for radio and television receivers on hire, the responsibility for the licence being borne by the hirer, and not the user, of the receiver.

Radio

The first stations to broadcast in this State were 5DN and 5CL. Station 5DN was issued an experimental licence in June 1924 and began operating under a commercial licence in February 1925. In November 1924, 5CL was licensed as an "A class station", the forerunner of the national station. The technical management of 5CL was taken over by the Postmaster-General's Department in 1929 and the programmes by the Australian Broadcasting Commission in 1932.

Stations 5KA and 5AD followed in 1927 and 1930 respectively, and a second national station, 5AN, was established in 1937. The first country station was opened in 1931.

There are at present 5 metropolitan and 11 country stations operating. The country or regional stations relay programmes from metropolitan stations and in addition provide programmes of local interest.

The call signs and locations of stations are given below, all call signs in South Australia being prefixed by the number "5".

Radio Stations, South Australia

At 31st December 1966

National Stations		Commercial Stations	
Call Sign	Location	Call Sign	Location
5AN	Adelaide	5AD	Adelaide
5CL	Adelaide	5DN	Adelaide
5CK	Port Pirie	5KA	Adelaide
5LN	Port Lincoln	5AU	Port Augusta
5MG	Mount Gambier	5MU	Murray Bridge
5MV	Renmark	5PI	Crystal Brook
5PA	Penola	5RM	Renmark
5WM	Woomera	5SE	Mount Gambier

Adelaide's three commercial stations broadcast continuously, while all other stations operated between 121 and 127 hours per week as at June 1966.

Commercial stations broadcast mainly light entertainment. In 1965-66, during the main listening time from 7 a.m. to 10.30 p.m., an estimated 64.5% of broadcasting time by Adelaide commercial stations was devoted to light entertainment (including 53.7% to light and popular music). News broadcasts accounted for a further 8.8% and advertising 15.1%, while programmes in the categories of education, information, current affairs and the arts occupied 7.5% of broadcast time.

By contrast the national stations, being independent of advertising revenue, provide a much wider variety of programmes. In 1965-66, in Adelaide, light entertainment accounted for 33.8% of broadcasting time, news 10.7%, the arts 23.9% and programmes relating to education, information and current affairs 26.1%.

From 1st April 1965, licensees who held both broadcast and television receiving licences have been required to take out a combined licence as their television licence fell due. Details of broadcast listeners' licences at present in force are given below.

Broadcast Listeners' Licences, South Australia^(a)

Current at 30th June

Type of Licence	1962	1963	1964	1965	1966
Ordinary	219,024	223,512	230,668	231,909	242,412
Hirers' and short-term hirers' ...	782	727	910	1,138	1,090
Pensioner	28,726	31,191	32,985	34,303	36,422
Other	1,141	1,311	1,464	1,690	1,823
Total	249,673	256,741	266,027	269,040	281,747

(a) Includes Northern Territory (5,524 licences at 30th June 1966).

Television

The State's first television station, NWS Channel 9, a commercial station, began operating on 5th September 1959. It was followed by ADS Channel 7 in October of the same year, and the Australian Broadcasting Commission began operating ABS Channel 2 in March 1960. Of the four remaining stations three became operative in 1965, two of these being country stations relaying programmes from ABS Channel 2, the fourth station, located at Mount Gambier, became operative during 1966.

The call signs, channels and location of television stations are given in the following table.

Television Stations, South Australia

At 31st December 1966

National Stations		Commercial Stations	
Call Sign and Channel	Location	Call Sign and Channel	Location
ABS—2	Adelaide	ADS—7	Adelaide
ABGS—1	Mount Gambier	NWS—9	Adelaide
ABNS—1	Port Pirie	SAS—10	Adelaide
		SES—8	Mount Gambier

As the early stations became established their broadcasting time was increased until in December 1963 the two commercial stations were broadcasting in excess of 77 hours per week and the national station 67 hours. Early in 1964 there was a substantial reduction in hours of service but by June 1966 four stations were each operating for approximately 94 hours.

On commercial channels there is a considerable emphasis on drama and light entertainment, whereas the Australian Broadcasting Commission devotes more time to programmes of an informative and educational nature. Surveys conducted by the Broadcasting Control Board in 1965-66 indicated that the proportions of total broadcasting time (other than advertising) for various types of programmes were as follows.

Category	Commercial	National
	Stations %	Stations %
Drama	56.5	32.4
Light entertainment	15.9	10.0
Sport	4.8	11.2
News	5.8	7.3
Family	9.8	5.6
Information and education	3.9	20.9
Current affairs	3.1	8.9
The arts	0.2	3.7
Total	100.0	100.0

Details of television viewers' licences for the five years ending June 1966 are given below. At 30th June 1959, before regular transmission began, 6,124 licences were operative in the State.

Television Viewers' Licences, South Australia

Current at 30th June

Type of Licence	1962	1963	1964	1965	1966
Ordinary	120,234	136,410	155,401	167,876	183,007
Hirers' and short-term hirers'	13,551	17,696	22,157	21,001	27,349
Pensioner	9,848	13,082	16,453	19,122	22,568
Other	161	314	419	643	802
Total	143,794	167,502	194,430	208,642	233,726

THE PRESS

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonization. The second issue of this paper, which served both as the official government publication and as an unofficial reporter of the news, was produced in Adelaide 12 months later. *The South Australian Government Gazette* emerged as a separate organ in 1839 and the newspaper continued as *The Register*. In 1850 *The Register* became the first continuous daily paper.

In the next 20 years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, in the last 40 years the present system of three major newspapers—one morning daily, one evening daily and one weekend publication—has emerged.

The Advertiser, published each morning except Sunday, was first issued in 1858 as *The South Australian Advertiser*. It absorbed *The Register* in 1931. It is now distributed throughout the State, with about one third of its circulation in country districts.

The News, published each evening except Sunday, was introduced in 1923. It replaced two evening newspapers, *The Express & Telegraph* and *The Journal* which traced back their origins to the 1860's. Almost 80% of sales of *The News* are in Adelaide and suburbs.

The Sunday Mail, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912 and the *Sunday Advertiser*, which was introduced in 1953. About 35% of sales of *The Sunday Mail* are in country districts.

To support these major State-wide newspapers, a strong provincial press has been built up. There are at present 38 country newspapers operating in the State with a combined circulation approaching 90,000. Most of these are published weekly, although three appear bi-weekly and two tri-weekly. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were the first to appear. Earlier publications are, however, recorded: *The Port Lincoln Herald* for example was being printed in the early 1840's.

There are also a number of district papers containing items of local interest circulated in some suburbs of Adelaide.

PARKS AND GARDENS

The Adelaide Botanic Garden

The Adelaide Botanic Garden is situated in parklands east of the Royal Adelaide Hospital with the main entrance off North Terrace.

The Garden, occupying about 45 acres, was established in 1855 and some of the original plantings are still flourishing. An area of about 75 acres north of the Garden was acquired in 1874 and this area, known as Botanic Park, has been developed as an Arboretum.

Since 1860 powers of management have been vested in a Board of Governors of eight members who serve for a period of 4 years but who may be re-elected for further terms.

The Garden contains an extensive collection of about 10,000 species of plants mainly of tropical and subtropical origin. Important features are the collections of native plants for dryland regions, cacti and succulents, the class ground, glass house displays and the Wisteria arbor. The Museum of Economic Botany, opened in 1879, houses a comprehensive carpological collection and displays of plant products.

In 1954 the State Herbarium was re-established within the Botanic Garden Department and a new herbarium building was completed and occupied in 1965.

State-wide advisory services are available on all matters relating to ornamental horticulture. Experimental tree plantations have been established at Giles Corner, Kulpara, Lameroo, Stansbury and Meningie.

The Zoological Gardens

The Royal Zoological Society of South Australia was founded in 1878, and in 1883 approximately 19 acres of Botanic Park were granted to the society for the establishment of the Zoological Gardens. At the same time arrangements were made for the various exotic and Australian animals and birds previously housed in the Botanic Garden to be transferred to the Zoological Gardens.

During 1965-66 a total of 114 species and varieties of mammals were exhibited including a large collection of marsupials. Of particular interest is a colony of Yellow-footed Rock wallabies, the only such colony in any zoological garden in the world. The Zoological Gardens also contain a fine collection of Australian birds, a total of 237 species and varieties of Australian and exotic birds having been exhibited during 1965-66.

The many mammals, reptiles, and birds are displayed in cages and enclosures; the enclosures for some animals are moated yards freely open to public view.

The revenue necessary for maintaining and developing the gardens is obtained through an annual State Government grant and from gate receipts and sundry sources.

During 1965-66 nearly 330,000 persons visited the Zoological Gardens.

National Park and Wild Life Reserves

The National Park Act, 1966, provides for the setting aside of certain lands as national park and wild life reserves, and for the administration of such areas by a body of commissioners.

At 30th June 1966 areas vested in the commissioners consisted of National Park, Belair (2,065 acres) and 30 separate wild life reserves totalling 547,227 acres.

National Park is extensively developed with recreational facilities and includes a wild life reserve and a museum at "Old Government House". Of the 30 wild life reserves, Cleland Reserve was opened to the public in April 1967 as a national park; Para Wirra and The Knoll Reserves are being developed as recreational areas, the remainder being reserved for scientific purposes and for the protection of native fauna and flora.

National Pleasure Resorts

The South Australian Government has designated 25 areas throughout the State as national pleasure resorts to be administered by the Director of the Immigration, Publicity and Tourist Bureau. A number of these areas have been developed while others have been preserved in their natural state.

Some are of historical interest (such as Dingley Dell, near Port MacDonnell and the Old Toll House on the Glen Osmond Road). Others, for public recreation, include Loftia Park in the Mount Lofty Ranges. Four have caravan park facilities.

Others include features of scenic interest, such as Tantanoola Cave in the South East and Wilpena Pound in the Flinders Ranges. There are refreshment kiosk facilities at several, including Mount Lofty Summit, Morialta Falls Reserve and Waterfall Gully, all in the hills near Adelaide.

Municipal Parks and Gardens

The City of Adelaide is surrounded by 1,700 acres of parklands, considerable areas of which are devoted to sporting grounds and recreational facilities. In recent years intensive development of garden areas has been carried out and at 30th June 1964 there were 347 acres of gardens. Plantings during the year 1965-66 included 415 trees and 621 shrubs.

Most suburban and country local government authorities maintain parks and gardens within their domain.

SPORTING FACILITIES

In 1964 the National Fitness Council of South Australia conducted a survey of recreational facilities in the metropolitan area. Summarized results of this and earlier surveys are given in the following table.

Recreational Facilities^(a), Metropolitan Area^(b)

Facility	1954	1958	1964
		Acres	
Field sports (c)	2,585	2,497	2,065
Children's playgrounds	95	87	79
Parks and gardens	677	767	630
Other (d)	1,718	1,866	2,981
Total	5,075	5,217	5,755

(a) School recreational facilities and regional reserves such as National Park and Waterfall Gully are excluded.

(b) As defined for Census purposes prior to June 1966.

(c) Includes tennis courts and bowling greens.

(d) Includes race courses, golf courses and areas reserved but undeveloped.

The total of 5,755 acres in 1964 represented approximately 9.5 acres per thousand persons.

Sports Grounds

Adelaide Oval, occupying approximately 15 acres of the north park lands, is leased to the South Australian Cricket Association and is the venue for major cricketing and Australian rules football events.

In addition there are a number of major suburban ovals where feature cricket and Australian rules football matches are played. Among the more important of these is Norwood Oval, which is also the main venue for outdoor night sports, especially baseball. Recently the Olympic Sports Field (previously Kensington Oval) has become the State Headquarters for athletics following the laying of a top-class bituminized rubber athletic track, and this arena is also frequently used for soccer matches.

The park lands of the City of Adelaide are used extensively for sporting purposes and during 1965-66 permits were issued for the use of 232 sports grounds (excluding tennis courts).

Sports grounds are distributed throughout suburban Adelaide, at approximately one to two mile intervals, and throughout country areas. In addition sports areas are available at most State and private schools.

Race Courses

There are three registered suburban courses—Victoria Park, occupying approximately 58 acres of the east park lands, Cheltenham and Morphettville. In addition there were, at the 30th June 1966, 42 registered country courses. Picnic race meetings are held at a number of outlying centres.

Trotting Tracks

Trotting is conducted at the Royal Agricultural and Horticultural Society showgrounds at Wayville. At 30th June 1966 there were also tracks at Gawler and at 12 other country centres. Wayville, Gawler and 7 other country tracks have facilities for night trotting.

Golf Courses

At 30th June 1966 there were 6 suburban public courses including two 18-hole courses and a par-3 links utilizing 248 acres of the north-west park lands, and a course at National Park, Belair.

There were 11 private courses operating within suburban Adelaide and a number of new courses have been, or are being, developed in nearby districts. In addition there are courses at many country centres.

Tennis Courts

The South Australian Lawn Tennis Association's courts at Memorial Drive, North Adelaide occupy approximately 6 acres of the north park lands. These courts were the venue for Davis Cup matches in 1952, 1956 and 1963. In 1965-66 the park lands also contained 152 tennis courts. Courts associated with schools, churches and private clubs exist throughout the State.

Bowling Greens

At 30th June 1966 there were 222 bowling clubs registered in South Australia—64 in and near Adelaide, 151 in country areas, 4 at Broken Hill, N.S.W., and 3 in the Northern Territory.

The size of clubs varied from the 35 rinks at Bordertown to as few as 6 rinks, with the two largest suburban clubs being Holdfast (33 rinks) and Lockleys (32 rinks).

Swimming Facilities

At 31st December 1966 there were 58 public swimming pools in South Australia, of which 48 were in country centres. Of these only 8 country and 2 metropolitan pools had been in use prior to 1950, recent activity having been stimulated by a State Government subsidy on pool construction. Of the 58 pools, 51 had treated water, the remainder were in lakes, dams, rivers or the sea, or utilized sea water.

Swimming pools are also provided at 27 State schools, 15 of these being in country areas. In addition a further five pools are under construction and are expected to be completed for the 1967 season. Swimming facilities are also available at a number of private schools.

The City Baths Olympic Pool, opened in 1940, is the venue for major swimming events. In February 1967 the National Swimming Titles were held at this pool.

The nature of Adelaide's foreshore and that of many country beaches, combined with the prevailing climate, provides ideal conditions for open sea summer bathing.

LOTTERIES AND BETTING

Lotteries

On the 20th November 1965 a referendum was held in South Australia to resolve the question "Are you in favour of the promotion and conduct of lotteries by the Government of this State". Of the 92.5% of enrolled electors who voted, 65.7% voted in favour of the question, 27.1% were not in favour and 7.2% recorded informal votes.

Subsequently in August 1966 a Bill was introduced into the House of Assembly to give effect to the "Yes" vote recorded at the referendum. The State Lottery Act, 1966 provides for the promotion and control of lotteries by the Government of the State. In November 1966 a Lotteries Commission, consisting of a chairman and two other members, was appointed to administer the Act which came into operation by proclamation issued on 8th December 1966.

During early 1967 a central headquarters for the Commission was established and ticket agents were appointed with the first draw taking place in May, 1967.

Betting

Legalized betting in South Australia is restricted to horse racing, trotting and coursing events with betting on coursing events being confined to "open" and "enclosed" meetings for the coursing of live hares. Betting on "speed" coursing—or dog racing—is not sanctioned.

Since 1949, legalized betting has been limited to betting with licensed bookmakers and licensed totalizators on courses where meetings are held and with licensed bookmakers in registered betting premises. Until recently facilities for "off-course" betting have been confined to Port Pirie where eight betting premises have been registered and in which bookmakers are currently licensed to operate.

However, in October 1966, an amendment to the Lottery and Gaming Act, 1936-1966 made provision for the setting up of a totalizator agency board system of off-course betting in South Australia.

A board was appointed to administer the new system and Totalizator Agency Board (TAB) headquarters were established in Adelaide during December 1966. Further premises in the city, suburbs and country towns have been established progressively towards the planned total of over 160 agencies within the State. In addition a system of telephone betting is available to persons who have established accounts with the TAB.

The TAB first operated on 29th March 1967 on a country race meeting whilst it operated for the first time on a metropolitan meeting on 1st April 1967.

6.5. HEALTH

HISTORICAL

The first Health Act in South Australia was passed in 1873. This Act, which was modelled on earlier English legislation, established a Central Board of Health, and a number of town councils were constituted as local boards. Regulations were mainly concerned with improved sanitation and the checking of "epidemic, endemic and contagious diseases". Amendments to this Act followed in 1876 and 1884, and a fourth Act, replacing earlier legislation, was passed in 1898. The present Health Act dates from 1935.

Administration was continued under the authority of the Central Board of Health until 1949 when the Department of Public Health was formed to co-ordinate the work of the board and other health activities.

The first hospital in South Australia was built in 1837. It was a small thatched hut situated on North Terrace near Holy Trinity Church and measured 18 feet by 12 feet. The foundation stone of the first Adelaide Hospital was laid in 1840. This building, which was eventually demolished in 1938, contained two 12-bed wards and four smaller rooms. The first buildings of the present Royal Adelaide Hospital were erected in 1856-57.

Hospitals in the country were established at Mount Gambier in 1869, Wallaroo and Port Lincoln in 1870, Port Augusta in 1875, and Port Pirie in 1890. The Port Adelaide Casualty Hospital was erected in 1882.

The State's first mental hospital, now demolished, was situated in Botanic Park. The Parkside Psychiatric Hospital (now Glenside Hospital) commenced operation in 1870 under the control of the Colonial Surgeon. The Enfield Receiving House and the Northfield Mental Hospital (now Hillcrest Hospital) were established in 1922 and 1929 respectively.

ADMINISTRATION

The administration of health in South Australia is principally under the control of three main authorities—The Department of Public Health, the Hospitals Department and the Commonwealth Health Department. Broadly their activities cover different fields as follows—The Department of Public Health concentrating on general health matters including the prevention of disease, the Hospitals Department on hospitalization, and the Commonwealth Health Department on health on a national basis including national health services and quarantine.

The Department of Public Health embraces the activities of the Central Board of Health, the School Health Branch (including the Deafness Guidance Clinic), the Poliomyelitis Branch, the Food and Drugs Advisory Committee, the Radiological Advisory Committee, the Clean Air Committee, and also the public health aspects of the control of tuberculosis, including the chest clinic and the State X-ray health surveys.

The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouse Registration, and Notification of Births Acts. The board also has responsibilities under the Local Government Act and the Cremation Act.

The Health Act and the Food and Drugs Act constitute every municipal or district council a local board of health or local authority for its area, except that in the metropolitan area, the Metropolitan County Board (representing 20 metropolitan corporations) is the local authority under the Food and Drugs Act. The Central Board of Health acts as a supervisory body over all the 143 local boards under the Health Act, the Food and Drugs Act and the Bakehouse Registration Act. It has concurrent jurisdiction with local boards. Outside the boundaries of local boards the Central Board is the administering authority.

The Hospitals Department administers government hospitals and supervises the work of government subsidized hospitals in South Australia.

Other State authorities concerned with aspects of public health include the Engineering and Water Supply Department which is responsible for water supply and sewerage services, and the Metropolitan and Export Abattoirs Board responsible for the functioning of the metropolitan abattoirs and for the inspection of premises used for merchandising, storing or processing of meat.

Under the Health and Medical Services Act, 1949, an Advisory Council was constituted to investigate and report on matters referred to it by the Minister of Health. The matters may relate to any question concerning health, hospitals, medical services, the training and employment of any class of persons whose work relates to the promotion of health or to the treatment of disease or abnormality of the human body, and any proposals for new legislation relating to any of the matters referred to.

The work of the Commonwealth Department of Health includes the administration of the national health services, including medical, hospital, pharmaceutical

and pensioner benefits. Under the *Quarantine Act 1908-1961* the department is responsible for the various aspects of human, animal and plant quarantine. Persons ordered into quarantine are accommodated at the Torrens Island Quarantine Station.

The South Australian Branch of the Repatriation Department administers the medical services provided for ex-service personnel whose disabilities are accepted as being due to war service.

GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the Hospitals Department, the Repatriation Department, various religious and charitable organizations, local community committees and private owners.

PUBLIC HOSPITALS

The Hospitals Department administers three general hospitals in the metropolitan area—Royal Adelaide Hospital, The Queen Elizabeth Hospital, and Morris Hospital (Tuberculosis). In the country there are government hospitals at Port Pirie, Mount Gambier, Port Lincoln, Port Augusta, Wallaroo and Barmera. In addition there are 50 other hospitals in country areas, conducted by local boards of management, which receive maintenance subsidies from the State Government and come under the general supervision of the Hospitals Department.

Public General Hospitals^(a), South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
Hospitals	65	65	65	65	67
Staff (at end of year)—					
Medical—					
Honorary	607	635	626	657	684
Permanent	220	215	248	283	300
Nursing	3,121	3,194	3,387	3,490	3,727
Attendants and others	3,004	3,368	3,423	3,478	3,587
Patients—					
Admitted and re-admitted	86,683	91,342	96,471	101,918	107,984
Average daily number resident—					
Males	1,209	1,282	1,362	1,410	1,491
Females	1,560	1,619	1,643	1,705	1,804
Revenue—					
State Government aid	10,366	10,007	12,094	14,171	19,681
Commonwealth (b)	1,612	1,833	2,098	2,083	2,097
Fees	4,581	4,941	4,908	5,592	6,205
Other	1,791	2,526	2,066	2,238	2,403
Total	18,350	19,307	21,166	24,084	30,386
Expenditure—					
Salaries	9,633	10,050	11,001	12,763	13,807
Maintenance, etc.	4,757	5,055	5,424	6,040	7,250
Buildings—					
New	2,909	3,183	4,646	4,871	9,617
Repairs	925	916	1,061	1,103	1,142
Total	18,224	19,204	22,132	24,777	31,816

(a) Public hospitals comprise those operated and maintained by State Government or semi-government authorities and those which receive a conditional subsidy or a regular grant from the State Government for maintenance purposes, but exclude those which receive *only* Commonwealth hospital benefits.

(b) Hospital, pharmaceutical and tuberculosis benefits.

Public General Hospitals^(a), South Australia, 1965-66

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Children's Hospital	Other General Hospitals	Total
Staff (at end of year)—					
Medical—					
Honorary	250	95	134	205	684
Permanent	160	81	42	17	300
Nursing	1,257	604	456	1,410	3,727
Attendants and others	1,162	638	598	1,189	3,587
Patients—					
Admitted and re-admitted	24,934	15,580	11,437	56,033	107,984
Average daily number resident	1,054	454	271	1,516	3,295

(a) Public hospitals comprise those operated and maintained by State Government or semi-government authorities and those which receive a conditional subsidy or a regular grant from the State Government for maintenance purposes but exclude those which receive *only* Commonwealth hospital benefits.

Royal Adelaide Hospital

The Royal Adelaide Hospital is a general and casualty hospital for adults and is controlled by a board of three members, with the Director-General of Medical Services as chairman. The hospital, which incorporates a department of dentistry, is a university teaching hospital. Charges are made for in-patient treatment, and patients requiring out-patient treatment at the various clinics are subject to a means test as to eligibility.

In addition to the main hospital there are wards at Magill and Northfield. A section of the Northfield wards is used for infectious diseases cases.

At 30th June 1966 there were 1,275 beds at the hospital including 121 in the infectious diseases wards at Northfield. Extensive building additions and alterations are in hand.

The Queen Elizabeth Hospital

The Queen Elizabeth Hospital at Woodville is a general and casualty and maternity hospital controlled by a board of 3 members with the Director-General of Medical Services as chairman. It is a university teaching hospital, and is of recent origin, opening in 1954 with the completion of a temporary section. Permanent blocks followed in 1957 and 1959.

In 1960 the hospital took over the "Mareeba" babies hospital as its paediatric department.

At 30th June 1966 there were 531 beds at The Queen Elizabeth Hospital.

Queen Victoria Maternity Hospital

The Queen Victoria Maternity Hospital was founded by public subscription, opening in 1902. It is a university teaching hospital.

Controlled by a committee of management the hospital is financially dependent on State Government aid. In 1965-66 State aid constituted 48% and fees from patients 38% of the monies received for maintenance purposes.

Accommodation at 30th June 1966 was 114 beds.

Adelaide Children's Hospital

The Adelaide Children's Hospital was founded by public subscription in 1876 and the first patient admitted in 1879. It is controlled by a board of management and supported by State Government grants, public subscriptions and fees. In 1965-66 the hospital received 59% of its revenue in the form of State Government grants.

Children 14 years and under may receive in-patient and out-patient treatment; however, the provision of out-patient treatment is subject to a means test.

The hospital provides a training school for nurses and instruction for medical students. The University Department of Child Health is situated at the hospital.

The history of the hospital has been marked by continued expansion, the most recent addition being a multi-storied out-patient building completed in March 1964. There were 413 beds at the hospital at 30th June 1966.

HOSPITALS FOR TUBERCULOSIS

The State Government conducts a chest clinic and a tuberculosis hospital in the metropolitan area. At the chest clinic patients are examined and treated, suspected cases are investigated and contacts are advised of precautionary measures and periodically re-examined. The Morris Hospital, Northfield, which at 30th June 1966 had 86 beds, cares for tuberculosis patients received from the chest clinic.

The Kalyra Sanatorium at Belair is conducted by the James Brown Memorial Trust Inc. for tuberculosis sufferers. At 30th June 1966 there were 70 beds at the Sanatorium.

REPATRIATION HOSPITALS

The Repatriation Commission maintains two hospitals in South Australia—the Repatriation General Hospital at Springbank and the auxiliary Repatriation Hospital "Birralee" at Belair.

The Springbank hospital was a military hospital during World War II, coming under the control of the Commission in 1947.

Medical and surgical in-patient treatment is provided for eligible ex-service personnel, eligible dependants and serving members of the forces. The average daily number of patients in the Hospital during 1965-66 was 300 and the staff at the end of the year totalled 551.

The average occupancy of "Birralee" during 1965-66 was 36.

Details of the number of patients treated at Springbank and Belair are given on page 216.

PRIVATE HOSPITALS

There are several large private hospitals in the metropolitan area including Calvary Hospital, the Memorial Hospital and St Andrew's Presbyterian Hospital, all of which are run by denominational bodies. Another large institution is the Home for Incurables at Fullarton which provides accommodation and nursing attention for persons suffering from chronic disease.

Details of all private institutions approved for payment of Commonwealth hospital or nursing home benefits are given in the following table.

Private Hospitals, South Australia

Year	Number of Hospitals	Number of Beds at End of Year	Average Daily Occupancy
1961-62	156	3,440	2,477
1962-63	173	3,755	2,797
1963-64	165	3,983	<i>n.a.</i>
1964-65	179	4,280	<i>n.a.</i>
1965-66	180	4,419	<i>n.a.</i>

n.a.—Not available.

MENTAL HEALTH SERVICES

The Mental Health Services, a division of the Hospitals Department, is responsible for the management of public psychiatric services.

Glenside (formerly Parkside) Hospital, situated on a site of approximately 130 acres, had accommodation for 1,286 patients at 30th June 1966.

Of the patients admitted during 1965-66, 66% were voluntary patients.

Hillcrest Hospital, Northfield, had accommodation for 947 patients including two repatriation wards of 58 beds. A special interest of this hospital is the accommodation of the alcoholic patient.

Psychiatric Hospitals^(a), South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
Staff—					
Medical	16	19	24	27	25
Nursing and attendants	534	566	618	634	652
Patients—					
Admitted and re-admitted (b) ..	609	578	557	477	318
Remaining end of year (b)					
Males	1,342	1,246	1,163	1,067	987
Females	1,067	1,054	912	818	734
Revenue—					
Commonwealth benefits	56	91	105	100	105
Fees, etc.	209	208	219	236	243
Net cost met by State Government	2,327	2,783	3,430	3,679	3,885
Total	2,592	3,082	3,754	4,015	4,234
Expenditure—					
Salaries	1,453	1,557	1,868	2,204	2,401
Maintenance, etc.	905	1,022	1,196	1,267	1,321
Buildings—					
New	38	265	349	157	153
Repairs	196	238	341	387	359
Total	2,592	3,082	3,754	4,015	4,234

(a) Includes Glenside and Hillcrest hospitals, but excludes Receiving House, Enfield and receiving section at Glenside. Transfers from the latter establishments are included in the number of admissions.

(b) Certified only.

The particulars of patients in the above table relate only to those certified patients in the two "long-term" hospitals. Most of the admissions (80% in 1965-66) had first been treated for a few months in either the Enfield Receiving House (88 beds) or the receiving section at Glenside (113 beds) where treatment

is directed towards an early discharge. The fall in certified patients admitted and in hospital is due mainly to the introduction of new, more effective treatment methods and advances in the understanding of mental health problems with a resultant shift in emphasis to treatment at out-patient clinics, the receiving houses, a day hospital, child-guidance clinics and a clinic for the intellectually retarded. Over this period the number of voluntary patients admitted to the hospitals and receiving houses has more than doubled to 2,168 in 1965-66, while the number of direct admissions of certified patients to these four institutions has fallen from 851 in 1961-62 to 642 in 1965-66.

MATERNAL AND CHILD WELFARE

MATERNITY HOSPITALS

In addition to the Queen Elizabeth Hospital and the Queen Victoria Maternity Hospital (see above), there were 14 private hospitals in the suburbs and 5 government and 70 subsidised and private hospitals in country areas which at the end of 1966 were licensed to operate as maternity hospitals.

MOTHERS' AND BABIES' HEALTH ASSOCIATION

The Mothers' and Babies' Health Association was established in 1909. This voluntary body, supported by government subsidy and public subscriptions, conducts maternal and infant welfare work throughout the State. At 271 regular centres Association sisters give advice on the management of babies and infants. Two Baby Health trains make regular visits to country districts and mothers in sparsely settled areas are contacted by correspondence. The Association holds classes for expectant mothers and provides for educational lectures in schools.

The Association's mothercraft hospital (Torrens House), in addition to providing accommodation for mothers and infants, serves as a training school for infant welfare and mothercraft courses.

SCHOOL HEALTH SERVICES

Medical services were first introduced into schools in 1913. Since 1951 all school health services have been the responsibility of a branch of the Department of Public Health.

Medical officers examine children at State schools at approximately three-yearly intervals. During 1966, visits were made to 367 schools and 89,040 children were examined. Where defects are found, the parents are notified and advised to obtain treatment. At Woomera and certain centres on Eyre Peninsula children are examined by local practitioners on behalf of the department.

Dentists with full equipment visit schools in many country areas examining the children and providing treatment where necessary. The department's dental officers examined 3,462 children during 1966. Departmental dentists also attend at institutions of the Children's Welfare Department.

Tests for hearing loss are conducted at schools and kindergartens and where necessary children are referred to the deafness guidance clinic for further tests and advice.

The staff of the School Health Branch at the beginning of 1967 included 11 medical officers, 10 nurses, 12 dental officers, 6 dental assistants, 3 otologists (part-time) and 3 audiometrists.

COMMUNICABLE DISEASES

Under the Health Act, 1935-1966, certain diseases have been designated as "infectious" and others as "notifiable". It is required that cases of infectious and notifiable diseases be reported to the local board of health, which in turn

advises the Central Board of Health, and that cases of tuberculosis and venereal disease be notified directly to the Central Board.

Communicable Diseases: Cases Notified, South Australia

Disease	1961	1962	18 Months ended 30/6/64	1964-65	1965-66
Acute rheumatism	9	10	5	—	4
Diarrhoea, infantile	3	—	40	14	5
Diphtheria	5	4	—	—	1
Dysentery, bacillary	97	46	246	53	200
Encephalitis	11	4	11	4	10
Infective hepatitis	1,406	504	436	349	405
Influenza (epidemic form)	—	—	—	—	—
Malaria	2	1	—	1	1
Meningococcal infection	5	10	6	6	4
Parathyphoid	1	—	11	1	3
Poliomyelitis	44	19	8	1	—
Rubella	66	543	760	745	497
Salmonella infection	36	69	128	141	89
Scarlet fever	129	183	290	164	86
Tetanus	2	—	—	6	—
Trachoma	124	—	77	20	—
Tuberculosis	214	254	306	131	173
Typhoid fever	3	1	7	1	1
Other diseases	8	5	15	10	10

Venereal diseases became notifiable in South Australia from November 1965; prior to this the Director-General of Public Health was empowered to compel a venereal disease suspect to submit to medical examination and treatment. The Department of Public Health maintains a venereal diseases investigation clinic at the Royal Adelaide Hospital.

Poliomyelitis Services

Following the development of Salk vaccine, a poliomyelitis immunization programme was begun in 1956. The programme has corresponded with a dramatic decline in the incidence of poliomyelitis, as illustrated by the table.

Poliomyelitis, South Australia

Year	Cases Notified	Deaths
1950	973	17
1951	1,491	61
1952	709	12
1953	398	22
1954	176	5
1955	182	6
1956	122	3
1957	16	1
1958	10	1
1959	1	—
1960	12	—
1961	44	2
1962	19	2
1963-64 (a)	8	1
1964-65	1	—
1965-66	—	—

(a) 18 months ended 30th June 1964.

All injections were given by the Poliomyelitis Services until 1961 when the vaccine became available to other authorities. In 1964 the vaccine was released for use by private medical practitioners.

Up to the end of 1966, 679,622 first injections, 664,190 second injections, 592,344 third injections and 226,068 fourth injections had been given.

Oral vaccine was first introduced in July 1967 and will eventually almost completely replace the use of Salk vaccine.

Anti-Tuberculosis Campaign

Since March 1952 compulsory X-ray surveys of the population have been conducted in South Australia. With the advent of mobile survey units using miniature radiography it has been possible to X-ray all persons aged 21 years and over every 3 or 4 years. Where necessary persons are subsequently referred to their medical practitioner.

Children in Grade I at all State and certain private schools in the metropolitan area are given a tuberculin test. A further test is made at Grade VII level and where appropriate the children are vaccinated.

Other references appear on pages 197 and 213-214.

OTHER HEALTH SERVICES

Blood Transfusion Service

The Red Cross Blood Transfusion Service collects and classifies blood for the daily needs of hospitals and to meet emergencies. During 1966 donors gave 54,055 individual donations either at the Service's centre or at a mobile unit visiting metropolitan and country centres.

The Service maintains a blood bank at the Royal Adelaide Hospital, and a reference laboratory which, in addition to classifying donors' blood, performs investigations for hospitals and medical practitioners.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60%), the Commonwealth Government (30%) and the Red Cross Society (10%).

Home Nursing

The Royal District and Bush Nursing Society of South Australia, through its 33 branches in metropolitan and country districts, provides nursing facilities to those in need of home nursing. The services of the fully trained nursing staff are provided free of charge to those unable to afford a fee, and to others according to their means. During 1965-66 a total of 153,794 visits were made by 50 full-time nurses.

The Society also maintains a hospital at Marree and a medical centre at Iron Knob.

The Society obtains its revenue from State and Commonwealth aid (59% of total revenue in 1965-66), fees from patients (21%), and legacies, donations, local government aid and other sources (20%).

Flying Doctor Services

People living in outback areas may receive medical attention through the Flying Doctor services. Aeroplanes with doctors and pilots are operated from control centres at Ceduna, Port Augusta and Alice Springs. The centre at Ceduna is maintained by the Bush Church Aid Society and those at Port Augusta and Alice Springs by the Royal Flying Doctor Service of Australia (S.A. Section) Inc. In addition the Bush Church Aid Society maintains hospitals at Cook, Penong, Ceduna, Wudinna, Tarcoola, Coober Pedy and Rawlinna (W.A.), while

the Flying Doctor Service conducts regular medical, dental and ophthalmic clinics at Andamooka, Marree and Oodnadatta.

Settlers with transceiver sets may consult the doctor by contacting the control centre, and the doctor may diagnose and prescribe over the air or may be flown to give direct medical treatment. The radio facilities of the flying doctor services are also used by the School of the Air, various community organizations and for the general relaying of messages.

Ambulance Services

The St John Council for South Australia Inc. has assumed responsibility for providing a full-time ambulance service for the metropolitan area. This service is manned and operated by the St John Ambulance Brigade which also assists in ambulance operation in certain country areas. During 1966 the Brigade's ambulances travelled a distance of 580,880 miles and carried 76,323 patients.

Country ambulance services throughout the State are affiliated with the St John Council.

Voluntary Agencies

There are many other voluntary bodies operating in South Australia and doing health work of a special nature.

Their activities cover such fields as care of the handicapped, hospital services, care of mother and baby, care of the aged and the provision of convalescent facilities.

MEDICAL PERSONNEL

The following table lists registrations with the Medical, Dental, Pharmaceutical, Physiotherapy, and Nurses' Boards of South Australia, and with the Board of Optical Registration.

The figures for registered medical practitioners show the number of persons registered to practise medicine in South Australia and not the number actually practising, which is estimated at approximately two-thirds of those registered. Of those practising in June 1962 it was estimated that slightly less than half were general practitioners, the remainder being specialists or salaried medical officers.

Professional Medical Personnel, South Australia

Number Registered at 31st December

Profession	1962	1963	1964	1965	1966
Medical practitioners (a)	1,821	1,883	2,002	2,080	2,175
Dentists	303	311	311	312	311
Pharmaceutical chemists	740	743	758	783	836
Opticians	90	90	93	89	91
Nurses (b)	6,523	6,879	7,255	7,699	8,065
Nurse aides	98	266	357	466	684
Midwives	2,990	3,016	3,136	3,272	3,353
Mental nurses	297	313	308	(c) 285	(c) 34
Psychiatric nurses	—	—	—	76	419
Mental deficiency nurses	—	—	—	17	361
Infant welfare nurses (d)	379	428	454	484	503
Infectious diseases nurses	48	34	36	34	36
Physiotherapists	413	426	463	492	467

(a) Includes personnel not practising in South Australia.

(b) Nurses may also be registered and included as midwives, psychiatric nurses, mental deficiency nurses, etc.

(c) Affected by change in registration provisions.

(d) Includes mothercraft nurses.

Over the past 20 years there has been a considerable re-organization of general practice with a movement away from single practices to partnership and group practice arrangements.

CREMATORIUMS AND CEMETERIES

The first crematorium in South Australia, the Adelaide Crematorium, was erected by the Cremation Society of South Australia and presented to the State Government in 1903. It was finally closed in November 1959.

Cremations are currently conducted at the Centennial Park Crematorium which was erected in 1956 and is operated by the Centennial Park Cemetery Trust. There were 1,957 cremations in 1966.

Cemeteries in South Australia are divided into three main groups—those under the control of the State Government or local government authorities, those under church control and those under the control of trusts.

In each of the above groups the cemeteries are financed by the usual charges for burials and by the leasing of land for burial purposes. With church and trust cemeteries, the cost of maintenance is often derived from interest accruing from invested capital funds.

STATE GOVERNMENT EXPENDITURE ON PUBLIC HEALTH

The following table shows expenditure by the State Government on various aspects of public health. It includes both the cost of maintaining the various State agencies and the subsidies paid to voluntary organizations active in this field. Expenditure on sewerage, drainage and water supply is excluded.

Net Expenditure by State Government on Public Health, South Australia

Category	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
<i>Care of sick and mentally afflicted—</i>					
Government general hospitals	7,848	8,329	9,273	10,572	11,918
Subsidies to—					
General hospitals (including					
Adelaide Children's					
Hospital)	3,356	3,804	4,470	4,736	5,799
Other	180	242	294	322	321
Mental hospitals	2,696	2,957	3,588	4,114	4,401
Institutions for mentally deficient					
children	137	86	88	236	210
<i>Health of mothers and children—</i>					
Baby health centres	292	247	215	239	231
Maternity homes	245	280	248	823	1,632
Medical and dental examination					
of school children	179	182	222	240	263
<i>Preservation of public health—</i>					
(including Public Health Depart-					
ment and administration of					
Health Acts)	476	434	540	591	609
Total	15,409	16,562	18,938	21,875	25,384

MEDICAL RESEARCH

The Institute of Medical and Veterinary Science

Details of this organization are given under the heading of Scientific Organizations on page 178.

The Anti-Cancer Foundation

The forerunner of the Foundation, the Anti-Cancer Campaign Committee, was formed within the University of Adelaide in 1928. The Committee's early activities were largely devoted to establishing and developing the Radiotherapy Department of the Royal Adelaide Hospital. As demand for these facilities grew the hospital assumed responsibility for routine treatment, and the Committee concentrated its activities on research. In 1962 the Committee was re-organized and became the Anti-Cancer Foundation of the University of Adelaide.

Early research was of a clinical nature, but more recently the Committee and the Foundation have subsidized research projects within the Institute of Medical and Veterinary Science and the various departments of the University.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals. The most recent appeal, in 1962, yielded \$220,000.

The National Heart Foundation

The National Heart Foundation of Australia, together with its South Australian Division, was established in February 1959. The National Heart campaign of 1961 raised \$5,124,000 for the work of the Foundation, of which \$662,000 was contributed in South Australia.

The campaign funds are being spent on research (70%), education (15%) and rehabilitation (15%). Research funds, distributed at the national level, support projects in various departments at the University of Adelaide, and at the Institute of Medical and Veterinary Science, the Royal Adelaide Hospital and the Adelaide Children's Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

To assist in its work in the fields of rehabilitation and public and professional education, the South Australian Division established the National Heart Foundation Centre in 1963.

6.6. SOCIAL WELFARE

The Commonwealth and State Governments and a large number of voluntary agencies minister to the social welfare of the population. The Commonwealth Government is concerned largely with the dispensing of fixed monetary pensions and benefits and with the provision of repatriation services. State agencies operate in the fields of child welfare and the care of Aborigines and distribute emergency relief in contingencies where Commonwealth assistance is not available or proves insufficient. The voluntary agencies, many of which receive Government aid, provide a wide range of services in various fields of social welfare.

COMMONWEALTH PENSIONS AND BENEFITS

EXPENDITURE

The following table sets out Commonwealth Government expenditure on social welfare. This includes social service payments, payments of national health benefits, grants under the Aged Persons Homes Act, and war and service pensions. It should be noted that the figures are for payments to recipients only, and do not include costs of administering the departments concerned.

Commonwealth Expenditure on Social Welfare, South Australia

Type of Benefit	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Social services—					
Aged and invalid pensions (a) .	32,844	33,951	36,120	38,509	39,691
Widows' pensions	2,755	2,917	3,884	4,452	4,802
Child endowment	12,671	12,861	15,916	16,563	16,988
Maternity allowance	690	685	675	666	657
Unemployment benefits	1,786	1,185	751	390	709
Sickness benefits	397	525	508	475	512
Other	332	336	353	355	356
Total social service payments . . .	51,475	52,460	58,210	61,408	63,715
National health benefits	14,567	16,066	17,080	18,948	21,254
Aged persons homes	1,114	878	1,348	1,726	2,389
War pensions (b)	12,048	12,380	13,535	13,240	14,667
Service pensions (b)	2,193	2,487	2,689	2,766	3,025
Total payments	81,397	84,271	92,862	98,088	105,050

(a) Includes allowances to wives of invalids and to wives of invalids on behalf of children.

(b) Includes Northern Territory. Includes pensions paid to dependants.

COMMONWEALTH SOCIAL SERVICES

Brief details of Commonwealth pensions and benefits are given in this section; however in discussing the eligibility of persons for the various payments all the necessary qualifications and exceptions to the general rule have not been delineated. Similarly such terms as "income" and "property" have not been defined. For more complete details reference should be made to the booklet *Commonwealth Social Services* issued by the Department of Social Services.

Historical

The first Commonwealth social service payments were made in 1909 when age pensions of \$1.00 per week, subject to a means test, were introduced. In the following year payments were extended to invalid pensioners.

Maternity allowances were introduced in 1912 and were subject to a means test from 1931 to 1943.

Child endowment was first paid in 1941; however, endowment for the first child and for student children dates from 1950 and 1964 respectively.

Rehabilitation services for invalid pensioners were introduced in 1941 and subsequently extended in 1948 to unemployment and sickness beneficiaries and in 1955 to tuberculosis patients, and young people of 14 and 15 years of age likely to become pensioners.

Widows' pensions were introduced in 1942, funeral benefits in 1943 and unemployment and sickness benefits in 1944. Widow pensioners became eligible for rehabilitation services in 1958.

All Aborigines, except those who are primitive or nomadic, became eligible for age, invalid, and widows' pensions in 1959.

Agreements for reciprocity in social service payments were first signed with New Zealand in 1943 and the United Kingdom in 1953.

Age and Invalid Pensions

Age pensions are payable to men aged 65 and over and women aged 60 and over, who have lived in Australia continuously for a period of 10 years. If a person has completed 5 years but not 10 years continuous residence, but has lived in Australia for periods which, in total exceed 10 years, he may be eligible. Absences from Australia in certain circumstances and residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons aged 16 years and over who have lived in Australia continuously for 5 years and who are permanently incapacitated to an extent of at least 85%, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, 10 years continuous residence is necessary. If a person subject to the 10 year qualification has completed 5 years but not 10 years continuous residence, but has lived in Australia for periods which, in total exceed 10 years, he may be eligible. Absences from Australia in certain circumstances and residence in New Zealand or the United Kingdom may be treated as residence in Australia in qualifying for an invalid pension.

At the 31st December 1966 for both age and invalid pensions the maximum rate payable to an unmarried pensioner, or to a married pensioner whose spouse was not receiving an age or invalid pension, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension, was \$13 per week. The maximum rate for a married couple, both being pensioners, was \$11.75 per week each. The non-pensioner wife of an invalid pensioner, or of an age pensioner who is permanently incapacitated for work or permanently blind, may be granted a wife's allowance of up to \$6 per week. Where the pensioner is an invalid an allowance of \$1.50 per week is payable for each child under 16 years or student child under 21 years. A supplementary allowance of up to \$2 per week may be paid to certain pensioners paying rent and who are entirely or substantially dependent on their pensions.

Payment of the above rates of pension is subject to a means test. Under the means test, provided the annual income plus one tenth of the value of property (in excess of \$400 for a single pensioner or \$800 for a pensioner couple) does not exceed \$520 for a single (unmarried, widowed or divorced) pensioner or \$884 for a pensioner couple, full pension is payable. If the combined income-property figure exceeds \$520 (or \$884) then the pension is accordingly reduced. There are certain items of income and property, including an owner-occupied dwelling, which are exempt from the means test. Blind persons are not subject to the means test except where receiving an allowance for a non-pensioner wife. The child's allowance for the first child of an invalid pensioner is also free of the means test.

Age and Invalid Pensions, South Australia*Number of Pensioners*

At 30th June	Age Pensioners			Invalid Pensioners		
	Males	Females	Total	Males	Females	Total
1962.....	16,700	38,313	55,013	4,181	3,479	7,660
1963.....	16,799	39,430	56,229	4,315	3,612	7,927
1964.....	16,888	40,392	57,280	4,519	3,774	8,293
1965.....	17,018	41,290	58,308	4,603	3,887	8,490
1966.....	17,330	42,148	59,478	4,607	3,914	8,521

Widows' Pensions

Widows' pensions are paid to widows and other women who satisfy certain conditions. There is a means test on income and property.

There are three classes of pensions:—

Class A, a widow with one or more children under 16 years of age or a student child under 21 years in her custody, care and control.

Class B, a widow of at least 50 years of age with no children under 16 years, or student children under 21 years, or a widow of at least 45 years of age who ceases to be eligible for a Class A pension because she no longer has a child in her custody, care and control.

Class C, a widow under 50 years of age who has no children under 16 years of age but is in necessitous circumstances within 26 weeks of her husband's death. If a widow is pregnant, a pension may be continued until the birth of the child when she may qualify for a Class A pension.

For Classes A and B the term "widow" includes a deserted wife, a divorcee, a woman whose husband has been in prison at least 6 months, and a woman whose husband is in a mental hospital.

The normal residential qualification is 5 years' continuous residence immediately prior to claiming a pension; however, this period is reduced to one year if a woman and her husband were living permanently in Australia when he died. Continuity of residence is not considered as broken by certain absences. Residence in New Zealand or the United Kingdom counts as residence in Australia. The means test operates similarly to that for age pensions except that for a Class A widow the property component is relaxed somewhat.

At 31st December 1966 the maximum weekly rates were: for Class A widows, \$17 (including \$4 mothers' allowance) plus \$1.50 for each child; for Class B and C widows, \$11.75. Supplementary assistance of up to \$2 per week may be paid to widows who pay rent and are entirely or substantially dependent on their pension.

Widows' Pensions, South Australia

Number of Pensioners

At 30th June

Class	1962	1963	1964	1965	1966
A	2,220	2,325	2,632	2,868	3,042
B	2,989	3,060	3,208	3,363	3,517
C	9	7	2	10	8
Total	5,218	5,392	5,842	6,241	6,567

Child Endowment

Persons resident in Australia who have the custody, care and control of one or more children under the age of 16 are eligible for child endowment. Approved institutions of which children are inmates are similarly eligible. Endowment is also paid for full-time students between the ages of 16 and 21 years. There is

no means test on child endowment, but one year's residence in Australia may be required if the mother and child were not born here.

At 31st December 1966 endowment was paid at the rate of 50c per week for the first eligible child, \$1 for the second, and \$1.50 for the third and each subsequent eligible child. Endowment of \$1.50 is paid for each child in an institution, and for full-time students between the ages of 16 and 21 years.

Child Endowment^(a), South Australia

At 30th June	Families		Institutions		Total Endowed Children
	Endowed Families	Endowed Children	Number	Endowed Children	
1961	142,663	317,236	51	1,760	318,996
1962	144,375	323,944	53	1,612	325,556
1963	146,377	329,198	55	1,644	330,842
1964	149,449	335,838	57	1,738	337,576
1965	153,461	344,019	54	1,721	345,740
1966	157,204	350,927	55	1,677	352,604

(a) Children under 16 years only. Student endowment commenced 14th January 1964 and was being paid in respect of 15,370 children at 30th June 1966.

Maternity Allowances

Any woman, permanently resident in Australia, who gives birth to a child in Australia, is entitled to a maternity allowance. The amount payable depends on the number of existing children under 16 years of age, and makes special allowance for multiple births. Maternity allowances are not subject to a means test.

At 31st December 1966 a mother with no other children under 16 years of age was entitled to an allowance of \$30; where there were one or two such children the rate was \$32, and where there were three or more such children \$35. An extra amount of \$10 is paid for each additional child in multiple births.

Maternity Allowances, South Australia

Claims granted during year

Category	1961-62	1962-63	1963-64	1964-65	1965-66
Single births—					
No other children under 16 . . .	6,271	6,526	6,812	6,938	7,188
One or two children under 16 . .	9,976	9,904	9,735	9,622	9,493
Three or more children under 16	4,823	4,700	4,317	4,044	3,687
Multiple births—					
Twins	258	226	230	213	223
Triplets	—	1	2	3	3
Total	21,328	21,357	21,096	20,820	20,594

Unemployment and Sickness Benefits

Unemployment and sickness benefits are paid to persons who suffer temporary loss of regular earnings because of unemployment, sickness, or accident. There is a means test on income but not on property.

Persons eligible must be between 16 and 65 years of age (60 for women) with either 12 months residence or the intention to reside permanently in Australia. A person receiving an alternative pension (except a war pension) is ineligible for unemployment and sickness benefits. A married woman is not usually qualified to receive sickness benefit if her husband can support her.

To qualify for unemployment benefit a person must (a) be unemployed and be able to show that unemployment was not due to his being a direct participant in a strike, (b) be able and willing to undertake suitable work, and (c) have taken reasonable steps to secure work, including registration with the Commonwealth Employment Service.

The amount of income which a person may receive and still qualify for the maximum rate of benefit is \$4 per week for an adult or married person under 21, and \$2 per week for a single person under 21. The benefit is reduced by any amount in excess of these figures. For unemployment benefit the income of the claimant's spouse is taken into account.

At 30th June 1966 the maximum weekly benefits payable were \$8.25 for an adult or a married minor, \$4.75 for an unmarried minor 18-20 years of age and \$3.50 for an unmarried minor 16-17 years of age. An additional \$6 weekly was payable for a dependent spouse, and \$1.50 for each child under 16 years. A special benefit may be granted to a person not normally qualified for an unemployment or sickness benefit if he is unable to earn a sufficient livelihood for himself and his dependants.

Unemployment and Sickness Benefits, South Australia

Year	Unemployment		Sickness		Special (a)	
	Admitted to Benefit	Average Number on Benefit (b)	Admitted to Benefit	Average Number on Benefit (b)	Admitted to Benefit	Average Number on Benefit (b)
1961-62	21,834	3,643	5,307	679	172	135
1962-63	11,782	2,244	5,274	760	129	135
1963-64	9,007	1,513	5,553	788	182	141
1964-65	6,711	800	5,685	728	124	131
1965-66	13,593	1,306	6,295	761	164	116

(a) Excludes special benefits to migrants in accommodation centres.

(b) Average number at the end of each week.

Rehabilitation

The Commonwealth Rehabilitation Service assists people who are unable to work because of physical handicap or who have had to give up their employment because of sickness or injury. It aims at helping disabled people to reach their maximum physical fitness and to prepare for suitable employment. The service provides a co-ordinated programme of treatment and training to meet the special needs of each disabled person. Rehabilitation is provided free to persons receiving, or eligible to receive an invalid or widow's pension, unemployment, sickness or special benefit. Recipients of tuberculosis allowance and children of 14 and 15 years otherwise likely to qualify for invalid pension at age 16 are also eligible.

All rehabilitation activities in South Australia are concentrated at the Commonwealth Rehabilitation Centre, Felixstowe. The centre has a treatment capacity of approximately 120, comprising 40 residents and 80 non-residents.

When a person begins treatment he continues to receive his existing pension or benefit plus certain expenses. When vocational training begins the pension or benefit is suspended and a rehabilitation allowance is paid instead. Certain additional allowances may also be paid during the period of training. The rehabilitation allowance for an invalid pensioner or an unemployment, sickness, or special beneficiary is equal to and calculated in the same way as the pension for an invalid pensioner. A widow pensioner receives the same rate as under a widows' pension.

The Commonwealth Employment Service works with the Rehabilitation Service to help find employment for disabled people. Loans may be granted to assist certain persons in the establishment of home employment.

Rehabilitation, South Australia

Year	Number Accepted for Rehabilitation	Number Placed in Employment	Expenditure (a)
			\$
1961-62	217	132	204,368
1962-63	286	183	198,102
1963-64	249	216	211,724
1964-65	271	228	212,642
1965-66	298	187	203,382

(a) Excludes capital expenditure by the Department of Works on sites and buildings, and administrative cost of the Rehabilitation Service.

Funeral Benefits

A funeral benefit is payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a person who, but for his death, would have been granted an age or invalid pension.

A funeral benefit is also payable in respect of deceased tuberculosis allowees or claimants for tuberculosis allowance who, but for their claim for tuberculosis allowance, would otherwise have been eligible for a pension.

At 31st December 1966 the maximum benefit payable was \$20, or \$40 if the person responsible for the funeral was a pensioner.

During 1965-66, 3,751 claims for funeral benefits were granted in South Australia.

Homes for the Aged

The Aged Persons Homes Act provides that grants may be made to certain organizations towards the capital cost of erecting or purchasing approved homes for aged people. Church, charitable and ex-servicemen's organizations as well as any other organization approved by the Governor-General are eligible.

Grants may not exceed two thirds of the capital cost of the home including land or twice the amount (excluding borrowings and other government grants) raised by the organization towards the capital cost, whichever is the less.

At 30th June 1966, 277 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, \$11,039,211, was associated with the accommodation of 4,298 persons.

Reciprocal Agreements

Agreements for reciprocity in the payment of certain pensions and benefits exist with New Zealand and the United Kingdom. The reciprocal agreements cover age, invalid and widows' pensions, child endowment, unemployment and sickness benefits and the comparable social service benefits payable in these countries.

NATIONAL HEALTH SERVICES

Expenditure

The following table shows Commonwealth Government expenditure from the National Welfare Fund on the various aspects of the national health services. The amounts shown are the direct costs of these benefits and services and do not include the cost of administering the services.

National Health Services Expenditure, South Australia

Type of Benefit	Year First Paid	1961-62	1962-63	1963-64	1964-65	1965-66
				\$'000		
Hospital benefits	1946	3,932	4,448	4,998	5,160	5,458
Medical benefits	1953	2,371	2,645	2,820	4,274	4,978
Pensioner medical service ...	1951	780	845	896	898	1,285
Pharmaceutical benefits	1948	4,283	4,669	4,900	5,110	5,670
Pensioner pharmaceutical benefits	1951	1,659	1,841	1,908	1,987	2,289
Anti-tuberculosis campaign ..	1947	856	892	838	743	755
Free milk for school children	1951	663	711	705	757	799
Miscellaneous	—	23	15	15	19	20
Total	—	14,567	16,066	17,080	18,948	21,254

Hospital Benefits

The Commonwealth pays hospital benefits to patients in approved hospitals and nursing homes under the following arrangements—

- (a) Patients insured with a registered benefit organization and in an approved hospital receive a benefit (\$2 per day at 31st March 1967) paid through the organization. Details of registered organizations are given on page 223.
- (b) Uninsured patients are entitled to a benefit (80c per day) which is deducted from the patient's account and paid by the Commonwealth to the hospital.
- (c) Pensioners enrolled with the pensioner medical service and their dependants in public wards of public hospitals are entitled to a special benefit (\$5 per day) which is paid to the hospital, no further charge being made on the pensioner by the hospital.

A Commonwealth nursing home benefit is paid for all qualified patients in approved nursing homes, whether the patient is insured or not. The benefit is deducted from the patient's account and paid by the Commonwealth to the nursing home. At 30th June 1966 this benefit was \$2 per day. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

Hospital Benefits, South Australia

Year	Procedure to 31st December 1962 (a)		Current Procedure			Total (b)	
	Ordinary Benefits	Additional Benefits	Hospitals				Nursing Home Patients
			Insured Patients	Uninsured Patients	Pensioner Patients		
			\$'000				
1961-62	1,614	1,802	—	—	—	3,416	
1962-63	914	1,346	614	58	358	3,906	
1963-64	—	—	1,846	130	1,008	4,618	
1964-65	—	—	1,921	122	1,099	4,920	
1965-66	—	—	1,977	118	1,191	5,191	

(a) During this period the Commonwealth paid ordinary benefits of 80c or \$1.20 per day to all patients, and additional benefits of 40c, 80c, or \$1.20 per day to members of registered hospital benefit organizations.

(b) Excludes amounts paid to special account deficits (these being reimbursements to registered hospital benefit organizations for losses incurred on chronic or pre-existing ailments and long-term illness and advances in respect of these deficits).

Medical Benefits

Commonwealth medical benefits are paid in respect of medical expenses incurred by persons who are contributors to registered medical benefits organizations or by the dependants of such contributors. The benefits are normally paid through the organizations to the contributor upon receipt of a medical practitioner's account. Medical benefits organizations, with minor exceptions, also pay a fund benefit equal to or greater than the amount of the Commonwealth benefits. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

At 30th June 1966 Commonwealth medical benefits ranged from 80c for a general practitioner consultation to \$60 for certain major operations.

Commonwealth expenditure on medical benefits in this State in 1965-66 was \$4,933,000, representing 39.4% of the cost of medical services for which benefits were payable. An additional \$45,000 was paid by the Commonwealth to registered benefit organizations to cover losses incurred in paying benefits in cases of chronic or pre-existing ailments and long-term illness.

Further details of medical benefits organizations are given on pages 223-224.

Pensioner Medical Service

The pensioner medical service is a general practitioner service provided free of charge to eligible pensioners and their dependants. The service does not extend to specialist treatment, general anaesthetics or the treatment of fractures. Doctors participating in the service are remunerated by the Commonwealth on a concessional fee basis.

In addition to the general practitioner service, a full range of medicines is available free of cost upon presentation of a doctor's prescription.

Persons eligible for the pensioner medical service are those receiving an age, invalid, widows' or service pension, and persons receiving a tuberculosis allowance. Dependent wives and children are also entitled to the benefits of the pensioner medical service.

Pensioner Medical and Pharmaceutical Benefits, South Australia

Year	Number of Pensioners and Dependants (a)	Commonwealth Payments for Services		
		Medical	Pharmaceutical	Total
	'000		\$'000	
1961-62	72	780	1,658	2,438
1962-63	75	844	1,840	2,684
1963-64	77	896	1,908	2,804
1964-65	79	898	1,987	2,885
1965-66	92	1,285	2,289	3,574

(a) Enrolled at end of year.

Pharmaceutical Benefits

Under the Pharmaceutical Benefits Scheme certain medicines, when prescribed by a doctor are made available to the general public upon the payment of a 50c fee and to pensioners free of cost. The drugs and medicinal preparations available as pharmaceutical benefits are determined on the advice of the Pharmaceutical Benefits Advisory Committee which also recommends the maximum quantities that can be prescribed. Pharmaceutical benefits are normally obtained through registered pharmacists but most public hospitals may also supply pharmaceutical benefits, as may doctors and certain recognized organizations in isolated areas.

Pharmaceutical Benefits (a), South Australia

Year	Number of Benefit Prescriptions	Cost of Benefit Prescriptions		
		Total Cost	Patients' Contributions	Net Cost to Commonwealth
	'000		\$'000	
1961-62	2,364	5,047	1,180	3,867
1962-63	2,774	5,612	1,386	4,226
1963-64	<i>n.a.</i>	5,661	1,480	4,181
1964-65	<i>n.a.</i>	5,900	1,536	4,364
1965-66	3,362	6,730	1,679	5,051

(a) Excludes pensioner benefits.

n.a.—Not available.**Anti-Tuberculosis Campaign**

Since 1948 the Commonwealth has paid for all additional capital expenditure on tuberculosis clinics and hospitals and for any increase in the cost of diagnosis, treatment, and control of tuberculosis.

The Commonwealth also pays allowances to people suffering from tuberculosis to encourage them to give up work and undergo treatment. The allowances are subject to a means test on income. The maximum income permitted before allowances are affected is \$7 per week for a single person and \$14 for a married person.

At 31st March 1967 the allowance for a married person with dependent wife was \$26.75 plus \$1.50 for each dependent child under 16 years. A single person without dependants, if not hospitalized, received \$16.25 or if receiving hospital treatment free of charge \$13. Widows or widowers with dependent children under 16 years receive \$17.

Anti-Tuberculosis Campaign, South Australia

Commonwealth Expenditure	1961-62	1962-63	1963-64	1964-65	1965-66
			\$		
Allowances paid to sufferers	165,610	139,674	128,460	117,000	100,595
Maintenance expenditure (a)	715,912	778,140	736,482	666,000	689,628
Capital expenditure (b)	92,454	26,666	29,770	13,000	13,597
Total	973,976	944,480	894,712	796,000	803,820

(a) Includes administrative expenses not paid from National Welfare Fund.

(b) Paid from Commonwealth Consolidated Revenue Fund.

Free Milk for School Children

A Commonwealth reimbursement to the State Government permits the free distribution of one third of a pint of milk daily to school children attending public and private primary schools, kindergartens, creches and Aboriginal missions.

The State Government administers the scheme and the Commonwealth meets the cost of milk supplied and half the cost of capital, administrative and incidental expenditure. At 30th June 1966 the approximate number of children eligible to participate in the scheme in South Australia was 185,000 while the cost of the milk supplied during 1965-66 was \$798,931.

REPATRIATION BENEFITS

War Pensions

War pensions are paid by way of compensation to ex-servicemen and women who have suffered incapacity due to war service and to their eligible dependants, and to the dependants of those who have died due to war service.

There are four main classes of war pensions.

The special (T.P.I.) rate (\$28.50 at 30th June 1966) is payable to those who are deemed totally and permanently incapacitated.

The intermediate rate (\$20.25 at 30th June 1966) is payable to an ex-serviceman who, because of the severity of his war-caused incapacity, can work only part-time or intermittently and in consequence is unable to earn a living wage.

The general rate is payable to those who suffered war-caused disabilities but still retain some earning capacity. The pension payable depends on the degree of incapacity, the maximum at 30th June 1966 being \$12 per week. Pensions are also payable for a wife and each child under 16 years of age under both special and general pensions.

The widows' rate is payable to widows of ex-servicemen who died as a result of war service, and to any children under 16 years of age. An additional domestic allowance is payable to certain classes of widows. At 30th June 1966 the widows' rate was \$12 and the domestic allowance \$7.

War Pensions^(a), South Australia^(b)

Year	Pensions in Force at End of Year				Expenditure
	Incapacitated Ex-Servicemen	Dependants of Incapacitated Ex-Servicemen	Dependants of Deceased Ex-Servicemen	Total	
	Number				\$'000
1961-62 ..	20,961	42,459	4,821	68,241	11,158
1962-63 ..	21,037	40,657	4,871	66,565	12,348
1963-64 ..	21,106	39,462	5,033	65,601	13,500
1964-65 ..	21,104	37,711	5,016	63,831	13,209
1965-66 ..	20,969	35,566	5,033	61,568	14,633

(a) Excludes pensions payable under Seaman's War Pensions and Allowance Act, Interim Forces Benefits Act, Native Forces Benefits Act; and various Cabinet decisions.

(b) Includes Northern Territory.

Service Pensions

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of 60 years (55 for women) or who are permanently unemployable. They are also paid to ex-servicemen suffering from pulmonary tuberculosis. The service pension is equivalent in amount to the social services age and invalid pensions and is subject to the same means test. It also confers eligibility for a full range of medical and dental treatment. The dependants of permanently unemployable or tuberculosis pensioners may continue to receive their appropriate allowance upon the death of the pensioner.

Service Pensions, South Australia^(a)

Year	Pensions in Force at End of Year				Expenditure
	Ex-Servicemen	Dependants of Pensioner Ex-Servicemen	Dependants of Deceased Pensioners	Total	
	Number				\$'000
1961-62 ..	4,639	1,262	312	6,213	2,194
1962-63 ..	5,028	1,334	312	6,674	2,486
1963-64 ..	5,159	1,340	323	6,822	2,689
1964-65 ..	5,202	1,222	328	6,752	2,766
1965-66 ..	5,200	1,238	342	6,780	3,025

(a) Includes Northern Territory.

Medical Services

The Repatriation Department provides in-patient treatment, general practitioner services, certain specialist facilities, pharmaceutical benefits and dental treatment for certain eligible persons. A comprehensive rehabilitation and social worker service is also available.

Medical treatment is provided for all disabilities due to war service and for pulmonary tuberculosis. General medical services are also available to service pensioners, war pensioners receiving the special, intermediate or maximum general rates, widows and dependants of ex-servicemen (whose death was due to war service), and nurses who served in the 1914-18 war.

In-patient treatment is provided at the Repatriation General Hospital, Springbank. Facilities at the Outpatient Clinic, Keswick, include radiological, pathological, and physiotherapy services in addition to medical specialist examinations. The Repatriation Department also maintains an auxiliary hospital, "Birralee", at Belair, a section of which is set aside for the treatment of tuberculosis patients. The Repatriation Artificial Limb and Appliance Centre, as well as attending to repatriation needs, provides appliances and services for other Government departments and certain philanthropic organizations.

Repatriation: Medical Services, South Australia^(a)

Year	In-Patients : Total Treated			Out-Patients : Number of Visits			Pharma- ceutical Benefits
	Springbank	Birralee	Other Hospitals	Keswick Clinic	Other Institutions	Visits to or by Medical Officer	
	Number						\$
1961-62	4,669	102	604	47,442	5,663	162,079	695,694
1962-63	4,478	134	767	46,056	7,833	197,171	881,948
1963-64	4,748	138	696	45,060	15,651	198,559	880,226
1964-65	4,994	105	774	43,733	11,966	204,658	955,966
1965-66	5,147	163	817	44,067	15,149	192,120	1,032,979

(a) Includes Northern Territory.

Education and Training

Assistance in education and training is provided, through the Repatriation Department, for children of ex-servicemen whose death, blindness or total and permanent incapacity was the result of war service. The Soldiers' Children Education Board guides and supervises the progress of children receiving such assistance (see page 158).

In certain circumstances vocational training is also provided for disabled ex-servicemen and widows of ex-servicemen.

Assistance is generally through the payment of allowances and fees, and the provision of books and equipment.

Other Services

Other assistance, through the Repatriation Department, includes gift cars for certain disabled ex-servicemen, aids for blinded ex-servicemen, tools-of-trade grants for trainees and business re-establishment loans. Funeral grants of \$50 are paid upon the death of certain ex-servicemen and dependants.

STATE WELFARE SERVICES

EXPENDITURE

The following table shows expenditure by the State on welfare services. This expenditure includes the work of the Department of Social Welfare and the Department of Aboriginal Affairs, the provision of transport concessions, and grants made to private welfare organizations.

State Expenditure on Welfare Services, South Australia
Net Cost of Services including Works, Buildings, Etc.

Service	1961-62	1962-63	1963-64	1964-65	1965-66
	\$				
Relief of destitute, aged, etc.	873,628	826,570	831,966	886,234	1,012,504
Child welfare—					
Institutions (a) ...	415,582	414,478	509,052	624,504	682,356
Other	367,932	367,700	410,910	450,910	530,829
Care of Aborigines ..	889,454	896,566	1,008,056	1,079,032	1,258,772
Other	75,888	118,988	121,318	79,407	176,429
Total	2,622,484	2,624,302	2,881,302	3,120,087	3,660,890

(a) Excludes reformatories.

CHILD WELFARE AND PUBLIC RELIEF

The first official activity for the social welfare of children and adults was taken soon after colonization. The early State immigration authorities cared for new arrivals, and sometimes immigrants were accommodated temporarily in tents on the parklands. A more permanent solution of the problems of the destitute came with the first Destitute Persons Relief Act in 1842. In 1867 a Destitute Board was formally appointed. This body assumed responsibility for the welfare of both children and adults. In 1886 a State Children's Council was formed to deal with children, whilst the Destitute Board continued with its other work. The Children's Welfare and Public Relief Board was created by the Maintenance Act, 1926, to do the work of both these earlier authorities.

The Chairman of the Board was the permanent head of the Children's Welfare and Public Relief Department. In 1965 a new portfolio of Minister of Social Welfare was created. Subsequently the Children's Welfare and Public Relief Board was abolished under the Social Welfare Act, 1926-1965, and its powers and functions vested in the Minister of Social Welfare, a body corporate under the Act. The department is now the Department of Social Welfare with the Director of Social Welfare as the permanent head.

In addition to its head office at Adelaide, the department maintains district offices at Port Adelaide, Port Augusta, Mount Gambier, and Elizabeth. Field officers work throughout the State.

Care and Supervision of Children

One of the major functions of the department is the care and supervision of State children, these being children committed to the department, either directly to a departmental institution or generally to the control of the Minister. A child up to 18 years may be charged with an offence or with being a neglected or uncontrolled child. In any of these cases he may be made a State child. In most cases the committal is until 18 years but a child between 16 and 18 years may be committed for any period between one year and two years provided that period does not expire before he reaches 18 years. Where it is for the child's benefit committal may be extended until 21 years or, in special cases for girls, beyond 21 years. Delinquent children may receive training in one of the reformatories; neglected children may be cared for temporarily at other institutions. Uncontrolled children may be placed in reformatories or other institutions depending on the circumstances.

The boys' reformatory at Magill and a reformatory for junior boys at Campbelltown are at present the only proclaimed reformatories for boys in South

Australia. A new reformatory was completed in the first half of 1967 at the Magill site. There are two proclaimed reformatories for girls. One is Vaughan House at Enfield, where a new building with modern accommodation and training facilities for approximately 70 girls was completed in 1965. This is the general reformatory for girls and is controlled and operated by the department. The other girls' reformatory, the Home of the Good Shepherd at Plympton conducted by the Sisters' of the Good Shepherd Congregation, is a proclaimed private reformatory controlled by the Minister for the training and rehabilitation of delinquent girls belonging to the Roman Catholic Church.

Neglected boys may be committed to the Glandore Children's Home while girls and very young children of both sexes are accommodated at Seaforth Home, Somerton Park. Children may be transferred to other departmental homes or institutions for care and training. Altogether the department had 20 official reformatories, other institutions and homes for children at the end of June 1966. These include Lochiel Park, a training centre for retarded boys, Struan Farm, a rural training centre at Naracoorte, two boys' hostels and two girls' hostels for selected older children attending school and six cottage homes where small groups of children of both sexes live in a family-like atmosphere. A new remand home at Glandore is used to accommodate delinquent and neglected children of both sexes in four separate sections.

It is the policy of the department to place children out of institutions as soon as possible. They may be allowed to live in their own homes under supervision or be placed in approved foster homes. In the larger institutions for neglected children and in the reformatories, departmental placing committees consider the circumstances of each child regularly and make recommendations regarding action to be taken for the child's benefit and welfare.

Details of the number of children committed to the department in recent years are given in the table below. Of the 677 children committed during 1965-66, 186 were girls, of which all but 41 were neglected or uncontrolled. Girls constituted approximately one third of all State children at 30th June 1966.

State Children ^(a), South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
Number of children newly committed during the year—					
Convicted of offences	276	362	371	406	403
Neglected	138	126	192	167	206
Uncontrolled	76	67	72	64	52
Truant	9	14	20	12	16
Total	499	569	655	649	677
Number of State children at 30th June—					
Children in departmental institutions	400	426	515	564	532
Children not in institutions	1,686	1,840	1,972	2,078	2,237
Total	2,086	2,266	2,487	2,642	2,769

(a) Excludes children on remand, not committed (739 on remand during 1965-66).

The department has a field staff of welfare officers and probation officers to supervise children living in the community. Welfare officers

investigate allegations that children are neglected, ill-treated or uncontrolled. Family casework is carried out with a view to improving the circumstances of children and their parents. The homes of illegitimate children under twelve years of age and other children of that age not living with near relatives are visited. In addition to supervising committed delinquent children, probation officers also supervise children placed by Juvenile Courts on bonds where supervision is ordered. Children may be placed voluntarily by their parents or guardians under the supervision of departmental probation officers.

During 1965-66, in addition to State children 559 children were placed on bonds requiring supervision by departmental officers; the total number of such children under supervision at 30th June 1966 being 990. A total of 264 children was under voluntary supervision. In addition to the above, 3,722 other children were subject to visitation by officers of the department.

Welfare officers and probation officers are also appointed as attendance officers under the Education Act to assist in the detection and prevention of school truancy. Medical and other specialists including psychologists are employed within the department.

Licensing of Maternity Homes, Foster Parents, and Children's Homes

Every foster parent caring for a child under 12 years of age for gain or reward must be licensed by the department. The children who are fostered are visited by departmental officers. Maternity homes must also be licensed. Under the Social Welfare Act, 1926-1965, every children's home providing permanent care for children under 12 years of age must also be licensed by the department.

Adoptions

Orders for the adoption of children under 21 years may be granted only by an Adoption Court, but inquiries as to the suitability of adoption applicants are made by the department. The Courts are required to notify the Director of all applications received, and he is empowered to tender evidence and address the court in the interests of the child. In practice most adoption cases in the State are dealt with directly by the department. Where the identity of either or both of the parties is not to be disclosed, preliminary arrangements for the adoption must be made through the Director.

Number of Adoptions, South Australia

Age of Child	1961-62	1962-63	1963-64	1964-65	1965-66
Under one year	351	404	400	506	551
One year and under two	29	37	27	24	39
Two years and under seven	103	119	107	94	81
Seven years and over	108	84	85	93	112
Total	591	644	619	717	783

Immigrant Children

The department makes inquiries regarding accommodation and supervision of proposed migrants under 21 years of age, who will not be living with a parent or near relative. Under the Commonwealth Immigration (Guardianship of Children) Act, the Minister becomes guardian of these children who numbered 40 at 30th June 1966.

Legal Services

Prosecutions for neglected, ill-treated and uncontrolled cases are carried out by departmental officers who may also appear in Court where State children are involved. The department assists the Courts by providing reports on the circumstances of children whose cases are considered by the Courts.

The department assists deserted wives and others to obtain maintenance from their husbands. When negotiations fail, legal proceedings may be instituted to obtain Court orders for protection, separation, custody of children and maintenance. The department collects and pays to deserted wives about 1,100 separate amounts weekly. Assistance is given to mothers of illegitimate children in affiliation cases.

Public Relief

The department issues relief to those in destitute circumstances. This relief is issued mainly in cash, although occasionally an order for accommodation or food may be issued. During 1965-66 relief was issued to 2,864 applicants, representing 9,330 persons. Deserted wives accounted for 29% and unemployed for 30% of the total cases issued with relief.

The department maintains a home at Magill for destitute or necessitous adults, mostly pensioners. The daily average occupancy of the Magill home was 191 during 1965-66.

To deal with cases of emergency the department has a staff of housekeepers who are provided for full-time service in homes where there are children and the mother is temporarily sick or incapacitated. A charge is made for this service.

Expenditure

Details of expenditure by the department in its various functions are given in the following table.

Department of Social Welfare, South Australia
Net Cost to Consolidated Revenue

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$				
<i>Payments:</i>					
General administration	113,738	123,898	140,950	163,974	211,843
Supervision and maintenance of children—					
In institutions	706,588	719,438	792,942	908,174	1,081,914
Placed out	273,300	286,348	313,808	343,018	393,067
Outdoor relief	430,468	331,662	324,888	307,866	411,252
Indoor relief at Magill home ..	322,390	332,000	342,438	371,742	397,203
Other	163,608	170,830	206,568	301,980	285,021
Total	2,010,092	1,964,176	2,121,594	2,396,754	2,780,300
<i>Receipts</i>	298,110	348,220	372,434	394,218	385,228
Net cost to Consolidated Revenue	1,711,982	1,615,956	1,749,160	2,002,536	2,395,072

ABORIGINAL WELFARE

Aboriginal welfare in South Australia is administered by the Minister of Aboriginal Affairs, under legislation provided in the Aboriginal Affairs Act, 1962-1967. This Act aims at promoting the welfare of full-blood Aboriginals and other persons with Aboriginal blood by providing facilities for guidance in all

matters—business, domestic or social—and in some instances by providing financial assistance.

Although all Aborigines and persons of Aboriginal blood are entitled to assistance, they are not obliged to accept it and may if they desire continue to live according to age-old customs.

Training in manual skills is provided and when an appropriate stage of development has been reached, employment is found in urban or country districts. If necessary, houses are built and let at a rental appropriate to the tenant's means.

When it is desirable for purposes of education, or because of the home environment, contributions are made towards the cost of maintenance of children placed in foster homes or institutions. Secondary education is encouraged and financial assistance is given where required.

Relief either in the form of money or goods is made available—

- (a) to supplement food of the near primitive people residing in pastoral areas, and
- (b) to unemployed, sick, infirm, widowed, or aged, where social service benefits are not available.

Aborigines are eligible to receive Commonwealth social service benefits and assistance is given in lodging applications and in the proper use of funds so provided.

The Department of Aboriginal Affairs maintains reserves at Point Pearce, Point McLeay, Gerard, Coober Pedy, North-West Reserve, Koonibba and Port Augusta, and financial assistance is granted to church missions assisting Aboriginal people. A home for Aboriginal women is conducted by the department at North Adelaide.

Aboriginal Welfare: Cost of Services, South Australia, 1965-66

Item	General	Reserves							Total
		Point Pearce	Point McLeay	Davenport	North-West	Coober Pedy	Gerard	Koonibba	
<i>Payments :</i>		\$							
Food, clothing, medical, educational, etc. . . .	79,257	4,299	2,257	5,716	2,974	2,201	2,740	828	100,272
Employment of Aborigines . .	22,312	64,365	36,411	43,981	16,176	5,526	39,954	29,766	258,491
Maintenance of Children in homes and institutions . .	73,101	—	—	—	—	—	—	—	73,101
Grants to non-departmental missions	5,478	—	—	—	—	—	—	—	5,478
Purchases of land, buildings, plant and equipment	141,302	35,464	24,892	97,030	61,743	10,760	32,864	43,860	447,915
Salaries of administrative, welfare and supervising officers	180,867	21,398	19,328	15,451	15,797	7,844	17,488	16,918	295,091
Other	92,649	31,455	26,252	22,596	25,513	8,246	16,088	33,990	256,789
Total	594,966	156,981	109,140	184,774	122,203	34,577	109,134	125,362	1,437,137
<i>Receipts</i>	51,462	65,615	13,089	3,529	3,757	262	13,525	12,767	164,006
Net cost to State Government	543,504	91,366	96,051	181,245	118,446	34,315	95,609	112,595	1,273,131 (a)

(a) Total cost varies from that shown in the table on page 217 by the inclusion of expenditure on payroll tax and superannuation.

Legislation passed by the State Parliament in the last two years specifically affecting Aborigines includes the removal of the prohibition on the sale of alcoholic liquor to Aborigines, the establishment of the Aboriginal Lands Trust to ensure land rights to Aborigines, the establishment of Aboriginal Reserve councils and an Act to prohibit the discrimination against persons by reasons of their race and colour.

The Commonwealth Government is prohibited by the Constitution from making law specifically for "the aboriginal race in any State". However, the referendum held on 27th May 1967 and approved by a large majority of voters empowers the Commonwealth Government to remove the prohibition from the Constitution.

At the 1961 Census there were 2,147 persons of predominantly Aboriginal blood resident in South Australia and a further 2,737 persons of half Aboriginal blood. Persons of less than half-blood were not enumerated as such, but it is estimated that there are currently in excess of 6,000 persons in this State who have at least some Aboriginal blood.

OTHER WELFARE ACTIVITIES

The State Government has an agreement with various transport authorities for the carriage of certain disabled persons, pensioners and ex-servicemen on public transport either free of charge or at a reduced fare. The cost to the Government of this service in 1965-66 was \$512,000, which included fare concessions of \$312,500 to pensioners, \$20,000 to blind persons, and \$164,400 to blind and incapacitated ex-servicemen.

The Government through the Chief Secretary also makes annual grants to various charitable agencies and institutions. In 1965-66 these included \$72,000 to the Royal Institution for the Blind, \$20,000 to the Institution for the Blind, Deaf and Dumb, \$16,000 for Meals on Wheels and \$36,000 for Aged Homes Assistance.

PRIVATE WELFARE SERVICES

There are numerous charitable and benevolent organizations working within South Australia. A large proportion of these derive at least part of their revenue from regular donations, subscriptions and income from bequests; nearly all derive revenue from special functions. A number also receive Commonwealth, State or local government grants.

The Collections for Charitable Purposes Act, 1939-1947, requires the registration of charitable organizations before they may actively solicit funds.

Organizations which have a wide range of activities include the Australian Red Cross Society, the welfare bureaux and missions of the various churches, and organizations catering for ex-servicemen and their dependants. Most of such agencies maintain full-time staff and generally employ professional social workers. Other organizations cater for more specific needs, covering a wide range of physical and sociological disabilities. This includes the care of physically and mentally handicapped persons such as crippled children, the blind, deaf-mutes and alcoholics; also of specific groups such as aged persons, Aborigines and migrants. Many of these organizations depend largely or entirely on voluntary aid.

For details of the numerous bodies concerned with social welfare, reference should be made to the *Directory of Social Agencies* published jointly by the South Australian Council of Social Services and the Department of Public Health.

For those in need, the Citizens' Advice Bureau advises on how to benefit from and how to use wisely the many services provided by the Commonwealth and State Governments and the various voluntary organizations.

REGISTERED MEDICAL AND HOSPITAL ORGANIZATIONS

Commonwealth medical benefits and certain hospital benefits operate on the principle of Commonwealth support of voluntary insurance towards meeting medical and hospital expenses. For access to these benefits persons must be insured with a registered organization. These are non-profit organizations and include a number of Friendly Societies. In most cases both medical and hospital benefits are provided by the one organization.

For hospital benefits the contributions (premiums) depend on the scale of fund benefits required, with separate rates for single persons and for married persons and their dependants.

Registered Hospital Organizations, South Australia

Particulars	Unit	1961-62	1962-63	1963-64	1964-65	1965-66
Registered organizations (a) ..	No.	13	13	13	13	13
Membership (a)	'000	336	350	367	382	387
Estimated persons covered (a)	'000	786	822	877	920	932
Fund benefits paid	\$'000	3,820	4,394	4,551	5,328	5,941

(a) At end of period.

Although a number of different scales of benefit are available from registered medical organizations, there is one scale which is used predominantly; at 1st January 1967 this provided benefits (to which Commonwealth benefits were added) ranging from 80c for a general practitioner consultation to \$90 for certain major operations. Contributions can be made to give either individual or family cover.

Details of registered medical organizations are given below. The number of members has increased steadily over the past ten years from 170,000 at 30th June 1956 to 356,000 in 1966. In this period the number of professional services per member has increased from 6.96 in 1955-56 to 8.93 in 1965-66.

Of the costs of medical services for which benefits are payable, the percentage met by members of registered organizations has decreased from 32.4% in 1963-64 to 22.9% in 1965-66; this has been due to the introduction, on 1st June 1964, of a new schedule which provided for increased Commonwealth benefits and to increased fund benefits for increased contributions introduced by the registered organizations on 1st April 1965. The percentage of cost met by the Commonwealth benefit increased over the same period from 29.2% to 39.4% and that met by the fund fell slightly.

Registered Medical Organizations, South Australia

Particulars	Unit	1961-62	1962-63	1963-64	1964-65	1965-66
Registered organizations (a) ..	No.	8	8	8	8	8
Membership (a)	'000	291	309	330	349	356
Estimated persons covered (a)	'000	707	769	819	867	886
Cost of medical services—						
Met by fund benefit (b)	\$'000	2,993	3,394	3,657	4,013	4,712
Met by Commonwealth benefit (b)	\$'000	2,345	2,607	2,781	4,230	4,933
Met by insured member	\$'000	2,496	2,816	3,095	3,111	2,869
Total	\$'000	7,834	8,817	9,533	11,354	12,514
Fund benefits for ancillary services (c)	\$'000	134	101	109	190	223
Professional services per member—						
General practitioner	No.	5.84	6.20	6.05	6.23	6.29
Other	No.	2.28	2.52	2.30	2.41	2.64
Total	No.	8.12	8.72	8.35	8.64	8.93

(a) At end of period.

(b) The Commonwealth figure excludes amounts paid to special account deficits (these being reimbursements to registered benefit organizations for losses incurred on chronic or pre-existing ailments and long-term illness). Such amounts have been included under cost to fund.

(c) Services for which Commonwealth benefits are not provided.

FRIENDLY SOCIETIES

Friendly Societies are mutual organizations paying medical, hospital and other benefits to members and dependants in time of need.

These societies are required to register under the Friendly Societies Act, 1919-1961. The Act is administered by the Chief Secretary through the Public Actuary who approves the table of contributions, the level of benefits and generally sees that the societies' rules and practices are in accordance with the law.

A number of Friendly Societies are registered to pay Commonwealth medical and hospital benefits (see previous section), while others re-insure such benefits through a society created for this purpose.

Other benefits offered by the societies include sickness, funeral, pharmaceutical and physiotherapy benefits; endowment assurance is also available. The Friendly Societies Act requires that separate funds be maintained for each of these benefits and members may contribute either for full benefits or for medical and hospital benefits only.

The level of benefits paid varies between societies, with sickness benefits generally on a declining scale as the period of illness lengthens. The Friendly Societies Act limits to \$4,000 any payment for endowment or funeral benefits and to \$21 any weekly payment to members for sickness or superannuation.

The Friendly Societies Medical Association operates 26 pharmacies in the metropolitan area and Port Pirie where medicines are dispensed for Friendly Society members at concession prices.

The Friendly Societies Act also prescribes the nature of assets which societies may hold. Their most important investment is in property mortgages and in particular in housing loans to members. They may also invest in governmental securities, and a number of societies own valuable city freeholds.

Friendly Societies, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
Number of registered societies (a)	14	14	14	14	14
Number of members (a) (b)	51,198	50,765	50,946	51,258	51,184
	\$'000				
<i>Revenue : (c)</i>					
Contributions and levies	3,045	3,532	4,013	4,687	5,836
Interest, dividends and rent	593	621	642	672	698
Other	831	376	370	476	475
Total revenue	4,469	4,529	5,024	5,835	7,009
<i>Expenditure : (c)</i>					
Sick pay	167	171	178	188	179
Medical attendance and medicine	1,236	1,411	1,566	1,780	2,094
Sums payable at death	106	119	128	125	125
Hospital benefits	1,265	1,451	1,522	1,858	2,116
Administration	607	659	752	837	910
Other	204	203	235	340	420
Total expenditure	3,585	4,014	4,382	5,128	5,843
Total funds	11,832	12,346	12,989	13,696	14,862

(a) At 30th June.

(b) Full benefit members : does not include those who contribute to medical and hospital benefits only.

(c) Receipts and payments of Commonwealth medical and hospital benefit subsidies excluded.

6.7. MARRIAGE

Registration of marriage has been compulsory in South Australia since 1842 when Acts "for regulating Marriages in the Province of South Australia" and "for registering Births, Deaths and Marriages in the Province of South Australia" were passed. The present law relating to marriages is contained in the Commonwealth *Marriage Act* 1961 which was assented to on 6th May 1961. This Act, which applies to all the States, the two mainland Territories and Norfolk Island, came into full operation on 1st September 1963, some of its minor provisions having been in operation from the date of assent. The South Australian Act superseded by the Commonwealth legislation was the *Marriage Act*, 1936-1957.

The Principal Registrar of Births, Deaths and Marriages in South Australia carries out the statutory duties under the Act and has supervision over ministers of religion (as regards their duties under the *Marriage Act*) and other officers empowered to perform marriages. Only the Principal Registrar, the Deputy Registrar, District Registrars appointed to the 22 registration districts and those ministers of religion registered for the purpose by the Principal Registrar may celebrate marriages.

After the marriage, celebrants are required to forward the official certificate of marriage to the Principal Registrar, who maintains at his office a register of all marriages in South Australia. In addition, a copy of the marriage certificate is prepared and forwarded by the office of the Principal Registrar to the District Registrar of the district in which the marriage was celebrated and each District Registrar maintains a register of the marriages performed in his district.

The average annual number of marriages and the rates per 1,000 of mean population in five-yearly periods since 1906 and numbers and rates for each of the years 1955 to 1966 are shown in the following table.

Marriages, South Australia, 1906 to 1966

Five-Year Period	Average Annual Number of Marriages	Rate per 1,000 of Mean Population	Year	Number of Marriages	Rate per 1,000 of Mean Population
1906-10	3,159	8.34	1955.....	6,226	7.59
1911-15	4,032	9.31	1956.....	6,277	7.40
1916-20	3,756	8.20	1957.....	6,581	7.53
1921-25	4,200	8.13	1958.....	6,505	7.25
1926-30	4,036	7.12	1959.....	6,614	7.18
1931-35	3,967	6.83	1960.....	6,607	6.99
1936-40	5,726	9.65	1961.....	6,804	7.01
1941-45	6,517	10.61	1962.....	7,021	7.13
1946-50	6,581	9.87	1963.....	7,202	7.25
1951-55	6,290	8.10	1964.....	7,765	7.51
1956-60	6,517	7.26	1965.....	8,680	8.17
1961-65	7,514	7.43	1966.....	9,051	8.30

During the period from 1852 to 1858 the marriage rate varied between about 10 and 13 per 1,000 of mean population, then fluctuated but gradually declined to a figure of 5.55 in 1897. It then rose steadily to 9.80 in 1911, fluctuated considerably during the First World War then levelled to about 8 in the 1920's. The conditions in the period leading up to and during the depression of the

early 1930's brought about a marked decline to 5.33 in 1931. By 1938 the rate had risen to 9.25 and during the subsequent war years of 1939 to 1945 it rose to 13.34 in 1942, the highest ever recorded, then fell to 8.49 in 1945. Following the return and demobilization of servicemen the rate rose to over 10 in the years 1946 to 1948 then fell steadily to 6.99 in 1960. Since 1960 the rate has risen in each successive year. The decline to 1960 in the marriage rate is related to the effect of the low birth rate of the depression years on the number of persons reaching the normal marrying age.

Particulars relating to first marriages and remarriages annually since 1957 are shown in the following table.

Conjugal Condition of Persons Marrying, South Australia

Year	Bridegrooms			Brides			Percentage of Total Married					
	Bachelors	Widowers	Divorced	Spinsters	Widows	Divorced	Bridegrooms			Brides		
							Bachelors	Widowers	Divorced	Spinsters	Widows	Divorced
1957.....	5,915	287	379	5,795	341	445	89.9	4.4	5.7	88.0	5.2	6.8
1958.....	5,830	317	358	5,753	319	433	89.6	4.9	5.5	88.4	4.9	6.7
1959.....	5,937	310	367	5,853	352	409	89.8	4.7	5.5	88.5	5.3	6.2
1960.....	5,966	289	352	5,870	323	414	90.3	4.4	5.3	88.8	4.9	6.3
1961.....	6,085	295	424	6,006	336	462	89.4	4.4	6.2	88.3	4.9	6.8
1962.....	6,318	268	435	6,284	302	435	90.0	3.8	6.2	89.5	4.3	6.2
1963.....	6,611	277	414	6,516	305	481	90.5	3.8	5.7	89.2	4.2	6.6
1964.....	7,052	285	428	7,034	282	449	90.8	3.7	5.5	90.6	3.6	5.8
1965.....	7,878	286	516	7,838	325	517	90.8	3.3	5.9	90.3	3.7	6.0
1966.....	8,168	323	560	8,165	306	580	90.2	3.6	6.2	90.2	3.4	6.4

Prior to 1951, in each year except 1946, the number of widowers remarrying exceeded the number of widows remarrying, but since then the reverse has been the case except for 1964 and 1966.

More divorced males than divorced females remarried in most years to 1940, but the reverse has been so in 21 of the 26 years since 1940 including all but one of the last 16 years.

The following statement shows age at marriage of bridegrooms and brides who were married during 1966 classified by conjugal condition.

Age at Marriage and Conjugal Condition, South Australia, 1966

Age	Conjugal Condition at Marriage							
	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 21 years	1,383	—	—	1,383	4,098	—	7	4,105
21 to 24 years	4,091	4	13	4,108	3,121	7	46	3,174
25 to 29 years	1,897	11	74	1,982	621	10	120	751
30 to 34 years	423	13	113	549	142	16	101	259
35 to 39 years	185	18	100	303	83	29	95	207
40 to 44 years	106	24	86	216	37	28	78	143
45 years and over ..	83	253	174	510	63	216	133	412
All ages...	8,168	323	560	9,051	8,165	306	580	9,051

In the following table of percentages of bridegrooms and brides in various age-groups the earliest available figures in each sector have been shown together with figures for selected later years.

**Age Distribution of Bridegrooms and Brides: Percentage to Total Marriages
South Australia**

Year	Under 21 Years	21 to 24 Years	25 to 29 Years	30 to 44 Years	45 Years and Over	Under 21 Years	21 to 24 Years	25 to 29 Years	30 to 44 Years	45 Years and Over
	ALL BRIDEGROOMS					ALL BRIDES				
1903....	2.7	27.8	35.8	28.5	5.2	19.2	37.5	26.7	14.7	1.9
1911....	3.3	28.7	37.1	25.6	5.3	17.1	37.4	28.3	14.7	2.5
1921....	3.2	25.6	36.8	29.0	5.4	16.1	35.9	28.2	17.0	2.9
1931....	6.8	30.8	33.7	22.8	5.9	25.8	37.2	21.2	12.9	2.9
1941....	4.1	32.5	34.6	22.9	5.9	20.5	38.8	22.4	15.0	3.3
1951....	6.2	37.3	28.1	20.6	7.8	27.8	36.6	15.8	14.6	5.2
1961....	10.6	40.9	24.2	17.5	6.8	40.8	34.4	9.7	9.6	5.5
1962....	10.8	41.3	24.2	17.0	6.7	41.7	34.2	9.1	9.4	5.6
1963....	11.3	44.0	23.0	15.4	6.3	42.9	34.1	9.3	8.7	5.0
1964....	12.7	44.2	23.6	13.8	5.7	44.4	35.0	8.3	8.0	4.3
1965....	14.7	44.2	22.8	12.4	5.9	45.1	35.1	8.2	7.1	4.5
1966....	15.3	45.4	21.9	11.8	5.6	45.4	35.1	8.3	6.7	4.5
	BACHELORS					SPINSTERS				
1928....	5.8	33.4	37.4	21.1	2.3	23.9	40.5	22.5	12.1	1.0
1931....	7.4	33.2	35.9	21.0	2.5	27.3	39.2	21.8	10.7	1.0
1941....	4.5	35.0	37.0	21.6	1.9	21.9	41.4	23.0	12.7	1.0
1951....	7.1	42.5	30.9	16.9	2.6	31.8	41.5	15.8	9.2	1.7
1961....	11.9	45.5	26.3	14.9	1.4	46.1	38.2	9.3	5.3	1.1
1962....	12.0	45.8	26.3	14.4	1.5	46.6	37.7	8.9	5.5	1.3
1963....	12.5	48.5	24.7	12.7	1.6	47.8	37.8	8.9	4.4	0.9
1964....	13.9	48.5	25.3	11.1	1.2	49.0	38.1	8.1	4.0	0.8
1965....	16.1	48.6	24.4	9.7	1.2	49.9	38.4	7.6	3.3	0.8
1966....	16.9	50.0	23.2	8.7	1.0	50.2	38.2	7.6	3.2	0.8

In 1966, 67% of first marriages of men and 88.4% of first marriages of women were of persons who were under 25 years of age. This compares with the 1928 figures of 39.2% and 64.4% respectively.

The following table shows the average age of bridegrooms and brides during the last 10 years. From 1908 to 1955 there was little change in the average age of all bridegrooms and all brides—from 29.4 years to 29.2 years for bridegrooms and from 25.9 to 26.0 for brides, with some minor fluctuations in between which can be related to the two wars and the depression of the early 1930's.

Average Age at Marriage, South Australia

Year	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	All Bridegrooms	Spinsters	Widows	Divorced	All Brides
1957.....	26.5	55.9	40.1	28.6	23.1	47.3	36.5	25.2
1958.....	26.3	56.3	39.9	28.5	22.9	49.5	36.6	25.1
1959.....	26.2	57.7	40.6	28.5	22.8	48.4	37.4	25.1
1960.....	25.6	56.3	41.2	28.0	22.5	49.0	36.7	24.7
1961.....	25.8	57.1	41.2	28.1	22.4	49.1	36.9	24.7
1962.....	25.8	56.9	42.5	28.0	22.4	49.3	38.8	24.6
1963.....	25.5	55.0	41.5	27.5	22.1	49.8	37.8	24.3
1964.....	25.2	55.6	41.9	27.2	22.0	49.2	38.6	24.0
1965.....	24.9	56.0	42.3	26.9	21.8	51.4	37.8	23.9
1966.....	24.7	55.4	40.6	26.8	21.8	51.6	37.3	23.8

The average age of all bridegrooms and brides rose slightly between 1942 and 1955 but has subsequently fallen. On the other hand, average age of previously unmarried bridegrooms and brides has fallen steadily since 1942, from 27.4 to 24.9 and from 24.6 to 21.8 respectively. This tendency during the last 20 years towards marrying younger is presumably influenced by the availability over that period of employment to married women.

MARRIAGE OF MINORS

The Commonwealth *Marriage Act* 1961 stipulates the marriageable age to be 18 years or over for a male and 16 years or over for a female. Under exceptional circumstances a magistrate can, upon application by a party who has not attained marriageable age but who is at least 16 in the case of a male or 14 in the case of a female, authorize him or her to marry a particular person who is of marriageable age.

South Australian legislation operative prior to the Commonwealth Act, and proclaimed on 1st March 1958, provided that a marriage between persons either of whom was a boy under the age of 18 years or a girl under the age of 16 years should be void, with further provision, upon application, for the Chief Secretary at his discretion to waive the provisions in relation to males aged 14 to 17 years and females aged 12 to 15 years. Prior to this it had been the practice to apply the provisions of British Common Law prohibiting the marriage of either a male under 14 or a female under 12.

In all cases where a party to a marriage is under 21 years, prior consent must be obtained from either both parents, one parent, a guardian or guardians, or other prescribed authority, according to the circumstances.

Figures for the first year for which information of marriages of minors is available and for certain years since are shown in the following table.

Marriages of Minors, South Australia

Year	Age in Years						Total Minors	Percentage of Total Marriages	
	14 or Less	15	16	17	18	19			20
BRIDEGROOMS									
1903.....	—	—	—	—	8	14	38	60	2.65
1911.....	—	—	—	1	8	44	79	132	3.27
1921.....	—	—	1	2	16	42	79	140	3.19
1931.....	—	—	1	10	31	67	101	210	6.84
1941.....	—	—	1	11	23	93	155	283	4.13
1951.....	—	—	2	21	44	107	241	415	6.24
1961.....	—	—	1	21	114	208	379	723	10.63
1962.....	—	—	2	20	132	218	384	756	10.77
1963.....	—	—	2	25	132	258	409	826	11.31
1964.....	—	—	2	24	185	305	466	982	12.65
1965.....	—	—	—	16	226	436	598	1,276	14.70
1966.....	—	—	1	19	221	518	624	1,383	15.28
BRIDES									
1903.....	—	5	12	45	93	135	143	433	19.16
1911.....	1	2	25	42	139	222	258	689	17.07
1921.....	1	3	20	67	135	235	244	705	16.08
1931.....	3	4	38	101	172	230	245	793	25.84
1941.....	—	9	37	119	262	384	592	1,403	20.47
1951.....	5	12	76	179	337	540	697	1,846	27.78
1961.....	4	15	143	335	559	825	895	2,776	40.80
1962.....	—	15	158	344	627	818	968	2,930	41.73
1963.....	1	8	206	366	641	911	996	3,129	42.85
1964.....	2	11	178	434	698	971	1,135	3,449	44.42
1965.....	—	9	193	462	895	1,124	1,231	3,914	45.09
1966.....	3	5	188	425	834	1,375	1,275	4,105	45.35

From 1903 to 1928 the proportion of bridegrooms under 21 remained under 5% with a general upward trend interrupted during and in the years immediately after the First World War. The proportion continued to rise to a figure of 6.84% in 1931 then fell steadily to 3.05% in 1939. From that year there has been a further general upward movement, again with an interruption in the years immediately following the Second World War.

The proportion of brides under 21 has followed a similar pattern, remaining under 20% until 1925, rising to 25.84% in 1931, falling to 16.29% in 1936 and generally maintaining an upward trend from 1939.

For each succeeding year from 1954 for male minors and from 1950 for female minors proportions have been the highest recorded.

RELIGIOUS DENOMINATION OF MARRIAGES

The number of marriages celebrated in South Australia by ministers of religion in 1966 was 8,075 representing 89% of the total. Civil marriages numbered 976, or 11% of the total. The following table shows the number and proportion of civil marriages and of marriages solemnized according to the rites of the principal religious denominations during the last 4 years.

Denomination of Marriage Ceremony, South Australia

Denomination	Number of Marriages				Proportion of Total Marriages			
	1963	1964	1965	1966	1963	1964	1965	1966
					%	%	%	%
Methodist	1,798	1,844	2,090	2,258	24.6	23.7	24.1	24.9
Church of England	1,436	1,603	1,803	1,894	19.7	20.6	20.8	20.9
Roman Catholic	1,520	1,612	1,723	1,814	20.8	20.8	19.8	20.0
Lutheran	389	437	479	495	5.3	5.6	5.5	5.5
Presbyterian	291	326	345	358	4.0	4.2	4.0	4.0
Congregational	238	278	265	319	3.3	3.6	3.1	3.5
Churches of Christ	242	231	292	276	3.3	3.0	3.4	3.1
Orthodox (Greek, Russian, etc.)	247	208	312	259	3.4	2.7	3.6	2.9
Baptist	176	191	178	201	2.4	2.5	2.0	2.2
Salvation Army	55	56	56	62	0.7	0.7	0.6	0.7
Other denominations	100	111	118	139	1.4	1.4	1.4	1.5
Civil marriages	810	868	1,019	976	11.1	11.2	11.7	10.8
Total	7,302	7,765	8,680	9,051	100.0	100.0	100.0	100.0

6.8. DIVORCE

LEGISLATION

The Supreme Court of South Australia has had jurisdiction in divorce from 1st January 1859, the date upon which the Matrimonial Causes Act, 1858 came into operation. The present law is contained in the Commonwealth *Matrimonial Causes Act 1959* which came into operation on 1st February 1961 and which provides a uniform law throughout Australia for dissolution of marriage and other matrimonial causes and vests the Supreme Courts of the States and Territories with jurisdiction to hear and determine causes under the Act. Its transitional provisions covered matrimonial causes instituted prior to 1st February 1961, and gave petitioners the advantages of the new Act without detracting from their position under the former legislation.

The principal form of relief petitioned for and granted by the Court is dissolution of marriage (commonly known as divorce) with provision also for petitions for nullity of marriage, judicial separation, restitution of conjugal rights and jactitation of marriage.

A decree of dissolution of marriage and in some instances of nullity of marriage is in the first instance a decree *nisi*. Under the provisions of the current Act, in general a decree *nisi* automatically becomes absolute at the expiration of 3 months, unless rescinded by the Court, unless an appeal has been instituted or unless there are children of the marriage in respect of whom proper arrangements have not been made for welfare, advancement and education.

Grounds on which petitions for dissolution of marriage could be lodged under the 1858 Act were limited for a husband's petition to adultery and for a wife's

petition to rape, sodomy, bestiality, or adultery qualified as incestuous, with bigamy, with cruelty, or with desertion for 1 year and upwards.

Since this Act came into operation the following changes to the grounds on which a petition could be lodged for dissolution of marriage have been made to State legislation by enactment or amendment:

From 29th May 1919 the qualifications to the ground of adultery on the petition of a wife were removed.

From 1st March 1929 the grounds of desertion for 5 years, habitual drunkenness, imprisonment or frequent convictions, attempted murder, repeated assault or cruelly beating and certified mental deficiency were added.

From 20th March 1930 failure to pay maintenance during the five years prior to petition was added as a ground, habitual cruelty was substituted for repeated assault or cruelly beating and "or inflicting or attempting to inflict grievous bodily harm" was added to the ground of attempted murder.

From 15th February 1939 the ground of 5 years separation pursuant to a Court order granting judicial separation or relief from cohabitation was added and the required period for desertion and failure to pay maintenance was reduced from 5 years to 3 years.

From 26th March 1942 under certain circumstances the Court was empowered to make an order of presumption of death and of dissolution of the marriage.

The grounds on which petitions can be filed for dissolution of marriage under the Commonwealth *Matrimonial Causes Act* 1959 can be briefly described as: adultery; desertion for not less than 2 years; refusal to consummate the marriage; habitual cruelty for not less than 1 year; rape, sodomy or bestiality; habitual drunkenness or habitual intoxication by drugs for 2 years or more; frequent convictions for crime and failure to support (only on petition of wife); imprisonment for at least 3 years of a sentence of at least 5 years; conviction of attempted murder or of inflicting or attempting to inflict grievous bodily harm on the petitioner; failure for at least 2 years to pay maintenance; failure for at least 1 year to comply with a decree of restitution of conjugal rights; insanity; separation for at least 5 years; and presumption of death.

The main effects on grounds in South Australia resulting from the Commonwealth legislation were that a petition on the ground of separation for 5 years no longer required a Court order granting judicial separation or relief from cohabitation as a pre-requisite, and the period for desertion to constitute a ground for dissolution of marriage was reduced from 3 to 2 years. In addition, the period of decree *nisi* is now 3 months, having been 6 months under State legislation.

Assessment of the changes in the time series tables in this section should not be made without consideration of the effects of these changes in legislation. Also, it should be noted that fluctuations from year to year in the number of decrees granted may be independent of fluctuations from year to year in the number of petitions filed.

PETITIONS LODGED

Particulars of petitions lodged during the last 10 years are shown in the following table. In each of these years petitions lodged for dissolution by wives outnumbered those lodged by husbands. This pattern has prevailed

for over 50 years, as petitions by husbands have rarely exceeded those by wives except during the two World Wars.

**Dissolution of Marriage and Other Matrimonial Causes
Petitions Filed, South Australia**

Year	Dissolution of Marriage			Nullity of Marriage	Judicial Separation	Total Petitions
	By Husbands	By Wives	Total			
1956....	303	451	754	15	1	770
1957....	324	443	767	11	—	778
1958....	342	449	791	5	—	796
1959....	329	460	789	6	1	796
1960....	313	468	781	8	—	789
1961....	406	459	865	9	3	877
1962....	368	542	910	4	1	(a) 916
1963....	386	619	1,005	5	3	(a) 1,014
1964....	420	614	1,034	5	4	(b) 1,045
1965....	390	717	1,107	13	10	(b) 1,132

(a) Includes one petition lodged for dissolution or nullity.

(b) Includes two petitions lodged for dissolution or nullity.

DECREES GRANTED

The following table shows the number of decrees absolute granted for dissolution and nullity of marriage and decrees granted for judicial separation. Whilst no doubt the large increase in decrees absolute granted from 1940 is partly due to the 1939 legislative changes, it also reflects the abnormal conditions experienced during the war and its immediate aftermath.

**Dissolution of Marriage and Other Matrimonial Causes
Decrees Absolute Granted, South Australia**

Period	Dissolution of Marriage			Nullity of Marriage	Judicial Separation
	To Husbands	To Wives	Total		
Annual Average					
1916-20	14.8	7.8	22.6	0.2	0.6
1921-25	37.2	45.2	82.4	0.8	0.6
1926-30	48.0	58.6	106.6	0.6	0.4
1931-35	73.0	93.8	166.8	0.6	0.8
1936-40	105.0	137.4	242.4	1.4	1.8
1941-45	216.2	215.2	431.4	1.2	1.4
1946-50	317.0	329.0	646.0	3.6	1.6
1951-55	262.8	350.0	612.8	4.6	1.2
1956-60	244.2	294.2	538.4	7.6	0.6
1961-65	334.6	446.8	781.4	4.6	0.2
Year					
1961.....	(a) 308	(a) 411	718	6	—
1962.....	(a) 315	(a) 371	685	6	1
1963.....	339	426	765	5	—
1964.....	(a) 358	(a) 530	887	3	—
1965.....	(a) 355	(a) 498	852	3	—

(a) Includes one granted to both husband and wife.

A petition can be lodged and a decree granted on more than one ground and for 1961 and subsequent years these combinations have been recorded separately. Prior to 1961 one of the grounds was selected for classification, e.g. "adultery and desertion" was classified as "adultery", and for the purpose of comparison the figures for the years 1961 to 1965 have been similarly shown in the next table, which relates to grounds on which decrees absolute have been granted for dissolution of marriage. Of the 852 decrees in 1965 for dissolution 28 were granted on more than one ground.

Dissolution of Marriage: Grounds of Decrees Absolute, South Australia

Period	Grounds on which Granted						Total
	Adultery	Cruelty	Desertion	Drunkness	Separation	Other	
HUSBAND AS PETITIONER							
Annual Average							
1933-35 ..	45.3	—	27.3	0.3	—	2.7	75.6
1936-40 ..	62.2	—	40.8	0.8	0.2	1.0	105.0
1941-45 ..	131.2	0.8	77.6	1.0	2.8	2.8	216.2
1946-50 ..	179.6	1.6	127.0	1.4	1.6	5.8	317.0
1951-55 ..	131.2	5.0	120.4	0.6	1.8	3.8	262.8
1956-60 ..	133.4	4.0	103.2	0.4	1.4	1.8	244.2
1961-65 ..	127.2	3.4	146.9	0.8	54.2	2.1	334.6
Year							
1961.....	131	5	154	1	14	(a) 3	(a) 308
1962.....	(a) 110	1	141	—	60	3	(a) 315
1963.....	124	2	152	1	58	2	339
1964.....	(a) 146	3	128	2	76	3	(a) 358
1965.....	126	6	(a) 160	—	63	—	(a) 355
WIFE AS PETITIONER							
Annual Average							
1933-35 ..	60.0	3.0	31.0	2.3	—	15.3	111.6
1936-40 ..	65.4	9.2	47.0	3.4	0.4	12.0	137.4
1941-45 ..	95.0	17.8	79.6	4.6	6.6	11.6	215.2
1946-50 ..	148.4	40.2	125.4	4.4	3.8	6.8	329.0
1951-55 ..	100.4	93.6	136.6	7.8	6.4	5.2	350.0
1956-60 ..	76.6	93.8	106.8	7.0	4.4	5.6	294.2
1961-65 ..	95.0	98.0	157.9	6.8	80.8	8.3	446.8
Year							
1961.....	114	135	138	5	9	(a) 10	(a) 411
1962.....	(a) 69	60	165	3	70	4	(a) 371
1963.....	85	86	138	6	104	7	426
1964.....	(a) 112	109	184	11	104	10	(a) 530
1965.....	96	100	(a) 165	9	117	11	(a) 498

(a) Includes one granted to both husband and wife.

Details for grounds were not recorded until 1933, but in all years prior to 1929 adultery was virtually the only ground upon which a divorce could be granted.

A total of 639 of the decrees absolute for dissolution granted in 1961, 198 of those in 1962, 66 of those in 1963, 49 of those in 1964 and 17 of those granted in 1965 were for petitions filed prior to February 1961 under the superseded legislation; this should be taken into account when comparing figures for recent years in the preceding table.

The ages at marriage of persons divorced are shown in the following table.

**Dissolution of Marriage: Decrees Absolute, Age at Time of Marriage
South Australia**

Year	Age at Marriage								Total
	Under 20	21-24	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
HUSBANDS									
1961.....	50	321	197	63	36	21	18	12	718
1962.....	38	285	197	68	45	21	18	13	685
1963.....	38	352	187	89	43	23	28	5	765
1964.....	53	399	245	100	45	20	19	6	887
1965.....	54	418	212	73	46	20	26	3	852
WIVES									
1961.....	207	309	100	43	21	12	13	13	718
1962.....	193	284	95	50	19	16	14	14	685
1963.....	218	322	115	42	31	18	14	5	765
1964.....	245	392	139	52	27	9	17	6	887
1965.....	275	380	88	47	34	12	14	2	852

Information of the relative ages at marriage of husbands and wives for marriages dissolved in 1965 is contained in the following table.

**Dissolution of Marriage: Decrees Absolute, 1965
Relative Ages at Marriage of Husbands and Wives, South Australia**

Age of Husband at Marriage	Age of Wives at Marriage							Total Husbands
	Under 20	20-24	25-29	30-34	35-39	40 and Over	Not Stated	
Under 20	42	12	—	—	—	—	—	54
20-24	175	218	18	4	3	—	—	418
25-29	43	106	44	13	4	2	—	212
30-34	10	30	13	13	5	2	—	73
35-39	4	12	10	7	9	4	—	46
40 and over	1	1	3	10	13	18	—	46
Not stated	—	1	—	—	—	—	2	3
Total wives ..	275	380	88	47	34	26	2	852

The following table shows the duration of marriage, *i.e.* the interval between marriage and the date the decree was made absolute, for marriages dissolved in 1946 (the first year so tabulated) and during the last 5 years.

**Dissolution of Marriage: Decrees Absolute, Duration of Marriage
South Australia**

Year	Duration of Marriage (Years)									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	
1946....	167	197	119	74	48	28	16	5	—	654
1961....	49	224	165	118	85	26	29	16	6	718
1962....	45	167	172	129	81	47	23	7	14	685
1963....	43	202	172	166	90	58	12	10	12	765
1964....	61	207	183	185	122	70	32	16	11	887
1965....	64	222	186	154	114	59	30	14	9	852

Of the marriages dissolved in 1965, 7.5% were under 5 years duration and 33.6% were under 10 years duration. The corresponding proportions in 1946, when these particulars were first tabulated, were 25% and 55%. The comparatively early "break-up" of marriages which were dissolved in 1946 partly

can be attributed to the abnormal war-time conditions: in each of the next 3 years the proportion of divorces for marriages of less than 10 years duration was 49%, higher than in any year since.

The lower proportions in recent years, particularly in the first three years under Commonwealth legislation, probably are at least partly due to the steep increase in the number of decrees absolute granted on the ground of separation for 5 years. Prior to the commencement of operation of Commonwealth legislation, a petition for dissolution on the ground of separation required a Court order issued at least 5 years previously. As the result of the removal of this restriction some of the subsequent petitions on this ground almost certainly came from persons who previously had no ground on which to petition, and probably many of them were in the higher marriage duration group. The effect was a rise in the proportion of dissolved marriages of 10 years duration or more from 61.1% in 1960 to 77.7% in 1963; since then this proportion has fallen to 66.4% in 1965.

The same trend is evident in the following table on age at time of decree absolute which shows that in 1946 nearly 52% of husbands and over 64% of wives were under 35 years of age at the time of dissolution but in 1965 the corresponding proportions were just over 31% of husbands and 42.5% of wives.

**Dissolution of Marriage: Age at Time of Decree Absolute
South Australia**

Year	Age at Time of Decree Absolute								Total
	Under 25	25-29	30-34	35-39	40-44	45-49	50 and Over	Not Stated	
HUSBANDS									
1946....	47	124	168	116	94	51	54	—	654
1961....	16	72	154	132	113	88	130	13	718
1962....	8	71	103	142	105	94	149	13	685
1963....	12	80	127	148	137	95	161	5	765
1964....	20	91	148	157	137	136	192	6	887
1965....	20	111	136	154	141	113	174	3	852
WIVES									
1946....	122	149	149	103	53	46	32	—	654
1961....	57	116	154	124	90	68	95	14	718
1962....	48	98	124	125	93	79	104	14	685
1963....	48	123	124	139	131	101	94	5	765
1964....	70	133	133	159	145	110	131	6	887
1965....	71	154	137	148	126	98	116	2	852

For marriages dissolved in 1965 the following table shows the relative ages of husbands and wives at the time of dissolution.

Dissolution of Marriage: Decrees Absolute, 1965

Relative Ages of Husbands and Wives at Time of Dissolution, South Australia

Age of Husbands at Dissolution	Age of Wives at Dissolution							Total Husbands
	Under 25	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
Under 25	20	—	—	—	—	—	—	20
25-29	40	62	9	—	—	—	—	111
30-34	7	67	52	7	2	1	—	136
35-39	4	15	54	67	8	6	—	154
40-44	—	7	16	53	49	16	—	141
45 and over	—	2	6	21	67	191	—	287
Not stated	—	1	—	—	—	—	2	3
Total wives ...	71	154	137	148	126	214	2	852

The following table shows particulars of the number of children of marriages dissolved in 1946 and in the last 5 years.

**Dissolution of Marriage: Decrees Absolute, Children of the Marriage
South Australia**

Year	Number of Children at Time of Petition							Total Dissolutions of Marriage	Total Children
	0	1	2	3	4	5	6 and Over		
1946.....	319	158	117	38	14	6	2	654	604
1961.....	292	165	140	68	31	14	8	718	894
1962.....	236	194	140	60	40	11	4	685	893
1963.....	243	199	166	94	51	6	6	765	1,085
1964.....	260	227	205	118	48	21	8	887	1,340
1965.....	253	198	210	109	52	19	11	852	1,333

Information collected for petitions filed under State legislation covered only living "issue" under 16 years of age; information collected for petitions filed under Commonwealth legislation covers living "children of the marriage" under 21 years of age, which, as defined in the Act, includes also adopted children, children of the husband and wife born before marriage and children of either the husband or the wife if members of the household. As the numbers of orders absolute for dissolution granted in 1961 to 1965 combine those granted under both the old and the new legislation (see comment after the table on "grounds" on page 233 for proportions), the information on children for each of these years is not strictly comparable with that of each previous year.

The next table shows the number of children of marriages related to duration of marriage for decrees absolute for dissolution granted in 1965.

**Dissolution of Marriage: Decrees Absolute, 1965
Duration of Marriage and Children of the Marriage, South Australia**

Duration of Marriage (Years)	Number of Children at Time of Petition							Total Dissolutions of Marriage	Total Children
	0	1	2	3	4	5	6 and Over		
Under 5	35	19	8	2	—	—	—	64	41
5-9	67	67	61	17	7	2	1	222	285
10-14	36	40	62	26	17	4	1	186	337
15-19	35	32	32	36	9	6	4	154	303
20-24	12	22	34	21	17	5	3	114	271
25-29	25	12	10	6	2	2	2	59	81
30-34	22	5	2	1	—	—	—	30	12
35-39	12	1	1	—	—	—	—	14	3
40 and over	9	—	—	—	—	—	—	9	—
Total dissolutions of marriage	253	198	210	109	52	19	11	852	—
Total children ...	—	198	420	327	208	95	85	—	1,333

PART 7

LABOUR

7.1. EMPLOYMENT

THE WORK FORCE

Particulars of the number of persons constituting the work force in South Australia are available from periodic population censuses. The work force consists of all persons who are actively engaged in an industry, trade, or service whether as employers, wage and salary earners, helpers not receiving a wage or salary, or persons self-employed. It also includes persons who would normally be engaged in these activities but who were without employment at the time of the census through inability to secure employment, illness, industrial dispute, or for some other reason.

Persons not in the work force include females engaged in home duties and full-time students as well as persons not at work on account of youth, age, or disability.

Details of persons in the work force at the 1966 Census were not available in time for inclusion but will be included in the 1968 Year Book.

In the following table persons in the work force at the 1954 and 1961 Censuses are classified by occupational status.

In 1961 females constituted 23.6% of the work force compared with 21.2% at the 1954 Census. Females in the work force represented 18.6% of the total female population as opposed to 17.3% in 1954. On the other hand only 58.4% of the male population was in the work force in 1961 compared with 62.8% in 1954.

Occupational Status of the Population, South Australia
Censuses 1954 and 1961

Occupational Status	30th June 1954			30th June 1961		
	Males	Females	Persons	Males	Females	Persons
In work force						
At work—						
Employer	18,921	2,441	21,362	20,132	4,081	24,213
Self-employed ...	35,241	4,521	39,762	35,128	5,850	40,978
Employee	195,568	59,437	255,005	223,241	75,447	298,688
Helper	1,535	914	2,449	1,318	634	1,952
Total at work	251,265	67,313	318,578	279,819	86,012	365,831
Not at work	2,020	765	2,785	8,520	3,210	11,730
Not stated	282	104	386	(a)	(a)	(a)
Total work force	253,567	68,182	321,749	288,339	89,222	377,561
Not in work force....	150,336	325,009	475,345	201,886	389,893	591,779
Total population.	403,903	393,191	797,094	490,225	479,115	969,340

(a) Where "not stated", occupational status has been allocated.

The working population may be classified according to two distinct concepts, the *occupation* which is personal to the individual, and the *industry* in which the individual carries on his occupation.

In the following table the work force at the 1961 Census is classified by occupation, *i.e.*, the kind of work a person normally performs.

Work Force: Occupation, South Australia, 30th June 1961

Occupation Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
		%		%		%
Professional, technical and related workers	18,319	6.35	13,698	15.35	32,017	8.48
Administrative, executive and managerial workers	22,650	7.86	3,848	4.32	26,498	7.02
Clerical workers	21,277	7.38	24,643	27.62	45,920	12.16
Sales workers	16,493	5.72	13,487	15.12	29,980	7.94
Farmers, fishermen, hunters, timber-getters and related workers	42,127	14.61	4,076	4.57	46,203	12.24
Miners, quarrymen and related workers	1,711	0.59	2	0.00	1,713	0.46
Workers in transport and communication occupations	22,257	7.72	2,289	2.56	24,546	6.50
Craftsmen, production-process workers and labourers (n.e.s.) ...	127,582	44.25	10,950	12.27	138,532	36.69
Service, sport and recreation workers	10,997	3.81	14,608	16.37	25,605	6.78
Members of armed services, enlisted personnel	2,483	0.86	59	0.07	2,542	0.67
Occupation inadequately described or not stated	2,443	0.85	1,562	1.75	4,005	1.06
Total work force	288,339	100.00	89,222	100.00	377,561	100.00

In the table below the numbers of males and females in the work force at the 1961 Census are classified according to industry in conjunction with occupational status. At the 1961 Census 11.9% of persons in the work force were occupied in primary production compared with 14.8% in 1954, 17.8% in 1947, and 23.7% in 1933. In contrast the percentage shown as employed in manufacturing had risen from 16.6% in 1933 to 27.4% in 1961.

Work Force: Industry and Occupational Status, South Australia
Census 30th June 1961

Industry Group	At Work					Not at Work	Total Work Force
	Employer	Self-Employed	Employee	Helper	Total		
MALES							
Primary production	5,462	21,657	11,935	1,125	40,179	563	40,742
Mining and quarrying	60	392	2,523	7	2,982	67	3,049
Manufacturing	2,488	1,854	79,272	15	83,629	2,205	85,834
Electricity, gas, water and sanitary services	17	15	8,653	—	8,685	78	8,763
Building and construction	2,904	3,029	24,565	13	30,511	1,379	31,890
Transport and storage	711	1,821	19,023	6	21,561	422	21,983
Communication	8	22	6,972	2	7,004	39	7,043
Finance and property	302	270	7,125	9	7,706	54	7,760
Commerce	5,240	4,138	31,863	58	41,299	719	42,018
Public authority (n.e.i.) and defence services	—	—	11,122	—	11,122	60	11,182
Community and business services (including professional)	1,550	545	12,708	25	14,828	75	14,903
Amusement, hotels and other accommodation, cafes, personal services, etc.	1,320	1,185	5,816	35	8,356	293	8,649
Other industries	—	—	3	—	3	3	6
Industry inadequately described or not stated	70	200	1,661	23	1,954	2,563	4,517
Total males in work force	20,132	35,128	223,241	1,318	279,819	8,520	288,339
FEMALES							
Primary production	928	2,237	814	259	4,238	28	4,266
Mining and quarrying	5	6	94	—	105	1	106
Manufacturing	301	275	16,013	25	16,614	654	17,268
Electricity, gas, water and sanitary services	3	—	391	—	394	—	394
Building and construction	130	57	462	3	652	7	659
Transport and storage	75	76	1,263	5	1,419	13	1,432
Communication	6	11	1,722	2	1,741	30	1,771
Finance and property	24	17	4,308	3	4,352	24	4,376
Commerce	1,604	1,704	18,908	159	22,375	439	22,814
Public authority (n.e.i.) and defence services	—	—	2,420	—	2,420	16	2,436
Community and business services (including professional)	194	264	19,891	43	20,392	296	20,688
Amusement, hotels and other accommodation, cafes, personal services, etc.	799	1,178	8,322	120	10,419	376	10,795
Other industries	1	1	6	—	8	1	9
Industry inadequately described or not stated	11	24	833	15	883	1,325	2,208
Total females in work force	4,081	5,850	75,447	634	86,012	3,210	89,222

Work Force Survey

In addition to the complete census counts, estimates of the civilian work force are prepared each quarter. These estimates are prepared on an Australia-wide basis and separate information is not available for South Australia. The estimates are based on the results of surveys of sample households. The first surveys were conducted in June 1960 and were restricted to the six State capital cities.

More recently the survey programme has been extended to non-metropolitan urban and rural areas; this will enable estimates of the total Australian work force to be published.

Information yielded includes work force participation rates, *i.e.*, the percentage of the total civilian population falling in a particular class who are members of the civilian work force. Work force participation, by age and marital status, is shown below for the surveys of August 1961 and 1966.

Work Force Participation Rates, Six Australian State Capital Cities

Particulars	Age Group (Years)					65 and Over	Total Civilian Population 15 Years of Age and Over
	15-19	20-44		45-64			
		Married	Not Married (a)	Married	Not Married (a)		
	Per cent						
	MALES						
August 1961 ..	68.6	98.7	91.4	93.7	81.6	23.0	84.3
August 1966 ..	63.7	98.9	90.2	93.9	80.3	22.4	83.4
	FEMALES						
August 1961 ..	67.1	31.3	86.4	23.0	45.9	3.9	34.9
August 1966 ..	65.0	37.8	85.3	27.5	48.3	4.4	38.7

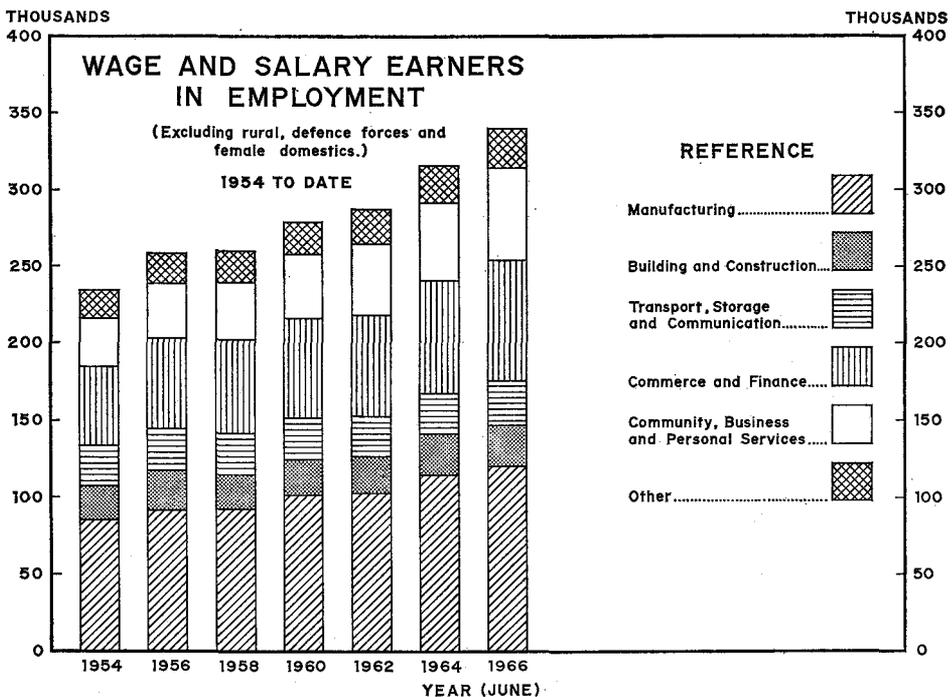
(a) Includes never married, widowed and divorced.

WAGE AND SALARY EARNERS IN EMPLOYMENT

Details of the number of wage and salary earners in civilian employment other than at census dates are available from periodic estimates. These estimates, which exclude employees in rural industry and private domestic service, are based on information obtained at the 1954 and 1961 Censuses, with adjustments being made from certain current information.

The figures relate to wage and salary earners on payrolls or in employment in the latter part of June as distinct from numbers of employees actually working on a specific date. They include some persons working part-time.

An industry distribution of wage and salary earners derived from these estimates, and beginning with the census year 1954, is presented in the following bar chart.



Estimated employment for June in the years 1962 to 1966 classified by industry group, is given in the following table. "Manufacturing" includes employees of manufacturing enterprises who are not directly associated with the productive process, such as sales and distribution personnel. The category "community, business and personal services" covers employees in education, health, amusement, hotels and restaurants, and professional and personal services but excludes female private domestics.

Wage and Salary Earners in Employment^(a), South Australia

June	Manufacturing	Building and Construction	Transport, Storage, and Communication	Commerce and Finance	Community, Business and Personal Services	Other	Total Employment
MALES ('000)							
1962.....	85.4	23.8	23.0	40.4	18.9	19.7	211.2
1963.....	89.7	24.1	23.2	42.6	19.8	20.2	219.6
1964.....	94.5	25.5	23.5	44.4	20.8	20.7	229.4
1965.....	99.3	26.6	24.2	46.6	22.1	21.1	239.9
1966.....	98.5	25.9	24.8	47.8	23.4	21.9	242.3
FEMALES ('000)							
1962.....	17.6	0.3	3.0	24.8	28.0	3.0	76.7
1963.....	18.4	0.3	3.0	26.1	29.9	3.2	80.9
1964.....	20.0	0.3	3.2	27.4	31.9	3.2	86.0
1965.....	21.9	0.4	3.4	29.8	34.2	3.7	93.4
1966.....	22.2	0.5	3.5	30.9	36.7	3.8	97.6
PERSONS ('000)							
1962.....	103.0	24.1	26.0	65.2	46.9	22.7	287.9
1963.....	108.1	24.4	26.2	68.7	49.7	23.4	300.5
1964.....	114.6	25.8	26.7	71.8	52.7	23.9	315.4
1965.....	121.2	27.0	27.6	76.4	56.3	24.8	333.3
1966.....	120.7	26.3	28.4	78.7	60.1	25.7	339.9

(a) Excludes employees in rural industry, female private domestics, and defence forces.

Government and semi-government departments or authorities employ over 25% of total civilian wage and salary earners. The following table shows the distribution of wage and salary earners at June 1965 and June 1966 by type of employer.

Wage and Salary Earners in Employment^(a): Class of Employer South Australia

Class of Employer	June 1965			June 1966		
	Males	Females	Persons	Males	Females	Persons
Private	170.9	71.9	242.8	170.5	74.9	245.4
Government (b)—						
Commonwealth .	20.8	4.9	25.7	21.5	5.1	26.6
State	43.7	16.0	59.6	45.9	17.1	63.0
Local	4.3	0.5	4.8	4.4	0.5	4.9
Total government	68.8	21.3	90.1	71.8	22.7	94.5
Total employment	239.7	93.2	332.9	242.3	97.6	339.9

(a) Excludes employees in rural industry, female private domestics, and defence forces.

(b) Includes semi-government bodies.

Further information on employment in specific sectors such as factories, rural industries, the building industry, etc., is found in the relevant sections.

Multiple Job Holding

The nature and extent of multiple job-holding throughout Australia was examined in surveys conducted in November 1965 and August 1966. The November 1965 survey was of an exploratory nature, being the first of its kind undertaken, and resulting information is not strictly comparable with the later survey although conceptual differences are minor.

Multiple job-holders comprise those persons who were employed in at least one of their jobs as a wage or salary earner during the survey week, those persons who were described as employers or self-employed in two businesses being excluded.

Multiple Job Holders

Description	Date	South Australia	Australia
			'000
Persons who actually worked in a second job in survey week ..	Nov. 1965	17.6	113.3
	Aug. 1966	18.1	125.2
All persons who held a second job in survey week	Nov. 1965	21.3	146.5
	Aug. 1966	20.7	148.0

No classification of totals are available for South Australia but the August 1966 survey indicated that Australia-wide multiple job holders are predominantly male (85.9%), married (81.2%), and 25-44 years old (65.2%).

Of all persons holding second jobs, 31.6% of second jobs was in "Amusement, Hotels, Cafes, Personal Services, etc." industry group and 20.2% in "Primary Production" whilst most persons (25.6%) worked 5-9 hours.

UNEMPLOYMENT

A full count of unemployed persons in South Australia is available only from population censuses. At the post-war censuses details have been obtained of all persons usually engaged in an industry, business, profession, trade or service but who were without employment at the time of the census, irrespective of whether they were actively seeking employment or not. As the term "unemployment" is normally associated only with those persons available for work and unable to obtain it, persons without employment at the census date are broadly described as "not at work".

Details of persons not at work at the 1966 Census were not available in time for inclusion but will be included in the 1968 Year Book.

The numbers of persons not at work at the 1947, 1954 and 1961 Censuses are given below together with the reasons for being without work. Persons not at work represented 2.05% of the total work force in 1947, 0.87% in 1954, and 3.11% in 1961.

Members of Work Force Not at Work, South Australia

Census	Unable to Secure Employment	Temporarily Laid Off	Sickness or Accident	Changing Jobs	Other and Not Stated (a)	Total
MALES						
1947....	903	750	1,219	31	1,499	4,402
1954....	290	166	816	516	232	2,020
1961....	5,649	802	1,183	503	383	8,520
FEMALES						
1947....	116	141	294	4	535	1,090
1954....	160	79	237	189	100	765
1961....	2,208	265	357	228	152	3,210
PERSONS						
1947....	1,019	891	1,513	35	2,034	5,492
1954....	450	245	1,053	705	332	2,785
1961....	7,857	1,067	1,540	731	535	11,730

(a) Includes persons resting between jobs or involved in an industrial dispute.

Monthly figures compiled by the Department of Labour and National Service from the operations of the Commonwealth Employment Service provide indicators of movement in the level of unemployment. The department makes a count of the number of persons, registered with the Employment Service for employment on the Friday nearest the end of the month, who claimed at the time of registering that they were not employed, and who were still recorded as unplaced. Included are persons who have been referred to employers and those who may have obtained employment without notifying the department. Also available is the number of vacancies, registered by employers, which were recorded as unfilled at the end of the month.

In the table below the number of persons and vacancies registered at the end of each month are shown for the years 1961 to 1966.

Registration with Commonwealth Employment Service, South Australia^(a)

Month	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
PERSONS REGISTERED FOR EMPLOYMENT (b) ('000)												
Year—												
1961.....	6.1	6.7	7.6	8.1	8.5	9.0	10.1	9.6	12.1	8.2	7.5	8.6
1962.....	10.3	8.1	7.2	7.4	6.9	6.9	6.7	6.1	5.4	5.0	4.9	6.5
1963.....	7.4	6.6	6.0	6.0	6.5	6.5	6.3	5.2	4.7	4.6	3.9	5.4
1964.....	6.5	5.3	4.5	4.5	4.4	4.3	4.2	3.5	3.1	5.7	2.9	4.8
1965.....	5.5	4.6	3.4	3.3	3.4	3.5	3.6	3.4	3.4	3.6	3.7	6.1
1966.....	7.6	6.8	6.5	6.0	6.7	7.4	7.2	7.3	7.1	6.7	6.5	8.5
VACANCIES REGISTERED ('000)												
1961.....	3.4	2.0	1.6	1.2	1.0	0.8	0.9	0.9	1.1	1.2	1.4	1.4
1962.....	1.3	1.5	1.5	1.5	1.5	1.5	1.5	2.1	2.2	2.4	2.5	2.6
1963.....	2.6	2.5	2.4	2.1	2.0	2.0	2.0	2.5	2.7	3.4	3.9	4.0
1964.....	4.0	4.3	4.2	3.9	3.7	3.4	3.3	3.9	4.7	5.3	6.0	6.0
1965.....	5.8	5.7	5.0	4.6	4.1	4.4	4.0	3.8	4.4	4.5	4.5	4.7
1966.....	3.6	3.1	2.4	2.1	1.9	1.5	1.6	1.7	2.5	2.9	3.3	3.4
EXCESS OF PERSONS OVER VACANCIES ('000)												
1961.....	3.7	4.6	6.1	6.9	7.5	8.3	9.2	8.8	11.1	7.0	6.1	7.2
1962.....	8.9	6.7	5.7	5.9	5.4	5.4	5.2	4.0	3.2	2.6	2.3	3.8
1963.....	4.8	4.1	3.7	3.9	4.6	4.5	4.3	2.8	2.0	1.2	0.0	1.4
1964.....	2.5	1.0	0.3	0.6	0.8	0.9	0.9	-0.4	-1.6	0.4	-3.1	-1.2
1965.....	-0.3	-1.1	-1.6	-1.3	-0.7	-0.8	-0.4	-0.4	-0.9	-0.9	-0.7	1.5
1966.....	4.0	3.7	4.0	4.0	4.9	5.9	5.6	5.7	4.6	3.8	3.2	5.0

(a) Includes Northern Territory. (b) Persons who claimed they were unemployed.

One of the primary functions of the Work Force Survey (see page 239) is to provide regular and detailed information on unemployment in Australia. Separate details for South Australia are not available and published estimates to date have been restricted to the six State capital cities.

In the table below unemployment rates are shown by industry group for the six capitals from 1961 to 1966. The unemployment rate is that percentage of the civilian work force aged 15 years and over (14 years and over prior to 1966) who are currently unemployed and looking for work or who are laid off without pay.

Unemployment Rates^(a), Six Australian State Capital Cities

Industry Group in which Last Employed	August					
	1961	1962	1963	1964	1965	1966
	Per cent					
Manufacturing.....	3.8	1.7	1.6	0.9	1.1	1.4
Building and construction	5.6	2.2	1.8	0.8	0.8	1.4
Transport, storage and communication	1.6	0.8	1.0	0.9	0.8	1.1
Commerce	2.6	1.4	1.4	0.9	1.2	1.5
Public authority (n.e.i.), community and business services (including professional)	1.1	0.8	1.1	0.6	0.6	1.0
Amusements, hotels and other accommodation, cafes, personal services, etc.	4.8	2.4	1.6	1.6	1.8	1.6
Other industries.....	1.4	1.5	1.5	0.6	0.7	1.1
All industries combined.....	3.0	1.5	1.4	0.9	1.0	1.3

(a) Excludes unemployed persons who had not previously been employed.

Of the persons found to be unemployed in August 1966, 56.5% had been unemployed for less than 1 month and 20.3% had been unemployed for at least 3 months, this latter figure contrasting with 12.5% in August 1965 and 24.4% in August 1964.

In the following table unemployment rates are shown according to age and marital status.

Unemployment Rates^(a), Six Australian State Capital Cities

August	Age Group (Years)					65 and Over	Total Civilian Population 15 Years of Age and Over
	15-19	20-44		45-64			
		Married	Not Married (b)	Married	Not Married (b)		
	Per cent						
	MALES						
1961.....	5.1	1.6	5.8	2.0	6.8	3.0	3.0
1962.....	2.4	1.0	2.1	1.3	3.2	0.7	1.5
1963.....	2.0	0.6	2.0	1.0	4.6	1.5	1.3
1964.....	1.4	0.4	1.2	0.3	1.7	1.3	0.7
1965.....	1.8	0.7	0.9	0.7	1.4	2.1	0.9
1966.....	2.6	0.8	1.6	0.8	2.7	1.2	1.2
	FEMALES						
1961.....	3.7	3.2	3.4	2.7	2.3	1.7	3.1
1962.....	2.4	2.2	2.1	0.9	1.0	..	1.9
1963.....	3.0	2.5	1.6	1.1	1.6	2.4	2.1
1964.....	1.5	2.3	0.9	1.0	0.7	1.0	1.5
1965.....	1.8	2.2	0.8	1.2	0.4	..	1.5
1966.....	2.5	2.3	1.6	1.4	1.3	1.9	2.0

(a) Includes unemployed persons who had not previously been employed.

(b) Includes never married, widowed, and divorced.

EMPLOYMENT SERVICES

Prior to 1946 the assisting of persons seeking employment and of private employers seeking labour was the responsibility of the South Australian Government Labour Exchange, which also acted as the employer of State Government labour. The central office of the Exchange was in Adelaide, with a branch office at Port Adelaide, and with police stations acting as local agents elsewhere.

The Commonwealth Employment Service commenced operations in South Australia in May 1946, superseding the State Exchange. The main functions of the Employment Service are to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

Specialized facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, migrants, rural workers, and persons with professional and technical qualifications. Vocational guidance is provided without charge by a staff of qualified psychologists. It is available to any person, but is provided particularly for young people and handicapped persons.

The Commonwealth Employment Service is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Experts for overseas service under technical aid programmes are recruited by the Employment Service.

Persons seeking unemployment benefit must register with the Employment Service, which is responsible for certifying that suitable employment is not available before benefits can be paid.

In association with placement activities, regular surveys of the labour market are carried out, and information supplied to interested parties.

The Commonwealth Employment Service operates 7 district or branch offices in the metropolitan area including one at Elizabeth, and has district offices at Gawler, Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, and Renmark. A part-time office is maintained at Whyalla, and agents of the Employment Service are located in other centres. The South Australian Regional Office is also responsible for district offices at Alice Springs and Darwin in the Northern Territory. A Higher Appointments Office in Adelaide specializes in placement of the more highly qualified and professional applicants.

There are also a number of private employment agencies, all of which are required to register with the State Department of Labour and Industry. Following amendments to the Employees Registry Offices Act in 1966 in which the definition of private employment agencies was broadened the number registered at 31st December 1966 rose to 28 and the fields of employment now covered include a wider range of professional and executive appointments.

7.2. ARBITRATION AND INDUSTRIAL ORGANIZATIONS

INDUSTRIAL ARBITRATION

In Australia a unique system of conciliation and arbitration by Government-established tribunals has been developed, with the Commonwealth Parliament and the State Parliaments each passing its own industrial legislation.

Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament may make laws in relation to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". In addition the Commonwealth may legislate under certain industrial powers for the stevedoring and maritime industries, the Commonwealth Public Service, and certain Commonwealth projects.

Commonwealth arbitration binds only the parties to a dispute, and decisions need not be of general application to an industry. Employees not specifically covered by Commonwealth awards are subject to State industrial jurisdiction. Where an award or determination of a State industrial tribunal is in conflict with an award of a Commonwealth tribunal, the latter prevails.

Although constitutionally limited, Commonwealth jurisdiction has been assisted by interstate ties of industry and trade unions, and is today the predominant influence in employer-employee relations.

Commonwealth Industrial Tribunals

Under the Commonwealth *Conciliation and Arbitration Act* 1904-1956, a Court of Conciliation and Arbitration was responsible for the prevention and settlement of industrial disputes extending beyond the limits of any one State. The Court consisted of a Chief Judge, six other Judges, and a number of Conciliation Commissioners.

In 1956 substantial amendments were made to the Conciliation and Arbitration Act with a view to separating the judicial and arbitral functions of the Court. Amendments provided for the establishment of the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission.

The Industrial Court performs the judicial functions of the former Arbitration Court. It interprets and enforces awards, and passes judgment on questions of law. The Court is composed of a Chief Judge and four other Judges. Jurisdiction is exercised by a single Judge when dealing with dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning membership of an organization, disputes between an organization and its members, and a prescribed matter of practice or procedure. In all other cases jurisdiction is exercised by not less than two Judges. Acts and judicial proceedings of the Court are recorded, and the Court has power to punish contempt of its authority. In general, decisions of the Industrial Court are final, however, in certain matters an appeal lies to the High Court but only by leave of the High Court.

The Commonwealth Conciliation and Arbitration Commission at present comprises a President, 5 Deputy Presidents, a Senior Commissioner, 10 Commissioners, and 3 Conciliators. Inquiries into basic wages, standard hours, and long service leave must be dealt with by the Commission in Presidential Session, *i.e.*, constituted by at least 3 presidential members. Other matters are generally dealt with by individual Commissioners who are assigned to particular industries or industry groups. A presidential member of the Commission deals with matters in the maritime and stevedoring industries. Conciliators assist in the reaching of agreement but have no power to impose compulsory arbitration.

When an industrial dispute occurs or is considered likely to occur, a Commissioner allocated to the industry takes steps for the prompt settlement of the dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. In seeking agreement he may obtain the services of a Conciliator, and must obtain such assistance when requested by one of the parties. If agreement is reached, the terms of the agreement are recorded and may be certified by the Commission. A certified agreement has the same effect as an award made by a Commissioner. Upon application by one of the parties, the President may, if he considers it in the public interest, direct the Commission constituted by not less than 3 members, one of whom shall be a presidential member, to hear the matter in dispute.

An appeal may be lodged against awards and certain decisions made by a Commissioner if in the opinion of the Commission the matter is of such importance that in the public interest an appeal should lie. Such appeals are heard by the Commission consisting of not less than three members of whom at least two are presidential members.

Conditions in the Commonwealth Public Service are normally regulated by the Public Service Arbitrator. However, where the Arbitrator refrains from hearing or determining a claim, or gives his consent to such action, a claim on behalf of Commonwealth employees may be submitted to the Commission.

State Industrial Tribunals

South Australia was a pioneer in State intervention in industrial relations. "A Bill to Facilitate the Settlement of Industrial Disputes" was introduced in State Parliament in 1890. It was, however, 4 years before a modified version setting up Boards of Conciliation was enacted. An Industrial Court was established in 1912 and was later incorporated in the system of tribunals created by the Industrial Code of 1920 which, as the Industrial Code, 1920-1966, is the basis of current arbitration provisions.

The Industrial Court usually consisted of a President and Deputy President, both appointed from legal practitioners of ten years standing. Normally the court was constituted by one of these officers, but certain matters were traditionally determined by a full court comprising both officers. When a dispute was under consideration, the President or Deputy President may have had the assistance of two assessors nominated by the parties before the court. The function of the court was to make awards concerning wages and conditions of employment for workers who were outside the jurisdiction of the industrial boards. It had authority to adjudicate in cases of strikes or lockouts and could summon persons to compulsory conference and hear appeals from determinations of industrial boards. In making an award the court could appoint or provide for a board of reference to deal with matters covered by the award, with a right of appeal to the Court against a decision of the Board.

The Board of Industry comprised the President or Deputy President of the Industrial Court and four commissioners. The functions of the Board were to recommend the creation or dissolution of industrial boards and to determine their ambit; to adjudicate on demarcation disputes; and to fix prices of commodities under the Fair Prices Act, 1924, if some manipulative control is shown. Prior to 1950 the Board of Industry also conducted periodic enquiries to fix a State "living wage", but subsequently the wage has been fixed by government proclamation.

Industrial Boards, consisting of a chairman and an equal number of employer and employee representatives, were set up by the Minister of Labour and Industry upon the recommendation of the Board of Industry. Each industrial board made determinations concerning wages and conditions of employment for workers within its particular industry group. The jurisdiction of most boards was confined to the metropolitan area, however, in the case of government and local government employees, determinations generally applied to the whole State.

The Code now provides for the Industrial Court, an Industrial Commission and Conciliation Committees.

Amendments made to the Industrial Code during 1966 established the Industrial Commission of South Australia which, in general, has the same award making powers as the Industrial Court previously had. The President of the Industrial Court became President of the Commission and in addition is the sole Judge of the Industrial Court. (The Court deals only with legal matters). In effect, the functions of the Industrial Court, which was constituted by a President and not more than two Deputy Presidents, are now exercised by the Commission as constituted by the President and two Commissioners (Full Bench) or by any one of them, as directed by the President. Although the President must be a person eligible for appointment as a Judge of the Supreme Court, the two Commissioners, who are appointed by the Governor, are not required to have legal qualifications. The Act provides that one must be experienced in industrial affairs through association with employers' interests, and the other must have similar experience by having been associated with trade union affairs.

The Industrial (or Wages) Boards, which operated since 1920, were reconstituted as Conciliation Committees with one of the Commissioners as chairman. Committees are appointed by the Minister of Labour and Industry on the recommendation of the President, for a three-year term. The Committees have the same jurisdiction in industrial matters as the Commission. If the process of conciliation before a committee fails, then the chairman sits as a Commissioner to determine the unresolved matters.

Provision is made for a Commissioner, whether dealing with a matter as Commissioner or as Chairman of a Conciliation Committee to consult with the President as to whether a matter should be dealt with by the Commission constituted by the President and the two Commissioners and he is required to so consult with the President on the application of any party to an industrial matter before him.

There is a right of appeal against awards and decisions of a Commissioner or of a Conciliation Committee. As one Commissioner is the Chairman of each Conciliation Committee a provision is included to enable the appeal to be heard by a bench of three, *viz* the President, the Commissioner, not concerned in the matter which is the subject of the appeal, and the Industrial Registrar.

Power is given to the President, a Commissioner or the Industrial Registrar to hear claims for the recovery of sums due under awards, but there is no power to award costs against either party. Where the amount of the claim exceeds \$60 there is an appeal to the President. Judgments are enforceable in the same manner as judgments of the Local Court.

These alterations abolish the Board of Industry, its functions (with the exception of demarcation disputes), being taken over by the Industrial Commission. Demarcation disputes are now dealt with in the same manner as an application for an award.

As the arbitration system now stands, it consists of:

- (1) the Industrial Court which deals with matters of law;
 - (2) the Industrial Commission which makes awards covering workers not under the jurisdiction of conciliation committees, hears claims for the recovery of sums due under awards, deals with demarcation disputes and hears appeals from decisions of conciliation committees;
- and
- (3) Conciliation Committees, which comprise equal representations of employer and employee interests, and have the same jurisdiction to make awards as the commission except that they cannot determine annual salaries, and generally have a geographical area of operation which is restricted to the metropolitan area (except as regards government or local government employees).

Proceedings against persons or organizations breaching an award are heard in a Court of Summary Jurisdiction although where a question of law is involved the matter may be referred to the Industrial Court.

EMPLOYEE ORGANIZATIONS

Early employee organizations in South Australia included the Progressive Society of Carpenters and Joiners, formed in the mid 1840's, and the Adelaide Branch of the Amalgamated Society of Engineers, founded some 20 years later in 1864. These societies were basically craft unions and it was not until 1870 that an industrial union open to all members in an industry, *viz* the Railway Service Mutual Association, was formed. Associations of waterfront employees, shop assistants, blacksmiths and saddlers emerged in 1873, and general acceptance of the eight-hour day was secured in the same year.

One of the problems facing early unions was the absence of legal recognition but in 1876 South Australia became the first State to legislate in this field. The Trade Union Act, 1876, recognized unions as lawful bodies capable of holding property.

The Adelaide Trades and Labor Council, the first delegates' society, held its inaugural meeting in January 1884 and in the following year reported 11 incorporated societies. At the beginning of 1890, 29 unions were recorded in South Australia. The maritime strike and other labour unrest of the early 1890's led to the establishing of a further 28 known unions in the three years 1890 to 1892.

There are today over 130 separate unions operating in South Australia. Although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. Some of these are bound under a system of unification with centralized control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The central labour organization for the State is the United Trades and Labor Council of South Australia, and combined union councils exist for Leigh Creek, Mount Gambier, Peterborough, Port Augusta, Port Lincoln, the Upper Murray and Whyalla. These central organizations, together with individual unions are affiliated with the Australian Council of Trade Unions. All major unions are affiliated with the council, which was founded at an All-Australian Trade Union Congress in 1927. The Trades and Labor Council is the State branch of the A.C.T.U. and has the right to appoint one representative to act on the executive of the council.

The following table gives particulars of the number of separate unions and union membership for the years 1961 to 1965. The table includes estimated percentages of trade union members to total wage and salary earners in employment. The estimates of total wage and salary earners have been calculated by adding estimates of rural and private domestic employees based on census results to estimates of wage and salary earners which normally exclude rural and private domestic employees. For this reason and because trade union membership includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

Trade Unions, South Australia
At 31st December

Year	Separate Unions	Members			Proportion of Members to Total Wage and Salary Earners		
		Males	Females	Persons	Males	Females	Persons
	No.	'000	'000	'000	%	%	%
1961.....	134	128.8	22.7	151.5	62	31	53
1962.....	133	136.5	23.9	160.4	61	29	52
1963.....	134	136.6	24.5	161.1	58	28	50
1964.....	137	141.4	25.5	166.9	58	27	50
1965.....	137	146.7	27.3	174.0	58	28	50

In the next table unions and membership have been classified under broad industrial groupings. Where the members of a union are employed in a number of industries they have been classified to the predominant industry. The classification "other" includes rural industry, mining and quarrying, banking, insurance and clerical, wholesale and retail trade, amusement, hotels and community and business services.

Trade Unions: Industry Groups, South Australia
At 31st December

Year	Manu- facturing	Building and Con- struction	Transport	Public Authority (n.e.i.)	Other	Total
NUMBER OF SEPARATE UNIONS						
1961....	41	7	19	37	30	134
1962....	41	7	19	36	30	133
1963....	41	7	18	37	31	134
1964....	42	7	20	38	30	137
1965....	42	7	20	37	31	137
NUMBER OF MEMBERS ('000)						
1961....	53.9	12.1	17.5	34.2	33.8	151.5
1962....	54.6	12.3	19.4	37.8	36.3	160.4
1963....	59.9	10.7	19.0	35.7	35.8	161.1
1964....	60.8	11.7	18.9	37.4	38.1	166.9
1965....	63.1	11.6	19.3	40.9	38.9	174.0

EMPLOYER ORGANIZATIONS

The oldest employer organization in South Australia is the Adelaide Chamber of Commerce, founded in 1839. The activities of the Chamber of Commerce, and of other employer associations, however, enter many fields not directly related to industrial issues.

From the point of view of industrial matters, the South Australian Employers' Federation Inc., founded in 1889, and the South Australian Chamber of Manufactures, established 20 years earlier in 1869, are the dominant organizations. These two organizations provide industrial services for the great majority of South Australian employers and employer groups.

The Employers' Federation is an incorporated body being largely a federation of employer associations, although provision is made for individual membership. In 1967 there were 36 affiliated associations encompassing some 7,000 employers, and approximately 1,000 individual members. The federation is maintained by fees paid by members, together with charges made for industrial actions, and from secretarial charges from member associations for which the federation acts as secretariat. A council, which contains a representative from each of the member associations, is elected annually, and an executive is elected by the council. Services provided include the negotiating and drafting of industrial agreements, and the preparation and presentation of cases before Commonwealth and State industrial tribunals. Advice is provided on existing awards and determinations, and on various aspects of industrial legislation.

The Chamber of Manufactures, formed originally to promote the products of South Australia, established an industrial department in 1940-41, and has since accepted increasing responsibility for representing employers' interests in the fixing of wages and the determination of employment conditions, both in State and Commonwealth jurisdictions.

The chamber has over 2,800 members organized, where possible, into nearly 50 trade sections. Administration is by a council of some 130 members representative of industry groups and trade sections, which in turn elects an executive of 6 members. In addition to industrial matters, the chamber secretariat draws attention to proposals before the State and Commonwealth Parliaments, proposals of local government authorities, matters before the Tariff Board, and regulations of government departments and instrumentalities which could or do affect member companies.

INDUSTRIAL DISPUTES

Details of the number and extent of industrial disputes occurring in South Australia are shown below. Effects on other establishments because of lack of materials, disruption of transport services, power cuts, etc., are not included in these statistics.

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years. Working days and wages lost are included in the appropriate year. Workers involved in more than one dispute during the year are counted once for each dispute.

Industrial Disputes^(a), South Australia

Period	Disputes	Workers Involved			Working Days Lost	Estimated Loss in Wages
		Directly	Indirectly (b)	Total		
						\$'000
Annual Averages						
1946-50	21	7,853	761	8,614	50,758	179.6
1951-55	30	17,376	402	17,778	50,472	310.0
1955-60	24	12,820	16	12,836	22,352	157.4
Year						
1961	26	17,012	321	17,333	17,256	133.6
1962	31	11,748	100	11,848	14,599	118.8
1963	35	11,938	107	12,045	8,957	81.9
1964	55	22,851	189	23,040	62,785	585.2
1965	48	28,323	143	28,466	26,379	253.3

a) Disputes involving a stoppage of work of 10 man-days or more.

(b) Persons thrown out of work at the establishment where the stoppages occurred but not themselves parties to the dispute.

In the following table industrial disputes occurring during 1964 and 1965 are classified by industry groups. A dispute involving workers in more than one industry group is counted once only and is included in the industry group which has the largest number of workers involved. Other details are allocated to their respective industry groups.

Industrial Disputes^(a): Industry Groups, South Australia

Industry Group	1964				1965			
	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
				\$'000				
Agriculture, grazing, etc.	—	—	—	—	—	—	—	—
Engineering metals, vehicles, etc.	22	8,632	54,803	507.8	17	7,275	8,836	72.6
Food, drink and tobacco	4	1,107	464	3.0	—	—	—	—
Sawmilling, furniture, etc.	1	258	60	0.4	—	—	—	—
Other manufacturing	7	749	1,287	12.4	2	224	710	8.7
Building and construction	4	322	123	1.2	7	5,067	3,254	33.4
Railway and tramway services.	—	—	—	—	3	2,270	2,186	26.1
Road and air transport	1	12	60	0.6	2	206	497	4.9
Stevedoring	16	11,960	5,988	59.8	15	12,787	8,994	91.9
Other Industries (c)	—	—	—	—	2	637	1,902	15.6
Total	55	23,040	62,785	585.2	48	28,466	26,379	253.3

(a) Disputes involving a stoppage of work of 10 man-days or more.

(b) Includes workers indirectly involved.

(c) Includes Communications ; Finance and Property ; Wholesale and Retail Trade ; Public Authority (n.e.l.) and Community and Business Services.

7.3. WAGES AND HOURS

WAGES

Wages as determined by the Commonwealth and State industrial authorities consist of two main elements—

- (a) A *basic or living wage* which is common to all wage earners and is the minimum payable to an unskilled worker. It is referred to as the “basic wage” in Commonwealth awards and the “living wage” in State awards.
- (b) A *secondary wage*, comprising margins and loadings, which differentiates between employees according to various features of their work.

The basic and secondary wages together form the *award wage*. This is simply the minimum wage payable; the *average weekly earnings* of an employee may include over-award and bonus payments.

Commonwealth Basic Wage

The *Conciliation and Arbitration Act 1904-1966* gives the Conciliation and Arbitration Commission power to make an award or to certify an agreement “altering the basic wage for adult males (or females) (that is to say, that wage, or that part of a wage, which is just and reasonable for an adult male [or female], without regard to any circumstance pertaining to the work upon which, or the industry in which, he is employed) or the principles upon which it is computed”. The Commission holds basic wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction.

Although the basic wage was originally interpreted as the minimum wage necessary to maintain an employee and his family, it is now generally accepted “that the wage should be fixed at the highest amount which the economy can sustain and that the ‘dominant factor’ is the capacity of the community to carry the resultant wage levels”⁽¹⁾.

The first basic wage judgment was given in 1907. The rate declared, in what became known as the Harvester Judgment, was 42s. (\$4.20) per week for Melbourne; the amount being considered reasonable for a “family of about five”. This award remained largely unaltered until 1913 when the Court of Conciliation and Arbitration, as it then was, took notice of a retail price index prepared the year before by the Commonwealth Statistician. At intervals thereafter, as awards came before it for review, the Court usually revised the basic wage rate in line with variations in the retail price index.

Following considerable criticism of retention of the “Harvester” standard, a royal commission was appointed in 1919 to inquire into the cost of maintaining a family of husband, wife, and three children under 14 years of age in a reasonable standard of comfort, and further, into how the basic wage might be automatically adjusted to retain its purchasing power. The Court felt unable to authorize the considerable increases in the basic wage recommended by the royal commission, being unsure of the ability of industry to pay such rates. On the other hand automatic adjustments, varying the basic wage in direct ratio to variations in the retail price index, were introduced in 1921.

(1) Commonwealth Arbitration Reports, Vol. 77, p. 494.

No further change was made in the method of fixing or adjusting the basic wage until the depression years. In 1930 applications were made to the Court for a greater reduction in wages than was resulting from automatic adjustments for falling retail prices. The Court, while declining to make any change in the existing method of calculating the basic wage, in 1931 reduced all wage rates under its jurisdiction by 10%. The male basic wage for Adelaide which had been \$8.85 per week in December 1929 was down to \$5.81 in December 1931. The Court in 1933 adopted a new series of retail price index numbers with a reduced influence on wages.

The "Harvester" standard, adjusted to retail price variations, continued to be the theoretical basis of the basic wage until 1934. In that year new wage rates were declared on the basis of the "C" Series retail price index, with provision for automatic quarterly adjustments in line with the index. At the same time the 10% special reduction was abandoned, and at the end of 1934 the male basic wage for Adelaide was \$6.30 per week. The Court also fixed a separate wage for provincial towns, the wage for South Australian towns being 30c less than that for Adelaide.

A new concept known as "prosperity" loadings was introduced in 1937. In this judgment the wage assessed on the 1934 basis was designated as the "needs" portion of the total wage and was to be adjusted to a new Court Price Index. To this was added a prosperity loading, which was independent of price movements. The first prosperity loading for Adelaide was 40c, with separate loadings for provincial towns.

A further increase in the basic wage was sought in 1940; however, due to the uncertain economic conditions in war-time, no alteration was made and the application held over for a later decision. It was not until 1946 that the hearing was resumed. In its judgment the Court granted an increase of 70c in the needs portion of the wage and introduced a revised Court index for automatic quarterly adjustments.

The next adjustment to the basic wage came in 1949-50 when the adult male wage was increased by \$2.00. At the same time the prosperity loading was standardized at 50c and made adjustable with the rest of the wage, resulting in a rise in the basic wage for Adelaide of \$2.10 per week. The female rate, which had been 54% of the male rate, was set at 75% of the male basic wage.

In 1953 the Court granted an employers' application for the deletion of quarterly adjustments, the last automatic adjustment being made in August of that year. A move was made for the restoration of quarterly adjustments in 1956, but the Court ruled that as the basic wage was based on capacity of the economy to pay it would be wrong to tie wage increases to price movements which were not necessarily related to capacity to pay. It was suggested instead that the basic wage be reviewed every 12 months. The ruling basic wage was increased by \$1.00.

Hearings were held in 1957, 1958, 1959, and 1960 with the unions on each occasion seeking the restoration of quarterly adjustments and an increase in the basic wage. The new authority, the Commonwealth Conciliation and Arbitration Commission, refused to restore quarterly adjustments but granted increases of \$1.00, 50c and \$1.50 respectively at the first three hearings and ruled against an increase in 1960.

An inquiry into basic wage differentials was held in the latter part of 1960 as a result of which the 30c country differential was eliminated.

In 1961 the unions applied for an increase in the basic wage and once again sought restoration of automatic adjustments. A wage increase of \$1.20 was granted. On this occasion the Commission, while refusing to grant automatic adjustments, agreed that where possible periodic allowances should be made for price fluctuations. It was accordingly proposed that the basic wage be reviewed annually in the light of the Consumer Price Index which had replaced the outdated "C" Series index. Unless persuaded otherwise the Commission would each year adjust the wage level to price movements, but such adjustments should always be at the discretion of the Commission and not automatic. In addition to the annual review of price movements, it was proposed that a general review of the economy, and in particular of productivity increases, be conducted approximately every 3 to 4 years.

Following the 1961 decision inquiries were held at the beginning of 1962 and 1963, with the Commission deciding on each occasion in favour of no increase in the basic wage. In 1964 the Commission awarded a \$2.00 increase in the basic wage, while rejecting a further request for quarterly adjustments. An application from the employers to have the basic wage provisions deleted in favour of a combined total wage was also rejected.

In June 1965 the Commission decided to abandon the established practice of making separate adjustments to the basic wage and margins, in favour of a simultaneous annual review of basic wage and margins together. The Commission rejected a union claim for an increase in the basic wage, deciding instead to increase the marginal component of wages by $1\frac{1}{2}\%$ of the award rate, or more precisely, of the total of the 6 capital cities combined basic wage and the current margin of the employee. The Commission reaffirmed that wage increases should be based on the ability of the economy to pay, and introduced price stability as a prime objective. In contrast to the 1961 decision the Commission rejected the relevance of the Consumer Price Index to their deliberations.

In July 1966 the Commission increased basic wage rates by \$2 per week for adult males with proportional increases for adult females and junior employees in accordance with percentages prescribed in the relevant award. It also expressed the opinion that, in addition to the amount of the basic wage, there should be an interim order in the unions' margins application so that no adult male employee in South Australia should be paid, as a weekly wage for the standard hours of work, less than \$36.55 at Whyalla and Iron Knob and \$36.05 elsewhere in the State. The Commission called for a report from the commissioner assigned to the metal industries concerning the classifications of work and marginal rates contained in the Metal Trades Award and made provision for an interim report to be made if the commissioner thought fit.

Later in 1966 the unions made application to the Commission for an interim increase in marginal rates on general economic grounds and because the commissioner's inquiry appeared likely to take some time to complete. The Commission subsequently granted increases ranging from 30c for unskilled workers to \$1.10 for tradesmen.

State Living Wage

The minimum weekly wage payable under an award or determination of a State industrial tribunal is known as the "living wage" and, according to the Industrial Code 1920-1966, is a sum sufficient for the needs of the average (unskilled) adult employee.

Although living wages of \$4.20 and \$4.80 per week were recorded in 1908 and 1913 respectively, these were of limited application, being restricted to the two awards in which they appeared. The first living wage with general application was awarded by the Industrial Court in the Living Wage (Tinsmiths) Case of 1916, when a wage of \$5.40 per week was fixed for adult males. An increase to \$6.30 was awarded in 1918, and a female wage of \$2.75 declared the same year.

Under the Industrial Code, 1920, responsibility for declaring a living wage passed to the Board of Industry. The Board was to conduct public inquiries into the average cost of living and to declare a living wage accordingly. The first such declaration was made in 1921 when weekly rates of \$7.95 for males and \$3.50 for females were fixed. The male rate reached \$8.55 in 1925 and then fell to \$6.30 in the depression years.

Although the Board of Industry was given power to differentiate between localities, all wage declarations prior to May 1947 applied to the State as a whole. At that stage the Board decided that the living wage at Whyalla and Iron Knob should be 50c in excess of that payable in Adelaide, to compensate for a higher cost of living. This loading is still in operation.

One of the provisions of the Industrial Code prohibited the Board of Industry from holding a new hearing within 6 months of a previous determination. Having made a determination in September 1946 the Board of Industry was therefore unable to adjust the living wage when the Commonwealth basic wage was increased in December of that year. A substantial disparity between the two wage rates appeared, resulting in provision being made under the Economic Stability Act, 1946, for the proclamation of a living wage based on the basic wage for Adelaide. The Board of Industry retained the power to declare a living wage which would supersede any declared by proclamation. An initial proclamation and two adjustments were made to the wage prior to the expiration of the Act at the end of 1947.

The Board of Industry awarded two further living wage increases before an amendment to the Industrial Code in 1949 provided for a quarterly adjustment of the living wage in accordance with variations in the basic wage for Adelaide. This provision resulted in the living wage and the basic wage being virtually synonymous from February 1950.

When the Commonwealth Court of Conciliation and Arbitration, late in 1950, increased the male basic wage by \$2.00 and the female rate to 75% of the male wage, State Parliament promptly amended the Industrial Code to make permanent provision for the declaration of the living wage by proclamation.

Quarterly cost-of-living adjustments to the living wage ceased in 1953 following the decision of the Court of Conciliation and Arbitration to abandon such adjustments for the basic wage.

Although the Board of Industry (now the Full Bench of the Industrial Commission) has retained the power to amend the living wage, it has not done so since 1949, all subsequent variations having been made by proclamation following basic wage judgments.

Adjustments to the living wage since 1920 are illustrated in the graph on page 262.

Basic wage and living wage rates applicable at 31st December each year since 1951 are recorded in the following table. The basic wage and the living wage

have been the same since February 1950 except in "other country districts" where the 30c differential operating until 1961 applied to the basic wage only.

Commonwealth Basic Wage and State Living Wage, South Australia

At 31st December

Year	Adelaide		Whyalla and Iron Knob	Other Country Districts (a)
	Males	Females	Males	Males
	\$	\$	\$	\$
1951.....	19.50	14.60	20.00	19.20
1952.....	22.90	17.15	23.40	22.60
1953.....	23.10	17.30	23.60	22.80
1954.....	23.10	17.30	23.60	22.80
1955.....	23.10	17.30	23.60	22.80
1956.....	24.10	18.05	24.60	23.80
1957.....	25.10	18.80	25.60	24.80
1958.....	25.60	19.20	26.10	25.30
1959.....	27.10	20.30	27.60	26.80
1960.....	27.10	20.30	27.60	26.80
1961.....	28.30	21.20	28.80	28.30
1962.....	28.30	21.20	28.80	28.30
1963.....	28.30	21.20	28.80	28.30
1964.....	30.30	22.70	30.80	30.30
1965.....	30.30	22.70	30.80	30.30
1966.....	32.30	24.20	32.80	32.30

(a) Commonwealth basic wage only. State living wage was same as Adelaide.

In a small number of Commonwealth awards a basic wage known as the "five towns" rate is used. This rate is a weighted average of the basic wage for Adelaide and of special rates declared for certain provincial towns. At 31st December 1966 the "five towns" rate for males was \$32.20.

Secondary Wages

Secondary wages constitute that part of award wages in excess of the basic (or living) wage, and are divisible into "margins" and "loadings".

Margins are rates awarded to particular classifications of employees in recognition of certain skills acquired, or as compensation for disabilities encountered in the general nature of their employment. Amounts provided under an award and applicable only to specific industries, tasks, or conditions, and not to classes of employees as a whole, are known as loadings. Loadings are payable for adverse features of particular industries, and for fares and travelling time, casual work, lack of amenities, working at heights, in confined spaces, under dirty or uncomfortable conditions, etc. As can be seen from the table on page 259 margins form the bulk of secondary wages.

The minimum margins and loadings payable are determined by an award of a Commonwealth or State tribunal or may be written into an agreement registered with either Commonwealth or State authorities.

Under Commonwealth legislation, the marginal rate of pay for any specific occupation is usually determined by the Commissioner for the industry concerned. However, awards of Commissioners are subject to appeal to a presidential bench of the Commission with the result that determinations of general principles are often referred immediately to the Commission. In practice, therefore, the Commission makes general determinations on economic grounds in respect of wage margins which the Commissioners follow in making individual awards. Furthermore, the State industrial tribunals have chosen also to follow general Commonwealth margins decisions.

Although general principles of marginal wage fixation had been enunciated by the Commonwealth Court of Conciliation and Arbitration as early as 1924, it was not until 1954 that the first general margins determination was made. The case involved an application for an increase in margins for all workers covered by the Metal Trades Award. In its judgment the Court increased the current margin payable in respect of each occupation covered by the award to two and a half times the margin payable in 1937, provided that where this amount was less than that currently payable no alteration was to be made. In effect, the decision provided considerable increases for the skilled occupations, *e.g.*, the margin of the fitter rose from \$5.20 to \$7.50, while making no increase in the margins of the unskilled.

At the same time the Court indicated that the rates prescribed could be taken as a guide by all Commonwealth arbitration authorities whose determinations were subject to appeal to the Court, and increases in margins were duly awarded in respect of corresponding occupations in other industries.

The next general increase in wage margins took place in 1959 when the Commonwealth Conciliation and Arbitration Commission began hearing a number of applications for increases in marginal rates. The applications related in the main to metal trades, although there was also an application in respect of the salaries of bank officers. The Commission increased margins under the Metal Trades Award by 28%, thus increasing the margin of the fitter from \$7.50 to \$9.60 per week. Increases were also granted under other awards to miners, to graduates and diplomates in engineering and science, and to bank officers.

In 1963 the Commission heard a further application by the metal trades unions for increased margins. It agreed to an increase to compensate for the loss of purchasing power since 1959, and further concluded that the economy could sustain an increase in the real value of margins, duly awarding a total increase of 10%. The margin of the fitter rose to \$10.60. On this occasion the Commission ruled that the decision would relate to the Metal Trades Award only, however, in practice it was extended to other awards.

The Commission, in 1965, decided in favour of a combined annual review of the basic wage and margins. It was decided on that occasion to leave the basic wage unaltered and to increase margins. However, the increase was to be based on the total basic wage plus margin and not on the margin only as in previous decisions. The 1½% granted represented an increase in the margin of the fitter of 60c per week, giving a new weekly total margin of \$11.20.

As mentioned earlier the Commonwealth Conciliation and Arbitration Commission, during 1966, handed down two decisions which altered the wage structure. Generally these decisions by the Commission have been followed by the State tribunals.

Award Wages

The minimum weekly amounts provided in awards, determinations, and registered agreements under Commonwealth and State jurisdiction are known as award rates.

The amounts shown in the following tables are a weighted average of minimum weekly wage rates payable to adult males and females in South Australia. Generally these are award rates; however, in a few cases where registered agreements are dominant in a particular industry, rates prescribed therein are used. The amounts shown should not be regarded as actual current averages, but rather as indexes expressed in money terms.

The minimum rates used are for representative occupations within each industry, the weights for each occupation and industry being based on sample surveys conducted in 1954, with allowance made where necessary for subsequent changes in the industrial structure. Because of coverage difficulties rural industries are excluded.

The statistics are designed to show movements in minimum wages as distinct from salaries, with the result that those awards, etc., which relate solely or mainly to salary earners have been excluded.

The first table shows a dissection of weighted average minimum weekly wage rates for adult males into the three components of the total minimum wage; basic wage, margin and loading. Separate details are shown for employees covered by awards, etc., within Commonwealth and State jurisdictions. Classified as Commonwealth are awards of, or agreements registered with, the Commonwealth Conciliation and Arbitration Commission and determinations of the Commonwealth Public Service Arbitrator. Incorporated under the State heading are awards or determinations of, or agreements registered with, State industrial tribunals, together with any unregistered agreements used in the computations.

Minimum Weekly Wage Rates^(a): Adult Males, South Australia
At 31st December

Year	Commonwealth Awards, Determinations and Agreements Registered				State Awards, Determinations and Agreements Registered				All Awards, Etc.
	Basic Wage	Margin	Loading	Total Wage	Living Wage	Margin	Loading	Total Wage	Total Wage
	\$	\$	\$	\$	\$	\$	\$	\$	\$
1940....	8.00	1.79	0.07	9.86	8.39	1.29	0.16	9.84	9.85
1945....	9.34	1.96	0.46	11.76	9.40	1.52	0.33	11.25	11.60
1950....	15.85	3.58	0.46	19.89	15.81	3.05	0.72	19.58	19.79
1955....	23.16	5.49	0.12	28.77	23.11	4.12	0.70	27.93	28.50
1960....	27.15	7.26	0.13	34.54	27.11	5.59	0.79	33.49	34.22
1962....	28.35	7.41	0.28	36.04	28.31	5.72	0.78	34.81	35.65
1963....	28.35	8.15	0.28	36.78	28.31	6.23	0.85	35.39	36.36
1964....	30.35	8.35	0.30	39.00	30.31	6.48	1.19	37.98	38.69
1965....	30.35	9.21	0.31	39.87	30.31	7.04	1.23	38.58	39.48
1966....	32.35	9.38	0.38	42.11	32.31	7.20	1.38	40.89	41.74

(a) For details of coverage see text above.

In the next table weighted average minimum weekly wage rates for males and females are shown for individual industrial groups.

Minimum Weekly Wage Rates^(a): Industrial Groups, South Australia
At 31st December

Industrial Group	1962	1963	1964	1965	1966
	\$	\$	\$	\$	\$
	ADULT MALES				
All industrial groups	35.65	36.40	38.69	39.48	41.74
Mining and quarrying	35.36	36.05	38.40	38.90	41.01
All manufacturing groups	35.65	36.36	38.61	39.18	41.25
Engineering, metal works, etc. ...	35.83	36.58	38.77	39.27	41.24
Textiles, clothing and footwear ..	34.02	34.68	36.93	37.53	39.59
Food, drink and tobacco	34.87	35.42	37.48	38.20	40.32
Sawmilling, furniture, etc.	35.38	36.08	38.08	38.74	40.82
Paper, printing, etc.	38.38	39.30	42.20	42.48	45.89
Other manufacturing	35.33	35.98	38.47	39.19	41.28
Building and construction	36.06	36.84	39.29	40.25	43.10
Railway services	34.72	35.48	37.60	38.51	40.71
Road and air transport	34.79	35.55	37.62	38.84	41.26
Shipping and stevedoring	35.52	36.71	38.81	39.65	41.88
Communication	39.35	40.88	44.10	47.09	49.13
Wholesale and retail trade	35.58	36.18	38.46	39.14	41.58
Public authority (n.e.i.) and community and business services...	34.19	34.98	37.25	38.50	40.78
Amusement, hotels, personal services, etc.	34.02	34.58	36.58	37.10	39.09
	ADULT FEMALES				
All industrial groups	25.23	25.52	27.29	27.75	29.41
All manufacturing groups	24.77	24.99	26.72	27.03	28.70
Engineering, metal works, etc. ...	24.74	24.88	26.59	26.83	28.53
Textiles, clothing and footwear ..	25.02	25.35	26.97	27.37	28.90
Food, drink and tobacco	24.62	24.81	26.51	26.77	28.61
Other manufacturing	24.63	24.84	26.79	27.13	28.76
Transport and communication ..	26.35	26.85	28.89	30.69	32.34
Wholesale and retail trade	25.88	26.22	28.02	28.39	30.08
Public authority (n.e.i.) and community and business services...	25.78	26.01	27.95	28.54	30.18
Amusement, hotels, personal service, etc.	23.89	24.14	25.72	26.13	27.73

(a) For details of coverage see text above.

In May 1963 a survey was conducted to estimate the proportion of employees affected by awards, determinations, and registered agreements. The following table indicates the approximate proportions found to be affected under Commonwealth and State jurisdiction respectively. Also shown are the proportions of employees whose rates of pay and working conditions were not affected by awards, determinations or registered agreements including those working under unregistered agreements. Employees in rural industry and in private domestic service were excluded altogether from the survey.

**Incidence of Awards, Determinations, and Registered Agreements
South Australia, May 1963**

Employees	Represented in Estimates	Affected by Commonwealth Awards, Etc.	Affected by State Awards, Etc.	Not Affected by Awards, Etc.
	'000	%	%	%
Males	194	55.7	29.0	15.3
Females	64	23.7	62.3	14.0

EARNINGS

Figures given in this section relate to actual average weekly earnings (including award wages, salaries, overtime earnings, over-award and bonus payments and prepayments) of all wage earners and salaried employees, whether adult or junior, full-time, part-time, or casual. Payments to members of the defence forces are excluded.

Particulars of wages and salaries are not available for males and females separately and average earnings have therefore been calculated by dividing total civilian employment expressed in terms of "male units". Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings.

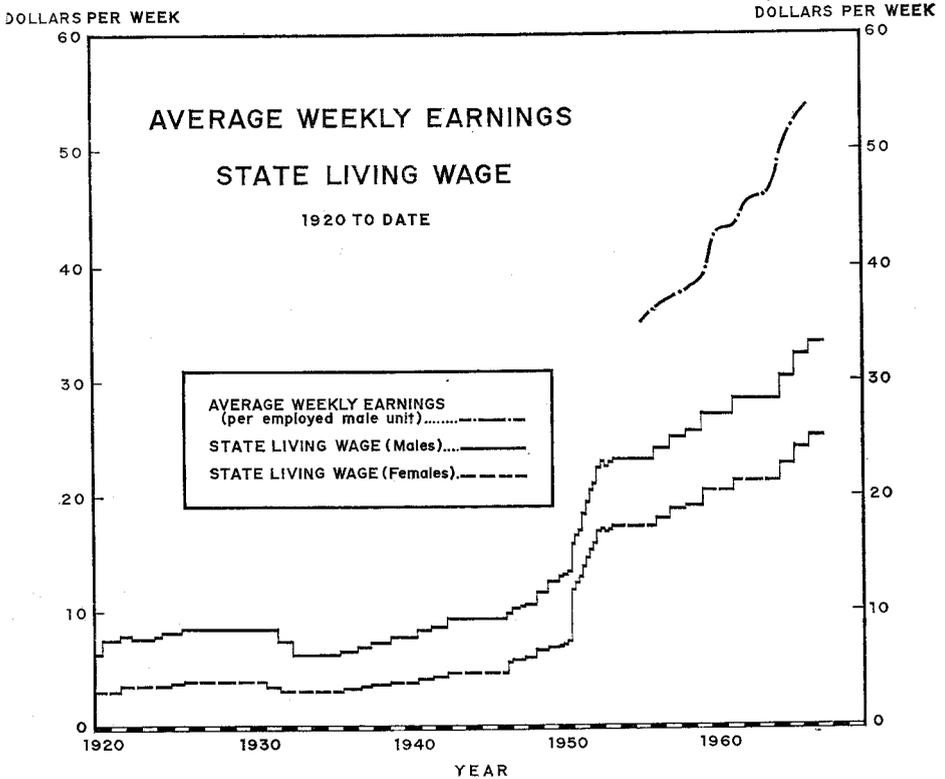
As quarterly figures are affected by seasonal influences, comparisons for trends should be made by relating complete years or corresponding quarters. From December quarter 1963, comparisons with corresponding quarters of earlier years are affected by additional prepayments arising from extensions of annual leave from two to three weeks. Due to variations in coverage, etc., these figures cannot be related to the minimum weekly wage rates shown in the preceding section.

Average Weekly Earnings per Employed Male Unit, South Australia^(a)

Year	September Quarter	December Quarter	March Quarter	June Quarter	Year
	\$	\$	\$	\$	\$
1955-56 ..	35.80	36.60	34.40	36.60	35.90
1956-57 ..	36.60	37.80	35.20	37.20	36.70
1957-58 ..	37.60	38.90	36.30	37.90	37.70
1958-59 ..	38.70	40.20	36.70	38.80	38.60
1959-60 ..	41.20	42.20	40.80	43.10	41.80
1960-61 ..	43.30	44.80	42.00	43.30	43.40
1961-62 ..	44.00	45.80	43.40	45.70	44.70
1962-63 ..	45.30	47.40	44.50	46.00	45.80
1963-64 ..	46.70	50.30	46.50	49.10	48.20
1964-65 ..	52.20	53.40	50.10	52.30	52.00
1965-66 ..	54.60	55.30	51.40	53.80	53.80
1966-67 ..	56.50	57.80	55.20		

(a) Includes Northern Territory.

Trends in average weekly earnings are expressed in the following graph, together with adjustments to the State living wage. The living wage and the Commonwealth basic wage have been the same over the period for which the average weekly earnings are shown.



Separate estimates of the average weekly earnings of males and females, and of adults and juniors, have been obtained from sample surveys conducted in the last pay-periods of October 1962, 1963, 1964, and 1966.

These surveys were based on a sample selection of private employers subject to pay-roll tax. Consequently employees of government and semi-government authorities and of religious, benevolent, and similar organizations exempt from pay-roll tax are excluded. Also specifically excluded are employees in rural industry and private domestic service, and casual waterside workers.

Employers selected gave details of all employees (other than part-time) whose hours of work were known and who were not involved in managerial, executive, professional, or higher supervisory functions.

Summarized results of the four surveys are given in the following table.

Average Earnings, South Australia

Particulars	Average Weekly Earnings				Average Hourly Earnings			
	October 1962	October 1963	October 1964	October 1966	October 1962	October 1963	October 1964	October 1966
	\$							
Males—								
Adult	47.00	49.30	53.60	58.00	1.11	1.15	1.24	1.35
Junior	21.20	22.50	24.80	27.70	0.52	0.55	0.61	0.68
Females—								
Adult	28.60	28.50	31.10	33.70	0.73	0.71	0.78	0.85
Junior	18.00	18.20	20.10	22.30	0.46	0.46	0.51	0.57

Similar surveys were conducted in 1961 and 1965 to determine the distribution of employees at various levels of earnings. On both occasions the survey was restricted to adult male employees while part-time and casual employees were excluded. Government employees were included only in the 1965 survey.

Adult Male Employees: Levels of Earnings, South Australia, October 1965

Earnings Per Week	Manufacturing			Non-Manufacturing			Total		
	Private	Govt	Total	Private	Govt	Total	Private	Govt	Total
	PERCENTAGE IN EACH GROUP								
Less than \$36 (a)	3.1	3.1	3.1	1.9	2.6	2.1	2.7	2.7	2.7
\$36 and less than \$40	6.4	6.6	6.5	9.1	9.4	9.2	7.4	8.7	7.7
\$40 and less than \$44	10.8	11.3	10.8	13.6	15.3	14.4	11.7	14.3	12.5
\$44 and less than \$48	13.6	15.2	13.8	12.3	15.0	13.6	13.2	15.0	13.7
\$48 and less than \$52	12.7	11.0	12.5	16.2	13.4	14.9	13.9	12.8	13.6
\$52 and less than \$56	13.0	13.2	13.0	10.5	11.8	11.1	12.1	12.2	12.1
\$56 and less than \$60	9.4	9.2	9.4	8.9	8.1	8.5	9.2	8.3	9.0
\$60 and less than \$70	16.6	12.7	16.1	14.0	12.7	13.4	15.7	12.7	14.8
\$70 and less than \$80	14.4	9.2	14.8	13.5	6.7	12.8	8.1	7.4	7.9
\$80 and over		8.5			5.0		6.0	5.9	6.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes some who received less than the basic wage because they were on training rates, retainers only in survey work, elderly persons, etc.

In the private sector 34.6% of all employees earned between \$36 and \$44 per week in 1961, whereas in 1965 39.3% earned between \$44 and \$56 per week. The 1965 results reveal that 35% of employees in the private sector earned less than \$48 per week and 29.8% earned \$60 or more. The corresponding details in the Government sector were 40.7% and 26%.

HOURS OF WORK

In 1914 in South Australia the average working time per week excluding overtime was in excess of 48 hours for males and 49 hours for females. By 1921 the average working week was about 47 and 46 hours respectively.

In 1927 the Commonwealth Court of Conciliation and Arbitration granted a standard working week of 44 hours to the Amalgamated Engineering Union, and intimated that this reduction would be extended to other industries operating under similar conditions. In the same year the first 44-hour week under a State award was granted. The extension of the 44-hour week was delayed, however, by the onset of the depression, and the average working week (excluding overtime) for males was only slightly less than 47 hours at the end of 1931. Throughout World War II the average working week was between 44 and 45 hours.

At the end of the war applications were made to the Commonwealth Court of Conciliation and Arbitration for a 40-hour week. Following an extensive hearing, the Court granted the reduction to 40 hours in September 1947. In the following month the State Industrial Court, after hearing applications by unions, approved the incorporation of the 40-hour standard week into State awards. In general, the 40-hour week operated from the first pay-period in 1948.

In 1952 the employers approached the Commonwealth Court of Conciliation and Arbitration for an increase in the standard working week, but the application was rejected. A further application was made to the Commonwealth Conciliation and Arbitration Commission in 1961, this time seeking a temporary increase in the working week to 42 hours with an accompanying increase in wages. This application was also rejected.

Today the 40-hour week is the standard working week for employees under Commonwealth and State awards; however, the number of hours constituting a full week's work varies between occupations. Certain Commonwealth awards covering rural industries prescribe hours in excess of 40, while other occupations by tradition work less than 40 hours, although 40 hours is generally retained in their awards.

The weighted average standard hours (excluding overtime) prescribed in awards, determinations, and agreements for a full working week for adult male employees in all industries in South Australia, except rural, shipping, and stevedoring, was 39.96 hours at 31st December 1964. This compared with 44.62 hours at 31st March 1939 and 43.83 hours at 30th September 1947, immediately prior to the introduction of the 40-hour week. The weighted average for female employees at 31st December 1964 was 39.77 hours. The weighted average figure for males and females has not changed significantly since 1964.

The normal working day is of 8 hours duration, and employees working beyond these hours are paid penalty rates. Award overtime rates are generally on the basis of time-and-a-half for the first four hours, with double-time thereafter. Double-time generally applies also to Saturday afternoon and Sunday work. Provision usually restricts overtime so that the employee has a break of at least 8 hours before resuming duty. Awards in certain industries provide for broken time and shift work. Employees on shift work normally rotate between shifts, receiving a loading for the working of afternoon and evening shifts.

The following table shows the relative distribution of employed civilian wage and salary earners for the six Australian State capital cities according to the number of hours worked in a specified week, as recorded in the August Work Force Surveys for years 1962 to 1966. The distribution is based on actual hours worked, not hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work due to sickness, accident and industrial disputes, and work stoppages due to plant breakdowns and weather.

Distribution of Hours Worked^(a), Six Australian State Capital Cities

Period	Proportion who Worked the Following Hours in the Specified Week							Total
	0-14	15-24	25-34	35-40	41-44	45-48	Over 48	
	Per Cent							
August—								
1962.....	4.3	2.1	4.3	76.5	4.7	4.6	3.5	100.0
1963.....	3.7	1.9	6.0	74.3	5.1	5.2	3.8	100.0
1964.....	4.0	2.2	4.4	71.2	5.7	6.6	5.9	100.0
1965.....	4.0	2.1	4.5	69.5	5.7	7.6	6.6	100.0
1966.....	3.9	2.6	4.5	68.4	5.6	7.5	7.5	100.0

(a) Employed wage and salary earners, 14 years of age and over. Figures for August 1966 relate to persons 15 years of age and over.

HOLIDAYS AND LEAVE**Public Holidays**

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed either on a State-wide basis or applicable to particular localities. Employees required to work on public holidays normally receive an extra day's pay and are paid at penalty rates.

The traditional public holidays are—New Year's Day (first week-day in January), Australia Day (first Monday after 25th January), Good Friday, Easter Saturday, Easter Monday, Anzac Day (25th April or the following day if 25th a Sunday), Queen's Birthday (by proclamation), Eight Hours Day (second Monday in October), Christmas Day (a holiday may be proclaimed for the following Monday if it falls on Sunday), and Proclamation Day (28th December or the following Monday if 28th falls on Saturday or Sunday).

Annual Leave

Prior to 1936 the granting by Commonwealth tribunals of annual leave on full pay was restricted to exceptional cases. However, in that year the Commonwealth Court of Conciliation and Arbitration granted one week's annual leave to employees in the printing industry. Thereafter annual leave was gradually introduced into other awards.

In 1945 the Court was approached for an extension of annual leave to 2 weeks. Although delineating the principles to be followed in considering applications for 2 weeks' leave, the Court chose to leave the question of altering any particular awards to the discretion of the single Judges hearing the applications.

An approach for 3 weeks' annual leave was made to the Commonwealth Conciliation and Arbitration Commission in 1960 by unions covered by the Metal Trades Award. In its judgment the Commission rejected the general application of 3 weeks' annual leave on economic grounds, but at the same time envisaged special cases where leave greater than 2 weeks would be justified. A further application for the general adoption of 3 weeks' leave was made in 1962 but the Commission was still not satisfied with the ability of the economy to cope with such an increase. In April 1963 the Commission granted 3 weeks' annual leave to employees under the Metal Trades Award who had completed 12 months' continuous service. Provision was also made for holiday pay on a proportionate basis for employees who had completed one month's service but whose employment was terminated before 12 months. Application of the new standard to other awards was left to individual Commissioners.

In May of the same year the State Industrial Court announced an increased standard of annual leave for employees under State awards, adopting for this purpose the Commonwealth standard.

At present the majority of employees receive at least 3 weeks' paid annual leave.

In addition to recreation leave most Commonwealth and State awards provide a sick leave entitlement. Generally employees are entitled to at least one week's sick leave on full pay during each year of service, with varying provisions for the accumulation of unused leave.

Long Service Leave

Legislative provision for the granting of long service leave to employees was introduced in the Long Service Leave Act of 1957. This State legislation applied also to employees under Commonwealth awards, as the Commonwealth Conciliation and Arbitration Commission had refrained from determining disputes concerning long service leave. The Act provided for one week's leave in the eighth and each subsequent year of continuous service. Exempted from the State legislation are employers bound by an award or agreement to provide long service leave to employees covered by such an award or agreement, and employers providing long service leave, superannuation benefits or other similar benefits considered to be not less favourable than entitlement under the Act.

Later in 1957 employer organizations in a majority of industries signed agreements adopting a "Federal Code of Long Service Leave" providing for 13 weeks' leave after 20 years' service. The attraction of the Federal Code was that it recognized service dating back to 1937, whereas the Long Service Leave Act did not recognize service prior to 1950. The majority of South Australian employees are entitled to long service leave under the Federal Code.

Employees under a number of awards introduced since 1964 are entitled, at least in relation to future service, to 13 weeks' leave after 15 years. In that year the Commonwealth Conciliation and Arbitration Commission provided for the first time for the inclusion of long service leave provisions in a Commonwealth award, granting employees in the graphic arts and metal trades industries leave on the basis of 13 weeks for 20 years' service, in respect of employment prior to the decision, and 13 weeks for 15 years in respect of future service. These provisions have been extended to certain other Commonwealth awards. In a number of other cases, registered agreements provide for 13 weeks' leave after 15 years' service.

In 1966, the South Australian Industrial Commission varied a long service agreement, applicable to many employees, by prescribing long service leave on the basis of 13 weeks for 20 years service for service prior to 1st January 1966 and 13 weeks for 15 years service for service after that date.

State and local government employees are in general entitled to 13 weeks' leave after 10 years' service, and Commonwealth Government employees to 4½ months after 15 years' service.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

7.4. INDUSTRIAL SAFETY

SAFETY REGULATIONS AND INSPECTION

Most of the legislation directed at industrial safety is administered by the Department of Labour and Industry, although other authorities hold responsibilities in certain fields.

Department of Labour and Industry

The general working conditions in factories, shops, offices and warehouses are regulated by the Industrial Code, 1920-1966, and the Country Factories Act, 1945-1965. Inspections are made by departmental officers to ensure that the requirements of these Acts with respect to safeguarding of machinery, safety of processes, cleanliness and general working conditions in factories are being observed.

The registration and inspection of steam boilers and other pressure vessels is provided for under the Steam Boilers and Enginedrivers Act, 1935-1952. The Lifts Act, 1960, regulates the use of lifts, escalators, cranes and hoists, with the department required to approve new installations and regularly inspect existing lift equipment. The safety of scaffolding, associated gear, and hoisting appliances on buildings under construction or being demolished is provided for under the Scaffolding Inspection Act, 1934-1963. The Inflammable Liquids Act, 1961, and the Liquefied Petroleum Gas Act, 1960, regulate the storage and carriage of these products.

Department of Mines

Regulations under the Mines and Works Inspection Act, 1920-1966, provide for the health and safety of persons engaged in mining or quarrying and for the protection of the general public. Mining sites must be maintained in safe conditions with specific attention given to ventilation, sanitation, and the use of explosives. Officers of the department inspect mines and quarries, check old workings, and investigate mining accidents.

Department of Public Health

Health aspects of industrial safety are the responsibility of the Occupational Health Section of the Department of Public Health. The department investigates health hazards resulting from the presence of toxic and noxious substances in industry, both on its own initiative and on reference from employers, unions, other authorities, and individuals. Investigations are carried out where radioactive and irradiating apparatus is in use for industrial, scientific, or medical purposes.

Chemistry Department

The Explosives Act, 1936-1963, regulates the importation, manufacture, carriage, storage, and sale of explosives. The Chemistry Department is responsible for the maintenance of government magazines and the licensing and inspection of private magazines. Vehicles used in the carriage of explosives are also licensed. Almost all commercial explosives, including fireworks, entering the State are inspected by the department.

Electricity Trust of South Australia

Electrical installations are required to conform to the service rules of the Electricity Trust and the wiring rules of the Standards Association of Australia, and are subject to inspection by Electricity Trust officers.

WORKMEN'S COMPENSATION

Legislation

The first Workmen's Compensation Act was passed in 1900. Covering factories and certain industries considered as offering hazards to employees, the Act set out a scale of compensation to be paid in the event of an accident without negligence by the employer having to be proved. Considerable amending legislation followed this early Act, and new Acts were passed in 1911 and 1932, gradually broadening the scope of the legislation as to persons covered, contingencies included, and the scale of benefits.

Current legislation, the Workmen's Compensation Act, 1932-1966, covers workmen whose average weekly earnings do not exceed \$110 against personal injury arising out of or in the course of their employment. The coverage extends to recess periods, travelling to or from work, travelling to or from or attending a trade or technical school, and travelling for medical treatment while on compensation. Diseases due to the nature of the employment are treated as injury, and special provision is made for silicosis and for certain industrial diseases contracted at Port Pirie.

Excluded from the scope of the Act are casual workers, outworkers, service personnel and Commonwealth employees; the last-named being covered by the *Commonwealth Employees' Compensation Act 1930-1964*.

Where death results from the injury, provision is made for compensation to be paid to the workman's family. In the case of dependants who are wholly dependent, the Act provides for a maximum payment of a lump sum based on 4 years' earnings plus \$220 for each dependent child under 16 years, with a minimum payment of \$2,200 and a maximum of \$12,000 plus the dependent child allowance. Proportionate payments are made to partial dependants, and where there are no dependants medical and funeral expenses are met.

Where the accident results in total incapacity, the worker receives a weekly payment of between \$12 and \$22 plus allowances for spouse and dependent children, with a maximum payment of \$32.50 or average weekly earnings, whichever is the less. Payment in relation to loss of earning capacity is made in the case of partial incapacity.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement; or after six months, by arbitration on application of either employer or employee. The total liability of the employer is limited to \$12,000 in the case of total incapacity and \$9,000 for partial incapacity, in addition to weekly payments already made. Lump sum compensation is also provided for certain specified injuries, *e.g.* loss of limbs.

In addition to other compensation reasonable medical, hospital, nursing, and ambulance expenses are paid and compensation to \$60 is provided for damaged clothing.

The Minister responsible for administering workmen's compensation is the Treasurer, with the Treasury responsible for surveillance of the Workmen's Compensation Act and Regulations.

Workmen's Compensation Insurance

The Workmen's Compensation Act requires every employer, unless specifically exempted, to obtain from a licensed insurance company a policy which fully covers his liability under the Act. The exemptions are the State Government which provides its own cover through the Government Accident Insurance Office,

the South Australian Railways Commissioner, and any employer who can satisfy the Minister of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption.

Details of workmen's compensation claims met by insurance companies and self-insurers during the last four years are as follows.

**Workmen's Compensation Claims
South Australia**

Year	Number of Claims	Compensation Payments
		\$'000
1962-63	48,000	3,552
1963-64	51,350	3,866
1964-65	55,600	4,306
1965-66	58,350	4,725

INDUSTRIAL ACCIDENTS

Detailed information on industrial accidents in South Australia was first collected in 1961. Statistics are compiled from reports of workmen's compensation claims submitted by insurance companies, self-insurers, and State Government departments through the South Australian Department of Labour and Industry.

The collection is restricted to fatal accidents and to accidents causing an absence from work of one week or more. Cases involving travelling to or from place of employment, occurring during a recess period, or involving diseases are excluded.

Particulars of the number of industrial accidents, of time lost, and compensation paid are given below for the years 1962-63 to 1965-66. The figures for any one year relate to claims closed during the year and to unclosed claims at the end of the year which have been outstanding for three years.

Industrial Accidents, South Australia

Particulars	Unit	1962-63	1963-64	1964-65	1965-66
Accidents—					
Fatal	No.	25	20	17	23
Non fatal	No.	10,498	11,098	11,809	10,522
Time lost—					
Total	week	40,959	43,867	43,376	37,659
Average per accident	week	3.9	4.0	3.7	3.6
Amount Paid (a)—					
Fatal accidents	\$'000	135.2	129.6	103.3	166.3
Non-fatal accidents	\$'000	2,037.4	2,348.3	2,504.5	2,212.0
Total	\$'000	2,172.6	2,477.9	2,607.8	2,378.3
Average per non-fatal accident...	\$	194	212	212	210

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Of the 10,522 non-fatal accidents in 1965-66, 1,053 involved females. No accident resulting in the death of a female has been reported since statistics have been compiled.

Industrial accidents for 1965-66 are classified below by industry group. As the statistics are based on workmen's compensation claims, persons outside the scope of the South Australian Workmen's Compensation Act are excluded. Notable exclusions are self-employed persons and all Commonwealth Government employees. Thus persons employed within some industry groups, e.g. defence services and communications, are not covered at all while coverage is reduced in other groups, particularly in commerce and primary production.

Industrial Accidents: Industry Groups, South Australia, 1965-66

Industry Group	Fatal Accidents		Non-fatal Accidents			
	Number	Amount Paid (a)	Number	Proportion of Total	Time Lost	Amount Paid (a)
		\$'000		%	Weeks	\$'000
Primary production	1	6.9	831	7.9	3,373	158.3
Mining and quarrying	1	0.2	106	1.0	376	25.7
Manufacturing	7	90.5	4,794	45.6	16,134	1,002.2
Electricity, gas, water, and sanitary services	2	15.8	491	4.7	1,890	116.8
Building and construction ..	5	15.4	1,520	14.4	5,636	357.5
Transport and storage	6	30.7	745	7.1	2,732	133.3
Finance and property	—	—	32	0.3	264	9.2
Commerce	—	—	1,300	12.4	4,266	265.0
Public authority (n.e.i.) and community and business services	1	6.7	396	3.8	1,663	85.4
Amusement, hotels, accommodation, cafes, etc.	—	—	306	2.9	1,303	56.5
Other	—	—	1	0.0	22	2.2
Total	23	166.3	10,522	100.0	37,659	2,212.0

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Most of the non-fatal accidents in 1965-66 involved injuries to the arm or hand (3,880), the leg or foot (2,927) or the trunk (2,675). Other accidents resulted in 318 eye injuries, 370 head injuries and 302 injuries to the neck or spine.

In the following table industrial accidents are allocated to an accident factor, this being the underlying agency, other than human failing, which appeared to contribute most materially to the accident.

Industrial Accidents: Accident Factor, South Australia

Accident Factor	1962-63	1963-64	1964-65	1965-66
Machinery	1,219	1,403	1,316	1,165
Vehicles	601	593	533	455
Electricity, explosions, flames, hot substances	292	256	345	276
Harmful substances	54	49	69	55
Falling, slipping, stumbling, etc. ...	2,162	2,360	2,445	2,212
Striking against, stepping on, etc. ...	566	518	640	593
Struck by moving or falling objects.	1,746	1,725	2,258	2,057
Strain in handling	1,858	2,050	2,279	2,068
Handling sharp objects	383	379	394	320
Other handling	87	111	71	82
Hand tools	1,035	1,101	950	859
Miscellaneous	520	573	526	403
Total	10,523	11,118	11,826	10,545

Falling, slipping, stumbling, etc., caused 21.0% of accidents in 1965-66. The majority of these resulted in sprains, bruising, and superficial injury, although 399 cases involved actual fractures or dislocations.

There were 85 fatal accidents in the four years 1962-63 to 1965-66. Of these 8 were attributed to machinery, 36 to vehicles, 8 to electricity, explosions, etc., 12 to falling, slipping, stumbling, etc., 11 to moving or falling objects, and 10 to other factors.

PART 8

PHYSICAL DEVELOPMENT

8.1. WATER SUPPLY

With 96% of the State receiving less than 20 inches of rain per annum, and high evaporation increasing the demand for water and causing heavy losses from reservoirs, water conservation is of vital importance to South Australia.

Water supplies, other than in irrigation areas, are under the control of the Engineering and Water Supply Department through the Waterworks Act, 1932-1962, and the Water Conservation Act, 1936.

METROPOLITAN WATER SUPPLY

From 1836 to 1860 the inhabitants of Adelaide and the surrounding plains obtained their water from the River Torrens and other streams, from springs and shallow wells, or by collecting the water shed from roofs.

Growth of population caused the primitive methods of supply and distribution to become inadequate and in December 1860 Adelaide received its first supply under pressure from Thorndon Park Reservoir. This early reservoir situated seven miles north-east of Adelaide is filled from a diversion weir on the Torrens Gorge. A second reservoir—Hope Valley—completed in 1872, is also filled from the River Torrens. These reservoirs are of a low altitude and residents of the eastern foothills still had to rely on local creeks, or on water pumped into storage tanks, for their supply.

In 1888 a Royal Commission recommended the construction of a reservoir to be fed from the River Onkaparinga, Happy Valley Reservoir being completed in 1896. The next major development was the completion of the Millbrook Reservoir in 1918 on the Chain of Ponds Creek, its intake coming from the River Torrens through a mile long tunnel. Mount Bold, completed in 1938, differs from the earlier reservoirs in that it does not lead directly into a reticulation system. Built on the Onkaparinga it functions as a storage for the Happy Valley Reservoir. With the construction of Mount Bold Reservoir the only catchment areas in immediate proximity to Adelaide, namely the Torrens and Onkaparinga areas, had been harnessed.

Continued population growth, however, necessitated increased supply and in 1945 over 50 boreholes were drilled in the Adelaide Artesian Basin, a basin of approximately 30 square miles to the north and west of the city. These bores can be brought into operation at short notice and yields vary from 500 to 25,000 gallons per hour.

The feasibility of Adelaide augmenting its water supply by means of a pipeline from the River Murray had been considered on a number of occasions, and in 1949 the project was commenced. The first Murray water reached the metropolitan system in 1954. The water is drawn from the river at Mannum, being 41½ miles in a direct line from Adelaide, and is raised by three pumping stations a total of 1,490 feet to a 30 million gallon summit storage near Tungkillo. At first the water flowed into the Torrens and Onkaparinga Rivers and hence into the metropolitan system; later the pipeline was extended to a terminal storage near Modbury. The Mannum-Adelaide Pipeline is also connected to the Warren Reservoir on the South Para River and branches serve many country areas *en route*.

With the growing demand for water in Adelaide and areas immediately to the north, investigations were focused on a site on the South Para River, the potentiality of this site having been recognized as far back as 1878. The South Para Reservoir was completed in 1958 and supplies water, *via* the Barossa Reservoir, to the metropolitan area, Elizabeth and the Lower North. In 1960 the capacity of the South Para Reservoir was increased.

There was also considerable development taking place in areas to the south of the metropolitan area, and in 1958 a dam was commenced on the Myponga River 34 miles south of Adelaide. The Myponga Reservoir, completed in 1962, supplies surrounding districts and areas to the south of Adelaide, surplus water being fed into the Happy Valley Reservoir.

The Mount Bold dam was raised in 1962, increasing the capacity of the reservoir by over 50%.

A new reservoir to be known as the Kangaroo Creek Reservoir is currently under construction in the Torrens Gorge downstream from the Millbrook diversion, and is anticipated to be completed in 1969.

COUNTRY WATER SUPPLY

Early settlement was confined mainly to localities in which water supplies, considered to be permanent, were available in the form of springs, soaks or running streams. Settlement gradually extended further from the sources of supply, and many sources previously considered permanent failed under prolonged periods of drought.

Water was required for domestic use and for stock and was obtained from tanks excavated on the properties, wells (in areas with sub-surface water), streams and water conservation works provided by the State. The Water Conservation Act of 1886 was passed to enable the State to provide and control necessary water supplies. Works constructed or acquired under this Act comprised approximately 340 bores, 460 wells and 550 dams, tanks or rain-sheds, costing nearly \$3,000,000.

These small water conservation schemes, while of immense value eventually proved to be inadequate.

Reticulated Supplies

The first large country water conservation and distribution scheme, the Beetaloo system, was completed in 1890. The Beetaloo Reservoir, 10 miles east of Port

Pirie, was the first of three major reservoirs in the Flinders Ranges, each interconnected and serving the farming areas of the Mid-North. The subsequent reservoirs were the Bundaleer between Gulnare and Spalding completed in 1902, and the Baroota 19 miles north of Port Pirie completed in 1922. Nectar Brook Reservoir, serving the Port Augusta district, was completed in 1899.

Reticulation in the Lower North began with the construction of the Barossa Reservoir on the South Para River in 1902. The Warren Reservoir, the most elevated in the State, followed in 1916, and the recently completed South Para Reservoir, as well as serving the metropolitan area, caters for an area extending as far north as Port Wakefield.

Water reticulation schemes on Eyre Peninsula date from 1912 when, under the Yeldulknie Scheme, three reservoirs were constructed across intermittently flowing creeks in the hilly country west of Franklin Harbor. In 1922 a reservoir was completed on the Tod River and a pipeline to Port Lincoln, approximately 17 miles away, connected in 1927. The Tod River Reservoir was later connected to the Yeldulknie system. In addition 9 bores have been sunk in the Uley-Wanilla Basin to the north-west of Port Lincoln the water being piped to Port Lincoln and surrounding districts as well as into the Tod River Reservoir.

With the growth of Whyalla, local supply became inadequate, and in 1940 work commenced on a pipeline from the River Murray. The Morgan-Whyalla Pipeline, completed in 1944, includes four pumping stations which lift the water 1,558 feet over a distance of 57 miles from Morgan to a summit storage at Hanson. From here the water gravitates 166 miles *via* Port Augusta to Whyalla. Branch lines have been laid to Woomera (110 miles) and other country centres. The Morgan-Whyalla Pipeline, being an additional source of supply for the Bundaleer system, has permitted reticulation over most of Yorke Peninsula. A second main, which will more than double the capacity of the pipeline, is currently under construction. This main, rather than skirt the gulf at Port Augusta, has been laid on the sea bed for a distance of 7½ miles between Mambray Creek and Point Lowly.

The Encounter Bay area has been supplied from a reservoir in the Hindmarsh Valley since 1917, this supply being augmented more recently by water pumped from the River Murray at Goolwa.

Local Water Schemes

In addition to the extensive reticulated schemes there are many local water supply schemes. Mount Gambier has drawn water from the Blue Lake since 1883 and many towns have small reservoirs serving their needs. Towns along the River Murray are supplied from the river and river water is reticulated to adjacent farm lands.

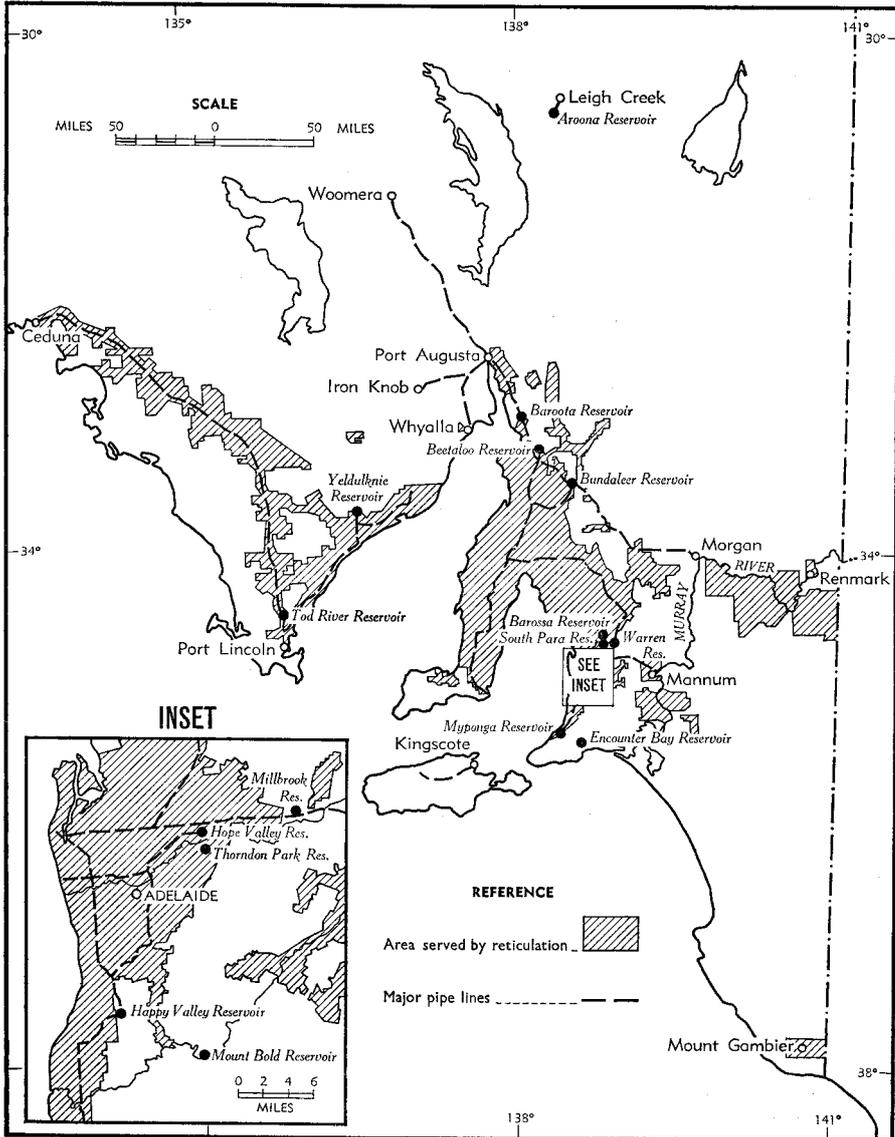
Underground Water

Underground water-bearing areas occur in many parts of the State, and without these resources the development of extensive areas remote from surface waters would have been impracticable.

The Great Artesian Basin extends over the far northern and north-eastern portion of the State. Many bores have been sunk in this basin including several along the stock route from Birdsville in Queensland to Marree. The daily flow from approximately 160 Government bores is 13 million gallons.

In addition to the Adelaide and Uley-Wanilla Basins other underground sources from which considerable supplies are obtained include the Robinson Basin supplying Streaky Bay, and the Murray Basin which is essential to settlement in the Murray Mallee country and in the south-east of the State. More recently the Lincoln and Polda Basins have been developed to further augment Eyre Peninsula supplies.

PORTION OF SOUTH AUSTRALIA
WATER SUPPLIES



MAP 8

PHYSICAL DEVELOPMENT

Water Supplies^(a), South Australia

At 30th June	Area of Works	Storage Capacity (b)	Length of Mains	Capital Cost to Date (c)
	Sq. Miles	Acre ft	Miles	\$'000
1881	<i>n.a.</i>	3,986	408	1,988
1891	(d)2,167	6,825	976	3,570
1901	2,279	18,554	1,577	5,964
1911	4,383	28,079	2,793	9,096
1921	7,740	46,924	4,126	13,876
1931	18,677	62,229	6,030	26,136
1941	18,544	87,774	6,450	31,218
1951	18,701	88,244	7,203	50,380
1961	20,498	130,488	9,292	142,104
1963	20,761	166,079	9,996	175,812
1964	20,895	166,490	10,469	187,908
1965	21,132	166,512	10,774	207,612
1966	21,640	166,549	11,091	221,919

(a) Controlled by Engineering and Water Supply Department and preceding State authorities.

(b) Includes Morgan-Whyalla pipeline storage tanks.

(c) Total original cost of assets.

(d) 1892.

n.a.—Not available.

Water Storage and Consumption, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	Acre-feet				
Water storage: (capacity at end of year)—					
Adelaide Water District (a)	89,570	89,596	89,623	89,268	89,303
Country water districts (b)	76,671	76,483	76,867	77,244	77,246
Water consumption—					
Adelaide Water District (c)	96,433	88,786	99,658	97,926	105,481
Country water districts	38,330	39,885	39,546	40,726	44,006
Pumped from River Murray—					
Mannum-Adelaide pipeline	53,983	30,576	18,667	18,298	56,702
Morgan-Whyalla pipeline	11,680	11,764	10,309	15,180	15,450

(a) Includes Myponga reservoir.

(b) Includes South Para reservoir.

(c) Gazetted area plus areas supplied directly from the Mannum-Adelaide pipeline and the Myponga reservoir.

Major Reservoirs^(a), South Australia

As at 31st December 1966

Reservoir	Capacity	Area at Full Supply Level	Catchment Area
	Acre-ft	Acres	Sq. Miles
South Para	41,647	1,096	88
Mount Bold	38,477	762	150
Myponga	21,763	693	48
Millbrook	13,441	440	90
Happy Valley	10,334	465	174
Tod River	9,196	330	76
Bundaleer	5,163	210	605
Warren	5,163	338	46

(a) All reservoirs with a capacity in excess of 5,000 acre-feet.

8.2. IRRIGATION AND DRAINAGE

IRRIGATION

The development of irrigation areas in South Australia has been carried out by both Government authorities and private interests. Since 1930 the controlling authority for Government irrigation areas has been the Department of Lands with the Engineer-in-Chief the constructing authority for the Minister of Irrigation.

Irrigation areas are confined almost exclusively to the Murray Valley. Details of the production of these areas are given in Part 9, pages 328-329.

These areas can be classified into two groups—highland areas requiring the pumping of water, and reclaimed lands watered by gravitation.

Highland Areas

With the major exception of the Myponga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

Although a few private settlers had earlier practised the art of artificial watering, large scale irrigation dates from the Chaffey Bros Irrigation Works Act of 1887. The two Chaffey brothers had come from America to assist in irrigation development and undertook to establish irrigation works at Renmark in return for certain land concessions. In 1893, with the departure of the Chaffeyes, the Renmark Irrigation Trust was formed. This trust administered the Renmark Irrigation Area as a local governing body until 1960, when it became responsible solely for irrigation matters.

In 1894, during a period of unemployment, the Government authorized the formation of eleven village settlements along the River Murray to be run on community lines. These were not successful and in 1899 a system of independent holdings with a co-operative water supply was substituted. Only the Lyrup Village Association remains today.

The preparation of irrigated land for fruitgrowing was first undertaken by the Government in 1909. Steady progress with development and settlement continued until 1918 when the Government decided that all future allotments were to be reserved for returned soldiers, and greatly accelerated development. However, following a heavy decline in prices, development ceased in 1923 and it was not until the end of the second World War that the area under irrigation showed any marked increase. Here again development was stimulated by the need to rehabilitate ex-service personnel, and between 1946 and 1954, approximately 8,000 acres of irrigable land were developed under the War Service Land Settlement Scheme, the largest settlement being at Loxton (approximately 6,500 acres). Since 1954 there has been no further large-scale development by the Government, and the authorities have been devoting their attention to the maintenance and improvement of existing schemes and in particular to the complete electrification of pumping plants.

A number of private schemes have also been developed in the post war period.

Highland areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped from the river in open concrete-lined channels or pipes. Many of the recently developed areas use a system of sprays for watering the blocks in preference to the traditional surface reticulation. Sprays are also being used to increase the acreage in a number of the older areas by bringing in land too high for reticulated watering. Landholders pay an annual rate for routine irrigation and a charge is made for additional water.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Blocks have internal drainage systems leading initially to shafts and bores, and later, when these become inoperative, to comprehensive drainage systems which convey the water to evaporation basins.

Reclaimed Areas

On the lower Murray between Mannum and Wellington is a series of swamp and overflow areas which have been reclaimed by Government and private agencies.

The first such reclamation was made in 1881 by Sir W. F. D. Jervois, then Governor of the State, and was followed by other large holdings being reclaimed by private enterprise. This successful conversion of almost waste land to highly productive areas led, in 1904, to the inclusion of the reclamation and subdivision of the remaining swamp areas in the State's policy of land settlement. In 1929 most of the areas which were suitable for settlement and which were not being developed privately had been reclaimed and settled.

Although these reclaimed areas contain some orchards, vineyards, and market gardens they are devoted principally to the growing of green fodder for dairy herds and sheep flocks. These lands are watered by gravitation and surplus water is run into main drains from which it is pumped into the river. In many reclaimed areas the adjacent highlands have also been developed for the production of fodder crops through the use of spray irrigation.

THE RIVER MURRAY AGREEMENT

In the earlier years there were great variations in the flows of the River Murray and its tributaries resulting from extremely variable rainfall in the catchment areas. The resulting droughts and floods were a considerable impediment to the proper functioning of the irrigation areas.

In 1915 the River Murray Waters Act was passed by the Parliaments of the Commonwealth and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provided for the construction of works and for the allocation of water between the three States concerned.

Works, to regulate the flow and control of the level of the River Murray, have included the construction of a number of storage areas and the erection of a series of locks and weirs. By 1928 Lake Victoria, in New South Wales adjacent to the South Australian border, had been converted into a large storage area supplying water for the South Australian irrigation settlements. The major storage area, the Hume Reservoir above Albury, was completed in 1936. Further works, the last being completed in 1961, have doubled the original capacity to 2½ million acre-feet. Except for that held in various lock pools, no water from the Murray is stored in South Australia. However, in 1962 agreement was reached for the construction of a reservoir of approximately 5 million acre-feet and covering 503 square miles with its dam at Chowilla, just inside the State border. Tenders have been called and construction of the dam is expected to take approximately four years after the letting of contracts.

Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition five barrages have been placed at the Murray mouth to prevent the ingress of salt water from the sea and to maintain a higher level in the River for the use of the reclaimed areas. The barrages were completed in 1940. During 1965-66, 271,585 acre-feet of water were diverted from the River Murray in South Australia for irrigation purposes.

Irrigation Areas, South Australia

Area Irrigated	1963-64	1964-65	1965-66
	Acres		
Government controlled—			
War Service schemes (World War II)	8,068	8,080	8,083
Other	30,508	30,715	30,919
Non-Government—			
Border-Mannum—			
Trusts, boards and association areas	10,881	10,889	10,912
Private schemes	17,899	19,935	22,567
Mannum-Barrages	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

n.a.—Not available.

Further details of the 39,002 acres irrigated in Government-controlled schemes in the year 1965-66 are as follows—

Area Irrigated	Highland Areas		Reclaimed Areas	Total
	Surface Reticulation	Spray Irrigation		
	Acres			
War Service schemes (World War II)	4,202	3,881	—	8,083
Other	18,980	3,029	8,910	30,919
Total	23,182	6,910	8,910	39,002

DRAINAGE

With the exception of the reclaimed areas along the lower Murray, already discussed in the previous section, and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State.

The topography of this area reveals a series of fertile valleys or flats interspersed by low infertile ranges running parallel to the sea and thus preventing the natural drainage of the land. In consequence considerable sums of money have been expended in constructing drainage schemes to reclaim these areas.

The first major drainage scheme was commenced in 1863 and completed in 1885. This scheme, the Millicent Drainage System, reclaimed 100,000 acres of land at a cost of \$300,000, this cost subsequently being included in the land allotment price. This system is maintained by the Millicent Drainage Trust from rates levied on landholders.

Following this early success the Government undertook the construction of further drains during the next sixty years. These drains were constructed under three sets of conditions—*national drains* were constructed at Government expense, the cost being absorbed in the price of the land when sold; *petition drains* were constructed on requests from landholders who agreed to repay the full cost to the Government over a period of 42 years; *scheme Act drains*, commenced in 1908,

provided for the Government and the landholders to share the cost, the landholders share being repayable over 42 years. After the Scheme Act Drains had been completed it was found that the cost exceeded the benefit derived, and subsequently following a Royal Commission, the landholders' liability was reduced.

Legislation in 1948 marked a new stage in the development of South-Eastern drainage. Previously attention had been devoted to the construction of a system of drains removing large quantities of water from general areas and providing above all for the rapid removal of floodwaters. By 1948, 430 miles of drains had been constructed at a capital cost of \$1,441,752. However in 1948, with the establishment of the Western Division Drainage Scheme, emphasis was placed on a complete drainage programme as achieved by the earlier Millicent scheme. The Western Division Drainage Scheme, which aimed at the comprehensive drainage of 400,000 acres of land between the Millicent and Kingston districts, has now, with the exception of some work in the northern region, been completed.

In 1960 the Eastern Division Drainage Scheme, for the drainage of 727,000 acres of flats lying between Kalangadoo and 40 miles north of Lucindale, was commenced.

Under the schemes introduced since 1948 landholders are required to repay an amount based on a "betterment assessment" of their property. As in the other schemes this amount can be repaid over 42 years.

At 30th June 1966, 824 miles of drains (excluding the Millicent scheme) had been constructed at a capital cost of \$16,489,400. These drains vary considerably in size from only a few feet to over 200 feet bottom width.

In addition to new construction, continual attention must be paid to the prevention of silting and of weed growth and to the upkeep of over 500 bridges, rates being levied on landholders to meet the costs of such maintenance. The closer settlement resulting from the drainage schemes has, in many areas, necessitated the construction of new bridges.

The system is administered by the South-Eastern Drainage Board under the South-Eastern Drainage Act, 1931-1959.

8.3. ROADS AND BRIDGES

Roads in South Australia are officially classified as either main roads, being those proclaimed as such under the provisions of the Highways Act, or district roads.

Main and district roads within local government areas are vested in the various local governing authorities who primarily are responsible for construction and maintenance works within their respective areas. However, there is provision in the Highways Act for the Commissioner of Highways to construct, reconstruct, and maintain important roads after due notice has been given, and in practice most of the roads carrying heavy traffic are constructed and maintained by the Highways and Local Government Department.

In areas outside the control of local government authorities road works are carried out by State Government departments. Until July 1961 almost all of this work was performed by the Engineering and Water Supply Department, using equipment already in those areas, but the Highways and Local Government Department now constructs and maintains roads in the Western Division including the Eyre Highway to the Western Australian border.

Funds used for road works in South Australia are derived from three main sources, viz the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers, grants from the Commonwealth Government, and rates levied by local government authorities.

Commonwealth legislation stipulates that not less than 40% of the Commonwealth aid roads grants shall be expended on roads in rural areas other than highways, main roads and trunk roads. State funds also are made available to local government authorities for construction and maintenance works generally and particularly for work on the more important district roads. In approved cases the Highways and Local Government Department assists by way of interest-free loans the purchase, by local authorities, of road-making equipment. Some local government authorities, having adequate resources of manpower and equipment, undertake specific works on behalf of, and financed by, the Highways and Local Government Department. The department provides technical advice when requested by a local government authority.

The following table shows the length of main and district roads according to type of surface at 30th June 1966 as advised by the Highways and Local Government Department.

Main and District Roads: Type of Surface, South Australia

At 30th June 1966

Type of Surface	Main Roads	District Roads	Total
	Miles		
Bitumen	4,203	3,737	7,940
Gravel or crushed stone	3,604	12,346	15,950
Formed only	331	10,207	10,538
Unformed	55	40,498	40,553
Total	8,193	66,788	74,981

The unformed roads shown above include tracks in localities outside of local government areas, mainly routes to and between station homesteads and not on land reserved for roads.

In closely settled areas, particularly in the metropolitan area and country towns, most roads are surfaced with bituminous concrete or by bituminous penetration of a macadam base. In rural districts where traffic is light roads may be formed of natural materials or be only lightly gravelled but the more important country roads are constructed of gravel or crushed rock and are improved, as traffic warrants, by the addition of a bituminous seal.

Since World War II the tremendous increase in road traffic has necessitated the reconstruction and widening of many major roads, particularly those in and near the metropolitan area of Adelaide. Major examples of this type of work are the main south-east road from Glen Osmond to Crafers, completed several years ago, the Main North Road to Gawler and the main South Road. In addition to this work and extensive road construction in new housing areas many country roads have been greatly improved.

A detailed historical survey was included on pages 257-259 of the South Australian Year Book 1966.

FUTURE DEVELOPMENT

The Town Planning Committee of South Australia, appointed by Parliament in 1955, presented its report in 1962 covering various aspects of the anticipated development of metropolitan Adelaide to the year 1991. The report contained alternative proposals but favoured the improvement of public road and rail transport and the construction of a limited number of freeways to relieve congestion on existing major roads by catering for a large volume of fast "through" traffic including express buses.

Freeways are roads without frontage access and with cross traffic carried under or over the through traffic by means of bridges. Access to such roads is permitted only at "interchanges".

The committee recommended the following six freeways totalling slightly less than 100 miles—

- (1) Central North-South Freeway from Gawler to the Yankalilla road east of Maslin Beach.
- (2) Freeway around the city of Adelaide.
- (3) City of Adelaide to Port Adelaide.
- (4) City of Adelaide to Modbury.
- (5) Modbury to Port Adelaide.
- (6) Crafers to Bridgewater.

The freeway from Crafers to Bridgewater is under construction and is expected to be completed by 1969. This road will link with the existing four-lane highway from Glen Osmond to Crafers and form portion of the highway to Melbourne. Although the exact routes of other freeways have not been determined the Highways Commissioner is acquiring land along some probable routes where such action is necessary to prevent development which might make the subsequent construction of freeways economically impracticable.

The extent and exact routing of future freeways will be largely dependent upon the findings of a Metropolitan Adelaide Transportation Study, for the planning and conduct of which the South Australian Government has established a Joint Steering Committee. The purpose of the study is the co-ordination of the plans and activities of various authorities to secure the integrated development of transport facilities for the metropolitan area. Authorities represented on the committee are the Highways Department, the State Planning Office, Adelaide City Council, Municipal Tramways Trust, and South Australian Railways. The study, under the direction of expert consultants, began in 1964 and will be completed with the submission of the Report by the end of 1967.

Recent studies indicate that road traffic is increasing at an approximate rate of 7% per year which is roughly equivalent to a 100% increase during a ten-year period. The Commissioner of Highways has estimated that to meet fully the requirements of increasing traffic, the following works would be necessary from 1964 to 1974.

Construction of freeways	35 miles
Duplication of pavements	140 miles
Reconstruction and improvement of existing sealed pavement	4,100 miles
Extension of bituminous surfacing	4,750 miles
Metalling or gravelling formed roads	9,000 miles
Clearing and forming of roads	12,000 miles
Construction of new and replacement bridges	190 units

These figures represented an assessment of "needs". They do not constitute a programme of works, for this would be conditioned by the findings of the Transportation Study as well as by the availability of finance, materials, manpower and equipment.

During 1967-68 a new assessment is being made, in conjunction with the Commonwealth Bureau of Roads, of road "needs" for the ten years 1969 to 1979.

RESEARCH

Because of the great area of South Australia climatic and soil conditions vary enormously, particularly from north to south. Special sections of the Highways and Local Government Department are engaged in constant investigation and testing of soils, materials, and construction methods to ensure that a high standard of road construction is maintained and that methods are adapted to the needs of particular areas.

South Australia contributes to Australian road development through its active participation in the National Association of Australian State Road Authorities. Specialist committees of the association deal with bridge design, materials research, traffic engineering, bituminous pavements, plants and equipment, and advance planning. The association in 1960 established the Australian Road Research Board whose functions include the co-ordination and organization of road research.

ROAD FINANCE

As indicated earlier, the three main sources of road finance are—

- (1) State motor vehicle taxation and drivers' licence fees.
- (2) Commonwealth grants.
- (3) Property rates and other levies imposed by municipal and district councils.

Finance received from the first two sources is controlled by the Commissioner of Highways. The Highways Act provides that fees received for vehicle registrations and drivers' licences, less cost of collection, should be credited to the Highways Fund. The fund is credited also with hawkers' licence fees collected under the Hawkers Act, 1934-1960, interest on and repayments of advances made to local government authorities for roadworks and drainage schemes and for the purchase of machinery, special contributions from the Municipal Tramways Trust under the Highways Act, contributions from local government authorities towards the cost of lighting Anzac Highway and Port Road, Road Maintenance (Contribution) Act charges and other minor sundry receipts.

The Local Government Act provides for grants-in-aid to be paid from the Highways Fund to local government authorities for expenditure on roads, other than main roads, and related works.

From 1923 to 1930 Commonwealth road grants were conditional upon *pro rata* expenditure by the States and work was subject to Commonwealth inspection. From 1931 to 1958 the total amount of Commonwealth aid road grants to the States was determined as a proportion, varied from time to time, of Commonwealth petrol taxation. From 1959 these grants have borne no direct relationship to any particular item of revenue.

For conditions and details of the method of dividing total Commonwealth road grants between the States from 1923 to 1963-64 reference should be made to Commonwealth Year Book No. 38 pp. 787-788, No. 41 p. 621, No. 46 p. 838 and No. 49 p. 934.

Proposed Commonwealth aid roads grants for the five years commencing in July 1964 were announced in March 1964. During the five year period South Australia is likely to receive slightly more than \$86,000,000, or approximately 11.5% of the total grants which will be distributed as follows—5% to Tasmania and the remaining 95% to the mainland States, $\frac{1}{3}$ according to population, $\frac{1}{3}$ according to area and $\frac{1}{3}$ proportionately to the number of motor vehicles registered. Portion of the grants is subject to matching expenditure by the States.

Highways and Local Government Department, South Australia

Receipts and Payments

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
RECEIPTS (\$'000)					
Motor vehicle registrations, licences, fees, fines, etc.	8,586	9,074	9,978	10,729	11,204
Road Maintenance Charges	—	—	—	1,426	1,903
Commonwealth Aid Roads Grants—					
For rural roads	4,903	5,546	7,272	6,988	6,611
For other roads	6,601	6,854	6,066	7,915	9,413
Special assistance	—	—	—	—	—
Loans from State Government	400	580	950	—	—
Repayments of, and interest on, advances to local authorities	832	922	991	1,144	1,293
Other	236	244	219	216	146
Total	21,558	23,220	25,476	28,417	30,570
PAYMENTS (\$'000)					
Construction and reconstruction of roads, bridges, etc.	14,616	15,358	19,517	18,339	20,623
Maintenance of roads, bridges, etc.	4,674	4,976	5,583	5,277	5,375
Interest, debt redemption, etc.	454	486	512	1,164	1,167
Advances to local authorities	840	1,162	1,650	1,126	1,376
Net purchases of land, buildings, plant, equipment, materials, etc.	484	Cr.218	801	1,080	902
Other (a)	329	74	Cr.263	Cr.92	601
Total	21,398	21,837	27,801	26,895	30,044

(a) This item includes provision for leave and for plant overhauls which may be a negative figure in some years.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction, and maintenance of roads, streets, bridges, ferries, and associated works: during recent years approximate total expenditure by State and local government authorities has been—1959-60, \$26 million; 1960-61, \$29 million; 1961-62, \$32 million; 1962-63, \$35 million; 1963-64, \$40 million; and 1965-66, \$39 million.

These figures include the cost of land purchased for new roads including future freeways and for road widening, and charges for depreciation of plant and machinery. Local Government figures used to derive the totals include expenditure which is subsequently recouped from the public and expenditure on foot-path maintenance and stormwater drainage.

The greatest deficiency in total figures is the cost of work carried out under the provisions of the Town Planning Act which requires persons and authorities (including the South Australian Housing Trust) who subdivide land for housing to provide roads to a certain specification. The actual work is sometimes performed by local government authorities at the expense of the subdividers: in such cases the costs of construction are included in the figures above, but when such roads are constructed by private contractors or by direct employees of the subdivider few details are available.

8.4. RAILWAYS

OWNERSHIP AND CONTROL

Both the State and Commonwealth Governments operate railway systems in South Australia.

In 1851 a "Board of Undertakers" was appointed in connection with the construction of the Adelaide to Port Adelaide railway. In 1856 a Board of Railway Commissioners was appointed to control South Australian railway operations. This board was abolished in 1859 and from then until 1887 control was vested in the Commissioner of Public Works. The South Australian Railways Commissioners Act of 1887 gave almost complete authority for management and administration to three Railways Commissioners, reserving (as in the past) financial control to Parliament. The powers of the three Commissioners passed to one Commissioner in 1892. Many of the provisions of the 1887 Act, including those for financial control, have been incorporated in the present South Australian Railways Commissioners Act, 1936-1965, under which the Commissioner is appointed for a period of seven years.

Management of all Commonwealth Railways is vested in a Commonwealth Railways Commissioner.

In South Australia the only private railways open to general traffic are the lines owned by the Broken Hill Proprietary Co. Ltd., from Iron Knob and Iron Baron to Whyalla (51 miles) used for the carriage of iron ore and from Coffin Bay to Port Lincoln (25 miles) used for the carriage of limestone. The construction of the latter line was completed in early 1967.

HISTORICAL SUMMARY

Much of the basic work of establishing the railway network which serves South Australia was concentrated in two comparatively brief periods, from about 1877 to 1887 when approximately 1,200 miles of lines were constructed, and from 1910 to 1917 when about 1,500 miles were added.

Before 1877 a number of scattered lines totalling roughly 300 miles had been constructed.

During the eleven years to 1887 rail communication with the eastern States was established, the rich ore deposits at Broken Hill were tapped, a line was built through northern pastoral areas toward the Northern Territory, and railways from outports to their hinterlands (predominantly agricultural but more pastoral in the South East) were extended and linked with arterial services centred on Adelaide.

During the following 22 years only 200 miles of new lines were opened. Then in an eight-year period railways were constructed to facilitate the agricultural development of Eyre Peninsula and the Murray Mallee lands, and the Commonwealth Railways built a line to Western Australia.

Since 1917 route mileage open has increased by about 600 miles only. The emphasis during recent years has been upon conversion of 3ft. 6in. lines either direct to 4ft. 8½in. or to 5ft. 3in. as an interim to possible ultimate conversion to the standard gauge.

Only a small portion of the Adelaide metropolitan area is served by railways. The main trunk routes pass through northern and southern suburbs; the line to Willunga, although closed to passenger traffic beyond Hallett Cove, serves south-western suburbs; the Port Adelaide line, its extensions to Semaphore and Outer Harbor, the branch line to Grange, and spur lines to industrial establishments provide better coverage in north-western suburbs than is achieved elsewhere in Adelaide. For many years two railways linked Adelaide and Glenelg: in 1929 the route *via* North Terrace and Richmond was closed and the South Terrace route was converted to its present use as a tramway.

A more detailed historical survey was included on page 263 of the South Australian Year Book 1966.

The table which follows shows route mileage of railways open for traffic for every fifth year from 1856.

State and Commonwealth Government Railways
Gauges, Route-mileage open in South Australia

Date	5ft. 3in. Gauge	4ft. 8½in. Gauge	3ft. 6in. Gauge	Total
31st December—				
1856.....	7	—	—	7
1861.....	56	—	—	56
1866.....	56	—	—	56
1871.....	105	—	28	133
1876.....	133	—	137	270
1881.....	251	—	549	800
1886.....	495	—	716	1,211
1891.....	504	—	1,162	1,666
1896.....	493	—	1,229	1,722
1901.....	507	—	1,229	1,736
1906.....	594	—	1,238	1,832
1911.....	622	—	1,313	1,935
30th June—				
1916.....	977	361	1,688	3,026
1921.....	1,122	598	1,688	3,408
1926.....	1,238	598	1,739	3,575
1931.....	1,451	598	1,676	3,725
1936.....	1,451	598	1,676	3,725
1941.....	1,480	654	1,675	3,809
1946.....	1,480	654	1,665	3,799
1951.....	1,530	654	1,621	3,805
1956.....	1,622	654	1,540	3,816
1961.....	1,673	871	1,291	3,835
1966.....	1,649	871	1,256	3,776

Mileage of the Goolwa-Port Elliot line which was completed in 1854, and its extensions to Victor Harbor (1864) and Strathalbyn (1869) has been excluded from the above table for years prior to 1884-85, when the route was converted from horse to locomotive traction.

STANDARDIZATION OF RAIL GAUGES

The existence in South Australia of 3ft. 6in., 4ft. 8½in., and 5ft. 3in. systems has already been noted.

For many years railway administrators have been greatly concerned about the increased costs and decreased efficiency associated with the transshipment of goods and passengers and with the provision, maintenance and operation of different sets of rolling stock. During recent years with the rapid development of road and air transport facilities there has been increasing pressure for standardization of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

In 1946 an agreement was signed between the Commonwealth Government and the States of N.S.W., Victoria, and South Australia regarding the standardization of railway gauges in their respective States. This agreement was subsequently ratified by the Governments of the Commonwealth, Victoria and South Australia but not by the N.S.W. Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia and the necessary legislation was enacted in 1949 by each Government concerned.

It was agreed that the whole of the South Australian Railways system, except the 3ft. 6in. gauge lines on Eyre Peninsula, be converted to the standard 4ft. 8½in. gauge and the Commonwealth would provide a standard gauge railway from Port Augusta to Darwin. The Commonwealth agreed to meet the full cost of work on Commonwealth Railways and to provide all finance (of which South Australia must repay 30% over a period of years) for the conversion of State railways.

By an amendment to this agreement the conversion of the South-East system from 3ft. 6in. to 5ft. 3in. completed in 1959 at a cost of \$10 million was accepted as an interim to final conversion to 4ft. 8½in. Lines from Beachport to Millicent and Wandilo to Glencoe were closed in 1956 and 1957 respectively as traffic did not justify conversion.

As part of the agreement and at a cost of \$24.4 million, the Commonwealth has built a 4ft. 8½in. line from Stirling North to Marree to replace that portion of the old railway to Alice Springs. From Stirling North to Brachina this standard gauge line follows a new route: the old railway has been closed from Hawker to Brachina but from Stirling North through Quorn to Hawker, still as a Commonwealth line, it remains open for occasional goods traffic.

In March 1956 a committee of members of the Federal Parliament was formed to consider whether it was desirable to confine standardization to the main trunk routes. In October 1956 the committee recommended that 4ft. 8½in. lines be provided from Wodonga on the Victorian-N.S.W. border to Melbourne, from Broken Hill to Adelaide *via* Port Pirie, and from Kalgoorlie to Fremantle. Conversion of the Victorian line for dual gauge operation (both 5ft. 3in. and 4ft. 8½in.) was completed in 1962 and in that year work commenced on the Western Australian sections.

In 1963 the Commonwealth Government decided to proceed with the standardization of the Port Pirie-Broken Hill railway as part of the 1949 agreement. At 30th June 1966 eighty miles of track between Cockburn and Port Pirie had been laid, and work was proceeding towards a target of completion by December 1968. Work has commenced on a new station yard at Port Pirie and tenders have been invited for the broad gauge extension between Terowie and Peterborough. No agreement has yet been entered into for the standardization of the thirty-five miles from Cockburn to Broken Hill.

Specific Commonwealth approval is necessary before any standardization work can be commenced under existing agreements. No such approval has been announced for works in South Australia other than those mentioned above.

During 1966-67 the Commonwealth Railways Commissioner submitted a report to the Commonwealth Government on a proposal to convert to standard gauge the line between Port Pirie and Adelaide.

8.5. HARBORS AND AERODROMES

HARBORS

The State of South Australia has a coastline more than 2,400 miles in length including Kangaroo Island; the eastern portion of the mainland has three great indentations—Encounter Bay, Gulf St Vincent, and Spencer Gulf. Although the gulfs were a barrier to transport overland, especially to Eyre Peninsula, they offered many harbors for shipping and it was by this means that early settlers were able to receive their supplies and send their products to market.

Although there are many seaports in South Australia, at present only 32 are classified as actively engaged in meeting the requirements of shipping interests. Of these harbors, 25 have State-owned wharves or jetties and 7 privately owned wharves or jetties.

The Broken Hill Pty Co. Ltd owns and operates bulk handling facilities, etc., at Ardrossan, Rapid Bay, Whyalla and Port Lincoln, and the Broken Hill Associated Smelters Pty Ltd a jetty at Wardang Island, whilst the Colonial Sugar Refining Co. Ltd owns and operates a bulk loading installation at Ballast Head, Kangaroo Island. The Commonwealth Railways operates the wharf at Port Augusta on behalf of the Commonwealth Government, and the Port Stanvac oil terminal, which commenced operations in December 1962, is owned by Petroleum Refineries (Aust.) Pty Ltd. Another private port located at Curlew Point (Port Augusta) and owned by the Electricity Trust of South Australia is no longer active. The State also maintains 45 jetties for promenade and fishing purposes at ports no longer used by commercial shipping and a further 5 jetties are leased to district councils.

There are 5 deep-sea ports operated by the State, *viz* Port Adelaide, Port Pirie, Port Lincoln, Thevenard, and Wallaroo, whilst overseas vessels are also accommodated at Whyalla and Ardrossan. The Government has approved the construction of a further deep-sea port at Point Giles, Yorke Peninsula, for the bulk loading of grain. A boat haven has been established on Lake Butler at Robe and a wharf provided in the lake as a fish landing point for the fishing fleet. Slipways have been provided at several ports throughout the State.

CONTROL OF HARBORS

In earlier days, many of the wharf frontages of the State were alienated from the Crown. This attracted general attention, and opinion was aroused to the necessity of re-establishing public control as far back as 1880. As the result of a report by a Royal Commission in 1911, the Harbors Act of 1913 was enacted. It provided mainly for the acquisition by the Crown of wharves, water frontages and other properties; the creation of a board called The South Australian Harbors Board; for vesting in this Board the wharves, water frontages, and other properties acquired by or vested in the Crown. The Board appointed consisted of three members called Harbors Commissioners, who held office for a term of five years. However, in 1966, amendments to the Harbors Act, 1936-65 provided for the abolition of the Harbors Board and the establishment of a Department of Marine and Harbors with all property, rights, powers, functions and duties transferring and vesting in the Minister of Marine. The amended Act came into operation on 20th March 1967.

The Minister of Marine exercises his power under the Harbors Act, 1936-1966 and the Marine Act, 1936-1966, within all harbors (including the River Murray) in the State, over navigation therein and over all publicly-owned harbor works; controls all lights, buoys, beacons and other sea marks in harbors; constructs and maintains harbour works and installations and provides and operates bulk loading plants at deep-sea ports.

Accommodation constructed for fishing boats pursuant to the Fisheries Act Amendment Act, 1956, is under the control of the Minister of Marine.

The tonnages handled in the ports operated by the Board in 1965-66 were 6,707,615 tons or 44% of the total tonnage of 15,287,326 tons passing through all the ports in South Australia; the balance being handled by the privately owned wharves. The total funds employed at 30th June 1966 were \$44,652,000, including \$827,000 for fishing havens.

South Australian Harbors Board^(a)
Funds Employed, Revenue and Expenditure

Year	Funds Employed	Revenue	Expenditure from Revenue			Surplus (+) or Deficit (-)
			Working Expenses	Interest	Total	
\$'000						
1959-60	33,222	4,630	3,150	1,224	4,374	+256
1960-61	35,524	5,430	3,370	1,316	4,686	+744
1961-62	37,884	5,152	3,352	1,402	4,754	+398
1962-63	39,334	5,098	3,344	1,532	4,876	+222
1963-64	41,350	6,144	3,590	1,582	5,172	+942
1964-65	42,748	6,200	3,908	1,678	5,586	+614
1965-66	44,652	6,194	3,941	1,734	5,675	+519

(a) Reconstituted as the Department of Marine and Harbors from 20th March 1967.

HISTORICAL

A detailed description of development in the nineteenth century was included at page 270 of the South Australian Year Book 1966.

Development in the Twentieth Century

As shipping increased through increased trade, many outpost jetties were strengthened or replaced by better structures; in some cases new jetties were built nearby and the old jetties remained for fishermen. As the size and draft of vessels increased jetties were lengthened into deeper waters. Many new jetties were erected in the early part of the century, e.g. Murat Bay, Smoky Bay and Thevenard on the West Coast. In the 1930's some of the wooden wharves at Port Adelaide were replaced by concrete and sheet steel piling structures. At Port Pirie the Baltic wharf was reconstructed during 1938-1940. Coal handling facilities were installed at Osborne, Port Adelaide.

Deepening or clearing of channels and deepening of berths was carried out by dredging over the years to keep most harbors open to shipping and to be able to accommodate larger and larger vessels. The opening of the Birkenhead Bridge in 1940 marked a further stage of development at Port Adelaide. Coastal shipping flourished in the pre-war period with regular services to the Gulf ports, West Coast and Kangaroo Island. Ketch traffic went to the main ports, carrying grain from the smaller outports for loading oversides into interstate or overseas vessels.

A change in the pattern of intrastate shipping has occurred with the erection of bulk-handling facilities for grain at major ports in recent years. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln and Thevenard and wheat and barley are being loaded at Ardrossan under agreement with the private owner. Grain is being carted overland to silos and loaded aboard overseas vessels by means of conveyors, so eliminating ketch trade from the smaller ports.

With no alternate means of transport and new soldier settlements in the 1950's, shipping trade to and from Kangaroo Island has increased. At the port of Kingscote the existing jetty has been widened and lengthened since May 1955. Additional harbor facilities were made with the provision of a trailership berth for the roll-on roll-off vessel m.v. *Troubridge* which went into service in November 1961. Trailership berths were also built at Port Adelaide and Port Lincoln.

In 1950 the Harbors Commissioners reported that the majority of the numerous ports established over the years along the coastline of South Australia and along the River Murray were operated at a loss. When these outpost jetties and wharves were constructed, sea or river transport was practically the only means available to the settler on the land. However, the advent of motor transport and improved roads, and in some cases a preference for railways, meant that much of the water-borne trade had been diverted. Many of the numerous outports which once served the outback trade of the State were not used at all, whilst others were used for cargoes which could not be conveniently or more cheaply handled by other transport.

At one time it was thought that shipping along the River Murray would play an important role in South Australia's commercial transport system. However, the development of railway systems in New South Wales and Victoria and South Australia and the erection of the first bridge at Murray Bridge in 1879 took the trade away from the river steamers and the commercial use of South Australian river ports quickly declined. By the time of Federation in 1901 the importance of the Murray as a medium of commercial transportation had largely ceased.

Of more recent origin, is the decline in the use of some outports due to the introduction of silos at railway sites and major ports and the erection of bulk-handling facilities for grain as mentioned earlier.

FUTURE DEVELOPMENT

The competition from road and rail transport intrastate has affected the larger ports as well, so that very little general cargo is carried between ports in this State. To decrease the delay in the turn round of vessels (especially overseas and interstate vessels) port facilities in the major harbors have been improved or are to be improved, *e.g.* reconstruction of wharves and deepening of berths and channels, installation of overhead cranes, increased storage sheds, etc.

The Greater Port Adelaide Plan was published in 1949 and embraced some twenty projects which were believed possible of completion before the end of the century. Amongst other projects the plan included:

- (1) The provision of adequate and up-to-date berths for shipping, new docks and an additional marshalling yard.
- (2) The rehabilitation of the dockyard at Glanville.
- (3) The deepening of the Port River.
- (4) The extension of the Osborne coal handling installation.
- (5) Provision of an oil dock.

Some phases of this plan have been completed whilst others are still to be carried out. In April 1964, approval was given for a start on a three stage plan, over six or seven years to widen and deepen the Port River at a cost of \$6.6 million. The stages include widening of river bends, deepening and widening between Outer Harbor and Osborne, and deepening and widening the inner basin at Port Adelaide. Widened bends will enable bigger ships to negotiate the Port River.

The recent advent of containerized cargo has created the need for suitable facilities in South Australia, capable of handling and transporting these cargoes. Initial proposals have been made which envisage construction of a large container terminal, to be located at Gilman, near Port Adelaide, which would provide a feeder service to the main terminals at Sydney, Melbourne and Fremantle. In addition, it is planned to link the terminal with the Port Adelaide rail complex in order to facilitate transport.

It is expected that the Port Adelaide container facilities will be ready for use by the end of 1968 and a regular container service in operation by 1969.

TIDES AND WATER DEPTH

Tides—the daily ebb and flow of the waters of the ocean—are due to gravitational effect of the sun and moon. Spring and neap tides are associated with phases of the moon, *i.e.*, spring tides with the new moon and full moon, and neap tides with the first quarter and last quarter of the moon.

All around the Australian coast there is a well-marked “diurnal inequality”, as it is termed; that is the forenoon and afternoon tides are not of equal height, but one may be much higher than the other. The mean tide rises in the following table are shown as higher high water and lower high water, rather than as high water springs and neaps. This is the method of measuring tides which have this “diurnal inequality”, found in nearly all South Australian ports.

Tides and Water Depth, South Australian Ports, 1st January, 1966

Port	Maximum Depth (Low Water, Ordinary Spring Tides) (a)	Tides		
		At	Mean Rise	
			Higher High Water	Lower High Water
	Ft. In.		Ft. In.	Ft. In.
Outer Harbor—				
Channel	33 0	Wharf	7 11	6 5
Wharves	35 0			
Port Adelaide—				
Channel	27 0	Wharf	8 0	6 6
Wharves	32 0			
Arrossan—				
Channel	(b)	Jetty	8 10	7 0
Wharves (B.H.P. Jetty)	27 0			
Port Augusta—				
Channel	16 0	Wharf	9 2	7 4
Wharf	20 0			
Port Lincoln—				
Channel	(c)	Jetty	4 11	3 6
Wharves (Bulk Loading)	32 0			
Port Pirie—				
Channel (Harbor)	21 0	Wharves	8 4	5 11
Wharves (Berths 2, 5, 6 and 7)	27 0			
Port Stanvac—				
Channel	(b)	Wharf	6 1	4 7
Wharf	35 0			
Thevenard—				
Channel	23 9	Jetty	5 0	3 7
Wharf	27 0			
Wallaroo—				
Channel	25 0	Jetty	4 10	2 11
Wharves	31 0			
Whyalla—				
Channel (Ore Jetty)	25 0	Jetty and Wharf	8 1	6 0
Wharves (Ore Jetty)	26 0			

(a) The depth shown against wharves is the greatest at present available and may be found at one berth only at the wharf or jetty concerned.

(b) No approach channel.

(c) Deep water gradually shoaling to depth at wharf.

AERODROMES

There are 646 civil aerodromes in Australia including Papua-New Guinea and of these 122 are owned and operated by the Commonwealth Government and 524 are licensed aerodromes owned and operated by local authorities or private interests. In addition there are some hundreds of authorized landing grounds which are fields prepared for the operation of aircraft but not open to public use. These fields meet Civil Aviation Department specifications less exacting than those used in the development of government owned or licensed aerodromes.

In South Australia at 30th June 1966 there were 12 government and 14 licensed aerodromes as set out below:

Government owned

Adelaide
Ceduna
Cleve
Cowell
Kingscote
Leigh Creek
Mount Gambier
Oodnadatta
Parafield
Port Lincoln
Renmark
Whyalla

Licensed

Cordillo Downs
De Rose Hill
Ernabella Mission
Innamincka
Kimba
Millicent
Minnipa
Mount Dare
Musgrave Park
Naracoorte
Port Pirie
Tieyon
Tintinara
Gidgealpa

About half of the licensed aerodromes are on stations, missions, etc., in the northern part of the State; the most recent, Gidgealpa, was licensed in April 1966. Apart from civil aerodromes, there are major aerodromes at Salisbury (Edinburgh Airfield) and Woomera controlled by the Department of Supply through the Weapons Research Establishment. These are used by aircraft associated with trials operations, and by civil charter aircraft carrying passengers and freight.

The main air terminal in South Australia is the Adelaide Airport at West Beach, and although not an international airport, it can be used by international aircraft when required. It is on the scheduled flights of interstate services from Sydney, Melbourne, Perth and Darwin and is the terminus of intrastate services. As part of the Civil Aviation Department's aerodrome development programme to provide improved airport facilities for new types of aircraft, construction was commenced at West Beach in 1947 and the aerodrome was opened to commercial aircraft in February 1955. The primary runway is 6,850 feet long by 200 feet wide and the secondary runway measures 5,420 feet by 150 feet. In addition to radio navigational aid systems and equipment there are modern hangars and a terminal building. The terminal building, opened in 1957 at a cost of approximately \$600,000, has a passenger lounge, modern baggage handling facilities, observation decks and incorporates the department's airways operations centre and airport control tower. However, due to the growth of air traffic the size of the passenger lounge has proved inadequate at peak periods and consequently will be doubled when terminal building extensions, due to be commenced in mid 1968, are completed.

Of note at the airport is the memorial to the late Sir Ross and Sir Keith Smith and their mechanics Bennett and Shiers to commemorate their flight from England to Australia in 1919. The Vickers Vimy aeroplane is housed in the memorial building together with equipment used on the flight and other souvenirs.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about 11 miles north of Adelaide, has been restricted principally to use by lighter aircraft as operated by air taxi and crop dusting companies, private planes used for business or pleasure, and aircraft belonging to the Royal Aero Club of South Australia whose headquarters remained at Parafield.

Other aerodromes are situated near the larger towns, e.g. Mount Gambier, Whyalla, Port Pirie and Port Lincoln and in all cases these aerodromes have replaced the landing fields used by the smaller planes of the first airline companies.

Control of Aerodromes

At a conference of Commonwealth Ministers and State Premiers in May 1920, it was agreed that the Commonwealth should introduce a Bill to give effect to the Convention for the Regulation of Air Navigation signed in Paris on 13th October 1919. The Air Navigation Act was passed in December 1920 and a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence.

The Act had three main objects:

- (1) Generally to regulate civil aviation activities in Australia.
- (2) To carry out the provisions of the Convention on Air Navigation signed in Paris.
- (3) To apply the principles of the Convention to domestic as well as international flying operations.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodical inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, control of aircraft movements, rules of the air, etc.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 wherein it referred to the Commonwealth powers to make regulations in connection with international and interstate air navigation. The Air Navigation Act, 1937 provided for the application of the Commonwealth Air Navigation Regulations to and in relation to air navigation within the State of South Australia and repealed the earlier Act.

The Commonwealth civil aviation legislation at present includes the *Air Navigation Act 1920-1963*, the *Australian National Airlines Act 1945-1961* and several other Acts, whilst the State legislation in South Australia includes the 1937 Act and the Civil Aviation (Carriers' Liability) Act, 1962.

Since 1939 Civil Aviation Administration has been a separate department under the Minister for Civil Aviation.

Historical

A description of early aerodromes in South Australia and recent developments was included on page 277 of the South Australian Year Book 1966.

8.6. ELECTRICITY AND GAS

ELECTRICITY

The period prior to 1946 saw the development of generating capacity by private enterprise and local authorities, with a dominant private company setting the pace from the turn of the century. It was also a period of almost complete dependence on imported fuels. By contrast the post war era has been one of extremely rapid development under a semi-government authority and has seen the rapid exploitation of local fuel supplies.

On 1st September 1946, as a consequence of recommendations of a royal commission of inquiry, the assets of the Adelaide Electric Supply Co. were acquired and vested in the Electricity Trust of South Australia, which then became responsible for co-ordinating and investigating the supply of electricity to all parts of the State.

A more detailed description of the development of electricity supply is contained on pages 278-281 of the South Australian Year Book 1966.

Power Generation

In 1946 the Electricity Trust inherited at the Osborne power station the "A" section, which had a generating capacity of 60,000 kilowatts, and the first installations of "B" section, which began operating in 1947. At 30th June 1966 the generating capacity at Osborne was 300,000 kilowatts.

A major decision by the Trust was the construction of the Thomas Playford Power Station at Port Augusta, designed to burn Leigh Creek coal exclusively. The "A" section was completed in 1954 while the "B" section was completed in 1964 to give a combined total generating capacity of 330,000 kilowatts.

Following the passing of the Electricity Trust of South Australia (Torrens Island Power Station) Act in 1962, work was commenced on the construction of stage one of a large power station on Torrens Island, near Port Adelaide. In the first stage there will be installed two 120,000 kilowatt turbo-generators, one of which began operating in the winter of 1967. The second stage has been commenced and will comprise two 120,000 kilowatt generating units which are scheduled to be commissioned in 1969 and 1971 respectively. The boilers now on order for or being installed in the Torrens Island Power Station have been designed so that they can, if necessary, be converted from using oil to the use of natural gas.

The rapid growth of generating plant since 1946 can be seen from the following table.

Electricity Generation, South Australia
Installed Capacity of Generating Plant in Power Stations at 30th June (a)

Power Stations	1946	1952	1955	1958	1961	1964	1966
	Kilowatts						
Electricity Trust—							
Osborne	79,000	172,000	204,000	264,000	264,000	264,025	300,000
Port Augusta	—	—	60,000	92,500	212,500	332,720	330,000
Mount Gambier	—	—	—	14,200	19,200	22,230	21,800
Port Lincoln	—	—	—	5,000	6,933	6,890	9,600
Other	—	3,500	2,135	—	—	—	—
Total E.T.S.A.	79,000	175,500	266,135	375,700	502,633	625,865	661,400
Other government authorities .	205	205	777	731	4,741	3,372	3,728
Local authorities	33,401	34,808	36,541	(b) 5,067	4,675	6,561	4,103
Private	29,855	28,162	26,825	18,600	33,537	33,109	4,654
Total	142,461	238,675	330,278	400,098	545,586	668,907	673,885

(a) Includes house plants used for emergency generation.

(b) Municipal Tramways Trust ceased generating in 1956.

At the 30th June 1966 steam generating plants represented 99% of total capacity, the remainder being internal combustion plants.

Fuels

The construction of refineries in Australia has resulted in residual oil being available at a price competitive with coal and increasing quantities of oil are being consumed in power generation. The majority of the boilers at Osborne are now oil burning.

However, Leigh Creek coal is currently a more economical fuel than imported coal or oil, and where possible power for the central network is generated at Port Augusta with the Osborne station being used primarily to meet peak loads.

The discovery of natural gas in the north-east of the State in commercial quantities and the recent decision by the State Government to construct a pipe-line from the gas fields to Adelaide indicates that gas may be an alternative fuel in future. In planning the Torrens Island Power Station the Electricity Trust has made provisions in the design of the boilers for conversion to use natural gas. This would provide one method of distribution of the energy from natural gas as electricity is distributed to all of the main settled areas.

Wood has also been used since the construction of the Mount Gambier and Nangwarry power stations. Its future as a fuel is, however, uncertain and depends on alternative uses of waste wood, particularly in the pulp industry.

The following table shows the quantities of various fuels consumed by the Electricity Trust in selected years since 1946 and illustrates the considerable movement in their relative importance.

Electricity Trust of S.A., Fuels Consumed in Steam Power Stations

Year	N.S.W. Coal	Leigh Creek Coal	Oil	Wood	Coke
	Tons				
1945-46 (a)	190,889	15,101	—	—	—
1951-52	(b)345,849	154,381	6,284	—	—
1954-55	343,861	394,214	6,696	—	2,156
1957-58	328,214	668,128	47,019	61,032	14,268
1960-61	185,043	938,532	98,216	110,304	12,627
1963-64	72,253	1,566,986	110,165	166,735	1,818
1965-66	73,495	1,926,672	194,838	184,420	—

(a) Consumed by Adelaide Electric Supply Co.

(b) Includes 32,884 tons of overseas coal.

Transmission and Distribution

The Electricity Trust was specifically charged with the responsibility of expanding its services into country areas. In the immediate post war years shortages of materials somewhat handicapped the rate of extension; however, a vigorous expansion of services in general has taken place as is illustrated in the following table.

Electricity Trust of S.A., Transmission Lines

At 30th June

Rated Voltage	1946	1952	1955	1958	1961	1964	1966
	Miles						
275,000 volt	—	—	—	—	370	370	370
132,000 volt	—	177	642	642	642	1,043	1,086
66,000 volt	105	222	277	335	375	430	457
33,000 volt	477	631	854	1,131	1,344	1,774	2,052
19,000 (SWER) (a) volt	—	—	—	26	1,877	5,065	7,396
11,000 and 7,600 volt	564	1,041	1,728	2,537	3,303	4,627	5,213
Total mileage.....	1,146	2,071	3,501	4,671	7,911	13,309	16,574

(a) Single wire earth return system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at sub-stations and distribution centres.

The most important transmission lines are those connecting the major production centre, Port Augusta, with the metropolitan area. The initial link between these centres was made with two 132,000 volt lines. These lines follow similar routes to Bungama, near Port Pirie, where a sub-station serves the mid-north area. From Bungama the lines diverge, one passing through South Hummocks where a major sub-station supplies Yorke Peninsula, and the other running *via* Waterloo where a sub-station serves the Upper Murray.

Further lines linking Port Augusta and Adelaide were brought into use in 1960 and 1961. These lines of 275,000 volts are not tapped at intermediate points.

Major transmission lines also extend from the central network, to Woomera (Commonwealth line), Berri (completed 1954-55), Leigh Creek (1961-62), Mount Gambier (1962-63) and Whyalla (1963-64). A submarine cable linking Kangaroo Island with the mainland was laid in 1965 and a 132,000 volt line from Whyalla to Port Lincoln is due for completion in 1967.

In recent years extensive use of the single wire earth return system (see table above) has resulted in the supplying of electricity to areas where consumers are so scattered that supply by conventional methods would have been impracticable.

Electricity Trust of S.A., Number of Consumers

At 30th June

Consumers	1946 (a)	1952	1955	1958	1961	1964	1966
Residential		143,040	171,757	203,321	239,446	277,399	308,439
Commercial	Not available	19,664	22,955	28,275	32,615	35,477	37,643
Industrial		2,851	4,790	6,665	10,670	15,579	18,583
Bulk and traction		7	16	15	15	10	7
Total	118,262	165,562	199,518	238,276	282,746	328,465	364,672

(a) At 31st August.

GAS

Gas was generated at three works in South Australia during 1966—two in the metropolitan area and one at Port Pirie. All production was by the South Australian Gas Company, a privately owned company regulated by State legislation. Until recently gas had also been produced at Mount Gambier, and prior to World War I gas works were operated at Gawler, Kapunda and Strathalbyn.

The South Australian Gas Company was incorporated by Act of Parliament in 1861 to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875.

An Act authorizing a second company, the Provincial Gas Company, was assented to in 1869. This company established a metropolitan works at Thebarton in 1871 and country works were opened at Gawler, Kapunda and Strathalbyn. In 1878 this undertaking was absorbed by the South Australian Gas Company and manufacturing at the Thebarton plant ceased. The country works were kept in operation until 1917. Gas was first produced at Port Pirie in 1892.

Following the development of high pressure distribution facilities the South Australian Gas Company was able to centralise its metropolitan production at Brompton with the Port Adelaide and Glenelg plants ceasing production in 1922 and 1923. These plants together with the earlier Thebarton works were retained as holder stations.

In 1928 a new gas works was opened adjacent to the Port River at Osborne. The Osborne works were closed for several years during the 1930's depression.

Since World War II a considerable expansion of manufacturing capacity and distribution facilities has taken place.

South Australian Gas Co., Capital, Consumers, and Mains

At 30th June

Particulars	1940	1950	1960	1966
Capital employed (\$m)	5.4	6.0	19.4	30.1
Number of consumers	61,207	84,629	121,720	167,103
Miles of mains	904	1,042	1,569	1,953

Details of the present day capacity of plant by the type of gas produced are given in the following table.

South Australian Gas Co., Plant Capacity

At 30th June 1966

Location	Coal Gas	Carburetted Water Gas	Reformed Gas (a)	Liquefied Petroleum Gas (b)	Total
	'000 Cubic Feet per Day				
Brompton	—	4,000	11,000	1,000	16,000
Osborne	6,500	750	—	1,500	8,750
Port Pirie	—	250	500	—	750
Total	6,500	5,000	11,500	2,500	25,500

(a) Using refinery gas and light virgin naphtha as feedstock.

(b) Mixed with other gases for distribution through the main laying network.

The manufacture of gas by the carbonization of black coal imported from New South Wales was the conventional method of production until the end of World War II. Under this process large quantities of coke and tar are produced as by-products and a declining market for these residuals together with the development of alternative production methods has resulted in less emphasis in recent years on this method of production.

In 1948 and 1950 the company installed plant at Osborne and Brompton for the manufacture of carburetted water gas from oil distillate and coke. This plant was introduced to help meet peak winter loads and can be brought into production much more rapidly than carbonizing retorts.

Liquefied petroleum gas has been available in South Australia since 1957. This gas is largely distributed in portable cylinders although a small quantity is converted for mains distribution when refinery gas is not available, and is also injected directly into the mains during periods of peak winter demand.

Refinery gas from the Port Stanvac oil refinery is piped to the Brompton works where a new reforming plant converts it for domestic use, and a second plant has been installed which will initially use light virgin naphtha as a feedstock. However, both plants will be capable of reforming petroleum products, refinery gas and natural gas. A similar plant is in use at Port Pirie for the reforming of light virgin naphtha.

Following the discoveries of natural gas at Gidgealpa and the establishment of the Natural Gas Pipelines Authority the South Australian Gas Company has entered into a 20 year contract with the producers for the supply of natural gas.

Gas from the various works is reticulated through most of the metropolitan area and Port Pirie. In addition liquefied petroleum gas is distributed by reticulation at Mount Gambier by the Mount Gambier Gas Company Ltd, at Christies Beach and Reynella by the South Australian Gas Company, and is available elsewhere as bottled gas.

An inter-connected system of high pressure mains traverses the metropolitan area from the Brompton and Osborne works and mains extend south to Darlington, north-east to Tea Tree Gully and north to Elizabeth. The Elizabeth main was first laid for industrial use but now serves over 5,000 domestic consumers including 1,500 in the Elizabeth area. The pressure in these mains is reduced at district governors for distribution through smaller pipes to consumers.

At 30th June 1966 the company was maintaining 1,953 miles of mains from its metropolitan works and supplying over 160,000 consumers. Approximately 80% of the gas supplied was used in domestic dwellings. The Port Pirie system involved 49 miles of mains.

Variations during the day in the demand for gas necessitates the storage of considerable quantities and gas holders with a combined capacity of 10 million cubic feet are situated in a number of suburbs. At Port Pirie facilities exist for the storage of 340,000 cubic feet of gas.

8.7. HOUSING AND BUILDING

HOUSING

Features of housing development in South Australia have been the high proportion of stone houses built in earlier years, and of brick houses in more recent years. The familiar old-style stone houses are still to be seen in most settled parts of the State, especially in rural areas. The 1947 Census was in fact the first at which houses with outer walls of brick outnumbered those with walls of stone.

The building materials used have largely been determined by the availability of building stone and deposits of clay suitable for brickmaking, and by the relative lack of natural timbers suitable for houses. Recently brick veneer homes have become more popular, particularly in the metropolitan area, but this is partly due to the poor building soil in some of the metropolitan and near-metropolitan areas.

DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each Census of the population. For the purpose of the Census a 'dwelling' is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term 'dwelling' includes houses and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution.

Dwellings have been classified as 'private' or 'other than private'. Private dwellings include private houses, shares of private houses, flats and other private dwellings; other than private dwellings include hotels, motels, boarding houses, lodging houses and hostels, educational, religious and charitable institutions, hospitals, defence and penal establishments, police and fire stations, clubs, staff barracks and quarters, etc.

Details of dwellings at the 1966 Census were not available at the time of printing but will be included in the 1968 Year Book. Consequently all references to Metropolitan Area in this Part are to the Metropolitan Area as defined for Census purposes prior to the Census at 30th June 1966.

Dwelling counts at the 1961 Census and five earlier Censuses are shown below; figures exclude dwellings occupied solely by full-blood Aborigines.

Dwellings in South Australia, Censuses 1911 to 1961

Census	Occupied			Unoccupied (a)	Total Dwellings
	Private	Other than Private	Total		
1911.....	82,108	2,035	84,143	3,062	87,205
1921.....	104,295	3,619	107,914	4,431	112,345
1933.....	136,611	2,663	139,274	5,353	144,627
1947.....	166,118	2,420	168,538	3,547	172,085
1954.....	212,095	3,206	215,301	8,524	223,825
1961.....	259,344	2,564	261,908	17,061	278,969

(a) Includes "weekenders," holiday houses and other dwellings whose usual occupants were temporarily absent on Census night.

Total dwellings increased more than threefold in the fifty years to 1961, with the greatest increase (about 107,000 out of a total of 192,000) occurring subsequent to the 1947 Census.

It is estimated that there were 323,000 dwellings (including unoccupied dwellings) in South Australia as at 31st December 1965. This is about 44,000 above the 1961 Census figure, and indicates that the post-war growth rate is being maintained.

Dwellings in South Australia were classified as being located in urban or rural areas at the 1961 Census.

For the 1961 Census 'other urban' included all municipalities outside the metropolitan area (except municipalities of less than 1,000 persons) and non-municipal towns of 1,000 persons or more. The table shows that slightly less than 20% of all occupied dwellings were in rural areas. The high proportion of occupied dwellings shown as urban reflects the tendency of South Australians to reside in the metropolitan area and other towns.

Dwellings in South Australia, Census 30th June 1961

Division	Occupied				Unoccupied	
	Private	Other than Private	Total		Number	Proportion of Total
			Number	Proportion of Total		
			Per Cent	Per Cent		
Urban—						
Metropolitan(a)	162,551	1,349	163,900	62.58	5,595	32.80
Other.....	45,673	516	46,189	17.64	3,273	19.18
Rural.....	51,120	699	51,819	19.78	8,193	48.02
Total ..	259,344	2,564	261,908	100.00	17,061	100.00

(a) As defined for Census purposes prior to 30th June 1966.

The next table gives details of occupied dwellings only, according to the type of dwelling. Private dwellings were classified into the following four categories—

Private House—includes houses, sheds, huts, garages, etc. used for dwelling purposes, and shared private houses for which only one householder's schedule was received.

Share of Private House—is a portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received.

Flat—is a part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities.

Other Private Dwelling—includes private dwellings such as rooms, apartments, etc. which are parts of buildings but are not self-contained units.

Occupied Dwellings by Class, South Australia, Censuses 1954 and 1961

Class of Occupied Dwelling	30th June 1954			30th June 1961		
	Metro-politan(a)	Country	Total	Metro-politan(a)	Country	Total
Private dwellings—						
Private house—						
House	114,247	75,274	189,521	140,113	91,527	231,640
Shed, hut, etc.	894	1,451	2,345	931	1,956	2,887
Share of private house ..	9,848	2,208	12,056	7,276	1,258	8,534
Flat	4,994	680	5,674	12,239	1,855	14,094
Other.....	2,305	194	2,499	1,992	197	2,189
Total private dwellings..	132,288	79,807	212,095	162,551	96,793	259,344
Other than private dwellings—						
Licensed hotel	206	371	577	206	371	577
Motel, boarding house, etc.	1,261	324	1,585	838	328	1,166
Educational and religious institutions	68	34	102	84	45	129
Hospital	81	89	170	95	85	180
Charitable institution ..	44	12	56	36	8	44
Other.....	(b) 155	(b) 561	(b) 716	90	378	468
Total other than private dwellings.....	1,815	1,391	3,206	1,349	1,215	2,564
Total occupied dwellings	134,103	81,198	215,301	163,900	98,008	261,908

(a) As defined for Census purposes prior to 30th June 1966.

(b) Includes caretakers' quarters classified as 'private dwellings' in 1961.

During the seven year period, the number of houses increased by 22% and flats increased by nearly 150%. The number of flats in the metropolitan area increased by more than 7,000. Shares of private houses decreased as more houses and flats were built. The number of boarding houses, lodging houses, etc. in the metropolitan area decreased by approximately one third.

Classification of Occupied Private Dwellings

The following tables in this section give details of occupied private dwellings only, classified by number of inmates, nature of occupancy, material of outer walls, number of rooms, and (for tenanted private dwellings) weekly rent payable.

Occupied Private Dwellings by Number of Inmates, South Australia Censuses 1954 and 1961

Number of Inmates per Dwelling	30th June 1954				30th June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
1.....	12,712	2,840	1,078	17,586	18,339	2,285	3,345	25,007
2.....	44,168	4,322	2,382	51,657	53,596	2,444	5,491	62,128
3.....	41,888	2,444	1,197	45,958	44,946	1,588	2,493	49,312
4.....	42,784	1,368	638	44,992	50,188	1,156	1,543	53,034
5.....	26,864	611	250	27,809	34,430	549	726	35,779
6.....	13,370	268	80	13,740	18,452	284	282	19,050
7.....	5,731	131	32	5,906	8,342	127	144	8,625
8.....	2,590	57	11	2,663	3,715	70	52	3,840
9.....	982	11	5	1,001	1,422	19	14	1,456
10 and over	777	4	1	783	1,097	12	4	1,113
Total	191,866	12,056	5,674	212,095	234,527	8,534	14,094	259,344
Total inmates..	690,542	30,466	14,082	740,424	856,767	22,758	34,894	918,773
Average number of inmates per private dwelling	3.60	2.53	2.48	3.49	3.65	2.67	2.48	3.54

Note—For definitions of private house, share of private house, and flat, see page 301.

The slight increase in average number of occupants per occupied private dwelling reversed a trend which had persisted for a long time. The figure fell from 4.02 in 1933 to 3.65 in 1947 and 3.49 in 1954, before rising to the 1961 figure of 3.54.

Occupied Private Dwellings by Nature of Occupancy, South Australia Censuses 1954 and 1961

Nature of Occupancy	30th June 1954				30th June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
Owner	96,528	3,664	1,212	101,588	115,860	2,689	2,555	121,266
Purchaser by instal- ments	36,584	931	173	37,741	58,578	871	525	60,022
Tenant—								
Government (a)	12,282	52	92	12,432	20,152	29	1,604	21,801
Private	41,138	7,120	4,127	54,601	34,397	4,692	9,082	50,085
Caretaker	1,716	90	32	1,862	1,683	80	191	1,973
Other occupancy ..	2,750	77	22	2,858	2,908	89	89	3,098
Not stated	868	122	16	1,013	949	84	48	1,099
Total	191,866	12,056	5,674	212,095	234,527	8,534	14,094	259,344

(a) "Government tenant" at 1954 Census, "Tenant paying rent to a government authority including South Australian Housing Trust"; at 1961 Census, "Tenant paying rent to South Australian Housing Trust".

Note—For definitions of private house, share of private house, and flat, see page 301.

Owners and purchasers by instalments occupied approximately 70% of all occupied private dwellings at June 1961 whilst tenants occupied about 27%. The increase in the number of dwellings since the 1954 Census was mainly in dwellings occupied by owners and purchasers by instalments. The metropolitan area contained 65.5% of owner (and purchaser) occupied and 58.5% of tenant occupied private dwellings.

Occupied Private Dwellings by Material of Outer Walls, South Australia Censuses 1954 and 1961

Material of Outer Walls	30th June 1954			30th June 1961		
	Metro- politan(a)	Country	Total	Metro- politan(a)	Country	Total
Brick (including brick veneer)	83,185	9,609	92,794	109,451	21,578	131,029
Stone	25,147	41,058	66,205	23,431	40,586	64,017
Concrete	6,558	5,869	12,427	10,538	7,930	18,468
Wood	6,602	7,257	13,859	6,660	6,647	13,307
Iron	2,959	7,275	10,234	2,578	6,912	9,490
Fibro-cement	6,905	7,437	14,342	9,320	12,172	21,492
Other and not stated	932	1,302	2,234	573	968	1,541
Total	132,288	79,807	212,095	162,551	96,793	259,344

(a) As defined for Census purposes prior to 30th June 1966.

In 1961 the number of dwellings with outer walls of brick represented 50.5% of all occupied private dwellings. This was a considerable increase over the 1954 proportion of 43.7% and was well above the Australian figure of 34.3% in 1961. Dwellings with stone walls which had decreased from 38.7% in 1947 to 31.2% in 1954, fell further to 24.7% in 1961. Despite this falling proportion, almost 80% of all stone houses in Australia in 1961 were located in this State.

In Australia 41.5% of occupied private dwellings had outer walls of wood, but in South Australia the proportion was only 5.1%.

The proportion of occupied private dwellings with outer walls of brick was particularly high in the Adelaide metropolitan area, increasing from 62.9% in 1954 to 67.3% in 1961.

Occupied Private Dwellings by Number of Rooms, South Australia Censuses 1954 and 1961

Number of Rooms per Dwelling	30th June 1954				30th June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
1.....	1,241	1,125	18	3,064	1,088	586	94	2,278
2.....	4,006	2,545	374	7,739	1,944	1,786	1,265	5,721
3.....	9,197	3,068	1,635	14,430	6,298	2,519	4,869	14,251
4.....	33,778	2,295	1,970	38,280	31,901	1,901	4,680	38,699
5.....	74,288	1,435	1,068	76,874	104,476	1,241	2,066	107,849
6.....	46,569	875	395	47,898	59,292	199	702	60,207
7.....	14,320	307	111	14,755	18,817	46	226	19,092
8.....	4,969	128	42	5,150	6,211	20	99	6,333
9.....	1,678	44	24	1,754	2,172	7	33	2,213
10 and over	1,588	46	17	1,660	1,924	12	13	1,951
Not stated	232	188	20	491	404	217	47	750
Total	191,866	12,056	5,674	212,095	234,527	8,534	14,094	259,344
Average number of rooms per private dwelling	5.20	3.46	4.03	5.04	5.35	3.29	3.80	5.17

Note—For definitions of private house, share of private house, and flat, see page 301.

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, pantry, laundry or storehouse. The largest increases in the seven year period were in 5 and 6 roomed dwellings. In 1961, 5 roomed dwellings were 41.6% of all occupied dwellings; 6 roomed dwellings were 23.2%. The total increase in private houses was approximately 43,000 and over 30,000 of these were 5 roomed private houses.

**Occupied Tenanted Private Dwellings^(a) by Weekly Rent (Unfurnished)
South Australia, Censuses 1954 and 1961**

Weekly Rent (Unfurnished)	30th June 1954				30th June 1961			
	Private House	Share of Private House	Flat	Total (including Other)	Private House	Share of Private House	Flat	Total (including Other)
Under \$1	1,429	104	16	1,587	420	12	3	443
\$1 and under \$2 ..	6,793	671	124	7,717	1,921	98	114	2,212
\$2 and under \$3 ..	11,529	1,214	450	13,368	4,602	255	300	5,221
\$3 and under \$4 ..	7,661	894	748	9,485	4,429	282	381	5,172
\$4 and under \$5 ..	3,479	507	593	4,706	4,308	372	440	5,196
\$5 and under \$6 ..	1,164	195	240	1,642	2,833	287	347	3,539
\$6 and under \$7 ..	940	112	221	1,303	2,209	338	495	3,125
\$7 and under \$8 ..	204	47	115	376	997	230	377	1,663
\$8 and under \$9 ..	163	20	73	260	858	232	426	1,556
\$9 and under \$10 ..	59	4	32	99	471	84	293	887
\$10 and over	154	23	62	242	3,192	247	1,964	5,456
Not stated (b)	7,563	3,329	1,453	13,816	8,157	2,255	3,942	15,615
Total	41,138	7,120	4,127	54,601	34,397	4,692	9,082	50,085
Average weekly rent (unfurnished) per private dwelling ..	\$2.83	\$2.95	\$4.27	\$2.94	\$5.13	\$5.71	\$8.23	\$5.63

(a) Excludes dwellings where tenants were paying rent to a government authority—including South Australian Housing Trust (1954) and to South Australian Housing Trust only (1961).

(b) Includes dwellings which were let furnished, rent-free dwellings and dwellings attached to shops, etc. at a combined rent.

Note—For definitions of private house, share of private house and flat, see page 301.

Average weekly rents for unfurnished private dwellings almost doubled in the seven year period to June 1961. Of all dwellings for which information was obtained, 27.7% were at a rental of \$7 or more per week in 1961, compared with only 2.4% in this range in 1954. There was a corresponding fall in the proportion of dwellings with weekly rental at less than \$4—from 78.8% in 1954 to 37.9% in 1961.

Unoccupied Dwellings

There were 17,061 dwellings unoccupied at 30th June 1961, and only 3,386 of these were vacant and for sale or renting. The following table shows unoccupied dwellings classified by reason for being unoccupied.

Central Division includes the seaside areas of Victor Harbor, Port Elliot, Port Noarlunga, Christies Beach, Moana and Sellicks Beach; hence the large number of unoccupied holiday houses and "weekenders".

**Unoccupied Dwellings in Statistical Divisions, South Australia
Census 30th June 1961**

Division	For Sale or Renting	Holiday House, "Weekender", Seasonal Workers' Quarters	Occupants Temporarily Absent	Condemned or to be Demolished	Other and Not Stated	Total
Metropolitan(a)	1,673	264	2,344	382	932	5,595
Central	877	2,596	812	119	1,087	5,491
Lower North	278	638	512	47	417	1,892
Upper North	57	54	208	4	103	426
South Eastern	210	385	285	30	328	1,238
Western	109	448	271	22	87	937
Murray Mallee	130	640	301	18	244	1,333
Remainder of State.....	52	40	34	3	20	149
Total	3,386	5,065	4,767	625	3,218	17,061

(a) As defined for Census purposes prior to 30th June 1966.

BUILDING

BUILDING CONTROL

The Building Act, 1923-1965 gives local government authorities power to control building operations within their municipality or district. This power is not automatic but follows a request from a local government authority for all, or a specified portion of its area, to be brought under the Act. In areas outside the jurisdiction of the Building Act certain building provisions under the Local Government Act, 1934-1966 apply.

Persons erecting or altering buildings on land coming under the Building Act are required to submit to a building surveyor appointed by the local government authority details and plans of the work envisaged and to receive written approval before commencing operations. Authorities concern themselves with such things as the size and location of buildings, the materials used, the height of ceilings and the provision of ventilation and drainage. They have the power to disapprove plans and provisions exist for a right of appeal in such cases.

Following the approval of plans, local government inspectors visit the construction site to inspect foundations and may visit the site at other times to check that council requirements are being met.

In addition to administering the general site and structural requirements of the Act, authorities may effect their own by-laws on certain matters. A by-law may prescribe a higher minimum size for dwelling sites than that provided under the Act or may regulate the positioning of a dwelling on a site. One of the most important by-law powers is that of defining particular areas or zones within which the nature of buildings and their use may be restricted. Thus certain areas may be proclaimed residential areas with industrial and commercial premises, beyond those already in existence, prohibited; other areas are designated as industrial zones.

BUILDING OPERATIONS

Details of building operations in South Australia are compiled from returns collected from all builders of new buildings. The statistics relate only to buildings as distinct from other construction activity such as roads, bridges, earthworks and water storage. Alterations and additions of \$10,000 and over to existing buildings are included with new buildings.

All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

Building Approvals

The following table shows the value of new buildings, and alterations and additions for which approval was given during 1965 and 1966. In addition to information on permits issued to private persons and organizations for building in areas subject to building control, particulars have been included of buildings known to be projected or to have started in areas outside building control and details of contracts let or expenditure authorized by governmental and semi-governmental authorities.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may rise over the period of construction.

Building Approvals, South Australia

Type of Building	1965			1966		
	Private	Government	Total	Private	Government	Total
New Buildings—	Number					
Houses	6,755	2,735	9,490	6,357	1,773	8,130
Flats (a)	2,135	6	2,141	1,564	—	1,564
	\$'000					
Houses	55,552	15,440	70,992	52,731	9,967	62,698
Flats	11,018	38	11,056	6,897	—	6,897
Shops	3,800	1,016	4,816	2,288	152	2,440
Hotels, hostels, etc.	4,338	—	4,338	1,805	—	1,805
Factories	10,332	960	11,292	5,566	302	5,868
Office premises	7,584	6,122	13,706	1,335	2,188	3,523
Other business premises	6,402	2,104	8,506	3,094	1,399	4,493
Entertainment and recreation	1,390	146	1,536	665	421	1,086
Educational	2,182	14,384	16,566	2,275	10,158	12,433
Religious	1,602	—	1,602	847	—	847
Health	182	9,856	10,038	1,038	3,112	4,150
Miscellaneous	528	2,482	3,010	1,133	1,200	2,333
Total value.....	104,910	52,548	157,458	79,674	28,899	108,573
Alterations and additions (b).....	15,904	2,112	18,016	14,601	1,534	16,135
Total value all building.....	120,814	54,660	175,474	94,275	30,433	124,708

(a) Number of individual dwelling units.

(b) Alterations and additions of \$10,000 or more are included with new buildings.

New Buildings Commenced

A building is recorded as commenced when work on the foundation has begun. In the table below commencements during 1965 and 1966 have been classified according to ownership at the date of commencement. Almost all houses recorded under the "government" heading were being built for the South Australian Housing Trust, many of them being intended for sale on completion.

New Buildings^(a) Commenced, South Australia

Number of dwelling units and anticipated completion value (\$'000) of new buildings commenced

Type of Building	1965			1966		
	Private	Government	Total	Private	Government	Total
	Number					
Houses	6,993	3,204	10,197	6,570	2,700	9,270
Flats (b)	1,750	6	1,756	1,476	—	1,476
	\$'000					
Houses	57,788	19,781	77,569	55,723	17,628	73,351
Flats (b)	9,504	36	9,540	6,933	—	6,933
Shops	3,662	1,086	4,748	7,127	164	7,291
Hotels, hostels, etc.	3,871	104	3,975	2,309	—	2,309
Factories	11,436	1,286	12,722	7,213	520	7,733
Office premises	1,147	5,472	6,619	8,347	2,395	10,742
Other business premises ..	5,817	652	6,469	3,349	2,005	5,354
Entertainment and recreation ..	1,602	306	1,908	1,277	323	1,600
Educational	2,344	9,593	11,937	2,437	11,235	13,672
Religious	1,805	—	1,805	1,154	—	1,154
Health	238	9,050	9,288	1,538	10,774	12,312
Miscellaneous	754	2,936	3,690	1,182	815	1,997
Total value of new buildings commenced	99,968	50,302	150,270	98,589	45,859	144,448

(a) Alterations and additions of \$10,000 or more are included with new buildings.

(b) Includes home units.

New Buildings Completed

Details of new buildings completed for the years 1957-1966 are given below. A building is regarded as having been completed when the contractor has fulfilled the terms of the contract or in the case of an owner-built house when the dwelling is either completed or occupied, whichever occurs first. However, the value in all cases is that of the building as a finished product.

New Buildings Completed, South Australia

Year	Number of Dwellings		Value of New Buildings			
	Houses	Flats (a)	Houses	Flats (a)	Other	Total
			\$'000	\$'000	\$'000	\$'000
1957	7,318	316	47,078	1,432	24,146	72,656
1958	7,705	562	50,060	2,684	32,544	85,288
1959	8,628	591	55,966	2,778	29,508	88,252
1960	9,379	790	63,326	4,042	37,190	104,558
1961	9,119	709	62,052	3,724	37,808	103,584
1962	9,280	583	61,966	3,198	49,404	114,568
1963	10,316	816	70,396	4,162	45,092	119,650
1964	10,869	1,279	78,148	6,264	54,288	138,700
1965	10,597	2,149	79,443	11,612	66,257	157,312
1966	10,095	1,607	78,810	8,288	56,824	143,922

(a) Includes home units.

The following table gives further details of dwellings completed over the five years to 1966.

A noticeable feature of the table is the increasing relative importance of flats, notwithstanding the diminishing number of government flats completed during the period. Flats accounted for 5.9% of dwelling completions in 1962, rose steadily to 16.9% in 1965 then fell during 1966 to 13.7%. However, no government-owned flats were completed in 1966.

Most of the flat building has taken place in the local government areas of Unley, West Torrens, Burnside and Glenelg.

Number of New Dwellings Completed, South Australia

Type of Dwelling	1962	1963	1964	1965	1966
Private—					
Contract-built houses	5,797	6,854	7,380	6,834	6,264
Owner-built houses (a)	674	598	557	624	560
Total houses	6,471	7,452	7,937	7,458	6,824
Flats (b)	455	700	1,252	2,045	1,607
Total private dwellings	6,926	8,152	9,189	9,503	8,431
Government—					
Houses	2,809	2,864	2,932	3,139	3,271
Flats	128	116	27	104	—
Total government dwellings	2,937	2,980	2,959	3,243	3,271
Total all dwellings	9,863	11,132	12,148	12,746	11,702

(a) Owner-built are houses erected without services of contractor for whole job.

(b) Includes home units.

The value of buildings, other than dwellings, completed over the same period is shown below. Included under "other business premises" are service-stations, warehouses and communication buildings and under "miscellaneous" are defence establishments, buildings for law and order and certain institutional premises.

Value of New Buildings Other Than Dwellings Completed^(a), South Australia

Type of Building	1962	1963	1964	1965	1966
			\$'000		
Shops	9,566	6,062	3,990	6,228	3,647
Hotels, hostels, etc.	1,784	2,016	1,968	2,733	3,959
Factories	4,792	10,512	17,528	20,201	11,510
Office premises	9,176	4,334	4,440	5,903	2,844
Other business premises	4,792	4,440	5,232	7,634	5,367
Entertainment and recreation ...	866	1,030	1,418	1,815	2,103
Educational	10,116	10,438	9,072	10,665	15,374
Religious	646	1,372	1,204	2,813	1,923
Health	4,724	1,984	5,714	3,777	6,166
Miscellaneous	2,942	2,904	3,722	4,488	3,931
Total	49,404	45,092	54,288	66,257	56,824

(a) Includes alterations and additions of \$10,000 and over to existing buildings.

Value of Work Done

The purest measure of building activity is that of value of work done, *i.e.*, of work actually carried out on buildings during the period.

Information on the value of work done on owner-built houses is not collected. However, an estimate based on the value of houses commenced, completed and under construction is calculated for such houses, yielding figures of \$4.2 million, \$5.0 million, and \$4.7 million for 1964, 1965 and 1966 respectively.

New Buildings: Value of Work Done, South Australia

Type of Building	1962	1963	1964	1965	1966
			\$'000		
Houses (a)	58,270	67,018	75,926	75,743	70,533
Flats (b)	3,536	4,222	7,542	11,324	7,568
Total dwellings (a)	61,806	71,240	83,468	87,067	78,101
Business premises—					
Hotels, etc.	1,978	1,732	2,214	2,762	3,694
Shops	6,328	5,574	6,292	4,354	3,984
Factories	6,278	12,390	18,828	19,671	11,956
Office premises	7,684	4,620	7,104	5,794	9,444
Other	4,958	5,302	5,520	7,056	5,324
Educational	9,906	9,298	9,230	13,932	15,626
Religious	774	1,328	2,364	2,113	1,512
Health	3,294	3,824	4,700	7,962	11,300
Entertainment, etc.	766	934	1,652	1,824	1,899
Miscellaneous	2,892	3,188	4,700	4,579	3,113
Total new buildings (a) .	106,664	119,430	146,072	157,114	145,953

(a) Excludes owner-built houses.

(b) Includes home units.

Buildings Under Construction

At the end of 1966 new buildings with an anticipated value when completed of \$122,699,000 were in the process of construction, with work done on these buildings valued at \$60,632,000. There were 4,324 houses and 585 flats in the course of construction, having an anticipated value when completed of \$35,921,000. The ratio of houses under construction at the end of 1966 to houses completed during that year was 43%, suggesting an average construction period of slightly less than 6 months. This ratio has fallen from 54% in 1960; however, in the preceding 5 years from 1955 it fell rapidly from 85%, or an indicated 10-11 month construction period for that year.

Location of New Dwellings

During 1966 the greatest development occurred in the Salisbury Corporation and the District Council of Tea Tree Gully; together they accounted for nearly 23% of the total State completions. Of the country local government areas, the greatest number of dwellings was completed in Whyalla.

Location of New Houses and Flats Completed, South Australia

Local Government Area	1962	1963	1964	1965	1966
Brighton	137	204	240	315	170
Burnside	272	322	449	533	352
Campbelltown	722	657	846	668	595
Elizabeth	(a)	(a)	(a)376	446	107
Enfield	966	713	895	729	695
Glenslg	58	107	223	230	149
Henley and Grange	195	157	235	230	200
Marion	534	634	731	507	384
Meadows	37	57	69	79	92
Millicent	71	68	38	67	112
Mitcham	448	481	583	745	582
Mount Gambier Corporation	115	151	117	91	77
Munno Para	320	954	545	662	727
Murray Bridge	28	31	45	70	99
Noarlunga	526	547	541	500	527
Payneham	167	138	207	296	119
Port Adelaide	237	363	469	312	170
Port Lincoln Corporation	60	57	75	111	117
Salisbury	(a)1,489	(a)1,587	(a)1,661	1,276	1,454
Stirling	54	68	82	74	79
Tea Tree Gully	767	787	917	1,096	1,200
Unley	73	139	177	451	274
West Torrens	489	623	422	621	625
Whyalla	409	276	307	511	634
Woodville	424	690	503	478	421
Other	1,265	1,321	1,395	1,648	1,741
Total State	9,863	11,132	12,148	12,746	11,702

(a) From July 1964 Elizabeth Corporation and Salisbury Corporation separately incorporated: previously combined as Salisbury and Elizabeth District Council and earlier as Salisbury District Council.

New Houses—Material of Outer Walls

A plentiful supply of clay and building stone together with a paucity of suitable timbers has resulted in the vast majority of South Australian houses being of solid construction. In the table below new houses have been classified by the materials used in the outer walls.

New Houses: Material of Outer Walls, South Australia

Year	Brick, Concrete, Stone		Brick Veneer and Stone Veneer		Fibro-Cement		Other	
	Number	Value	Number	Value	Number	Value	Number	Value
		\$'000		\$'000		\$'000		\$'000
COMMENCED								
1962.....	7,893	53,908	986	5,942	639	3,438	55	348
1963.....	8,453	60,610	1,469	9,360	560	3,012	52	350
1964.....	7,892	60,292	2,985	18,778	605	3,454	42	374
1965.....	6,247	52,850	3,314	20,964	604	3,481	32	274
1966.....	5,780	50,174	2,922	19,649	549	3,398	19	130
COMPLETED								
1962.....	8,513	57,768	(a)	(a)	675	3,648	92	550
1963.....	8,631	60,484	1,068	6,488	560	3,052	57	372
1964.....	8,475	63,212	1,740	11,144	614	3,450	40	342
1965.....	7,101	57,458	2,825	18,007	638	3,679	33	299
1966.....	5,990	52,032	3,506	23,147	579	3,492	20	139

(a) Brick and stone veneer included with brick, concrete and stone prior to 1962 for commencements, and prior to 1963 for completions.

Extensive use of the brick veneer technique in house building is of recent origin. The increasing importance of this form of construction can be seen from the commencement figures for 1962, 1964 and 1966 where brick and stone veneer made up 10%, 26% and 31% respectively of all commencements.

Building Employment

Details of building employment in South Australia are given in the table below. The figures are an average of the number of persons employed on four days in the year, viz at the end of March, June, and September and in mid-December. They include all contractors and sub-contractors, and employees of contractors, sub-contractors and government instrumentalities, who on these four days were engaged on the construction, alteration, repair and maintenance of buildings, but exclude persons working on owner-built houses or for contractors or sub-contractors who undertake only alterations, additions, repairs, and maintenance. Persons "actually engaged" include those temporarily laid off because of weather. Some duplications may occur as a result of frequent movement between jobs or because some persons (such as electricians) may work on several jobs which are under construction simultaneously.

The average employment figure of 13,574 for 1966 was made up of 6,910 persons working on new private dwellings, 4,876 working on other new buildings and 1,788 employed on additions, alterations, repairs and maintenance.

Building Employment, South Australia

Classification	1962	1963	1964	1965	1966
	Persons Engaged				
Occupational status—					
Contractors	647	690	694	696	663
Sub-contractors	2,498	2,959	3,469	3,543	3,164
Wage-earners	9,499	9,852	10,506	10,746	9,747
Trade—					
Carpenters	3,403	3,586	3,808	3,873	3,595
Bricklayers	2,150	2,356	2,589	2,573	2,244
Painters	1,128	1,252	1,415	1,413	1,283
Electricians	659	748	759	800	782
Plumbers	1,109	1,202	1,315	1,335	1,233
Builders' labourers	1,922	1,884	1,997	2,102	1,895
Other	2,273	2,473	2,786	2,889	2,542
Total	12,644	13,501	14,669	14,985	13,574

THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust was constituted by Act of Parliament in 1937. It provides houses and flats for rental and houses for sale.

Rental Dwellings

When the Trust commenced operations in 1937 it was confined to the building of houses for rental only, by legislation which severely restricted the capital cost per house in order to keep the rents within the means of lower paid workers. For this reason the Trust for many years built only the double unit attached type of dwelling although subsequent legislation made possible the building of single unit houses for letting. When the statutory limitations upon the cost and rent of houses were extended, and then removed, larger and better appointed houses were built.

During 1965-66 the Trust completed 700 houses for letting, most of which were of double unit construction.

Since 1952 the Trust has built a number of flats most of which are in two and three storey blocks and let to married couples without young children or to people living alone. At 30th June 1966, 1,365 flats of this type had been completed. In 1953 the Trust began building small groups of cottage flats for elderly people and had completed 1,248 by 30th June 1966, 463 of these had been built for charitable organizations and the remaining 785 were being let by the Trust. To meet the requirements of persons without children who can afford to pay a rent higher than that charged for a cottage flat but less than the rent charged for a flat in a two- or three-storey building the Trust has built 54 single-storey villa flats.

Sale Houses

The Trust began building houses for sale in 1946.

At first, purchasers were required to pay the purchase price either from their own resources or by obtaining a mortgage from a financial institution. However, in 1952 the Trust established a scheme under which it advances an amount on second mortgage. During the year ended 30th June 1966, 614 for sale houses were completed under this scheme. In 1962 a further scheme was introduced whereby certain houses, known as rental-purchase houses, are made available on \$100 deposit under agreement for sale and purchase.

A variety of sizes and designs are offered for sale, generally grouped on Trust land although the Trust will build any of its standard designs on private land anywhere in the State. It also erects houses for primary producers, and between 1946 and 1962 completed 932 houses for settlers under the War Service Land Settlement Scheme. When requested by State Government departments, the Trust erects houses for purchase by these departments for the accommodation of their employees.

Details of dwellings completed by the Trust since its inception, both for rent and for sale, are given in the following table.

South Australian Housing Trust, Number of Dwellings Completed^(a)

Period	Houses		Flats		Rural Dwellings including Soldier Settlers	Total
	Single Units	Double Units	Cottage Flats	Other		
1937-1961 ..	20,926	(b)16,851	690	1,087	1,214	40,768
1961-62	1,431	1,574	118	120	15	3,258
1962-63	1,289	1,394	126	69	4	2,882
1963-64	1,779	942	81	55	1	2,858
1964-65	2,465	714	93	45	—	3,317
1965-66	2,469	588	140	53	—	3,250
Total ..	30,359	22,063	1,248	1,429	1,234	56,333

(a) Excludes emergency and temporary dwellings.

(b) Includes a small number of triple-units.

In its early years the Trust built small groups of houses with rental and sale houses generally in different locations. With the extension of its activities, however, the Trust has had to build much larger housing complexes including what amounts to a complete town at Elizabeth where rental and sale houses are intermixed.

Both because of its emphasis on providing housing for those working in industry and because it has the power, subject to The Industries Development Committee, to erect and lease factories, the Trust has played an important role in the location of industry in South Australia.

Most of the funds used to finance the building operations of the Trust are borrowed either from the State Government under the Commonwealth-State Housing Agreement or from semi-government raisings arranged in conjunction with the State Treasury. Details of funds employed, and of the revenue and expenditure of the Trust in recent years are given on page 496.

COMMONWEALTH-STATE HOUSING AGREEMENTS

In July 1953 the State Government became party to an agreement already existing between the Commonwealth and certain other States under which the Commonwealth Government makes substantial loans to the States for the provision of housing. The initial agreement was renewed in 1956, 1961 and again in 1966 for a further five years.

Under the present agreement the Commonwealth makes advances to the State for the erection of dwellings by the South Australian Housing Trust and for the provision of finance for home builders by means of loans through the Home Builders Fund, to the State Bank and certain building societies. At least 30% of the funds provided must be channelled through the Home Builders' Fund. The advances with interest are repayable by the State over 53 years.

A total of \$169,429,000 had been loaned to the State under these agreements to 30th June 1966, providing for a total of 29,385 dwellings to 30th June 1965.

Commonwealth-State Housing Agreement, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Advances for year—					
Housing Trust	8,754	10,030	9,200	10,000	10,200
Home Builders Fund	9,372	8,982	10,200	10,500	10,857
Total	18,126	19,012	19,400	20,500	21,057
Liability at end of year—					
Housing Trust	64,325	73,836	82,456	91,801	101,270
Home Builders Fund	21,701	30,554	40,569	50,807	61,332
Total	86,026	104,390	123,025	142,608	162,602

DEPARTMENT OF HOUSING

The Commonwealth Department of Housing was established in January 1964. The principal activities of the department in South Australia are the administration of the War Service Homes Act and the recently created Homes Savings Grant Scheme.

War Service Homes

The War Service Homes Branch of the Department of Housing originated in the War Service Homes Commission which was set up in 1919 to help provide homes for ex-servicemen and their dependants.

Persons currently eligible for assistance include members of the Australian forces and nursing services who served outside Australia in the 1914-18 war, the 1939-45 war, in Korea, Malaya or Vietnam (southern zone) or in other areas as specified from time to time by the Commonwealth Government. Also eligible are other British ex-service personnel who were resident in Australia prior to enlistment and certain members of the mercantile marine services. Assistance may be granted to the widow or, in some cases, the widowed mother of an eligible person.

Assistance is given in building a home, in purchasing a new or existing home, and in discharging a mortgage which has been arranged with the prior approval of the Branch. In certain circumstances a person who has not received the maximum loan may receive a further loan to undertake certain additions. The maximum loan available at 30th June 1966 was \$7,000 and the interest rate 3½%.

Services provided by the Branch to persons building a home include the preparation of plans and specifications and the arranging and supervision of construction.

Funds used by the War Service Homes Branch are made available from Commonwealth Consolidated Revenue.

War Service Homes Branch, South Australia

Year	Activities During Year		Advances Outstanding at End of Year	
	Homes Provided	Capital Advanced	Number	Amount
		\$'000		\$'000
1961-62	912	5,316	14,947	61,020
1962-63	889	6,470	15,481	65,470
1963-64	695	5,078	15,718	67,900
1964-65	752	5,510	16,008	70,564
1965-66	847	6,200	16,577	74,117

Homes Savings Grants

Under the Homes Savings Grant Scheme introduced in 1964, married persons and widowed persons under 36 years of age who have lived and saved in Australia for at least 3 years may become eligible for a grant of \$500 to assist them in obtaining a home. To be eligible for the maximum grant a couple must have saved \$1,500 in an acceptable form and have entered into a contract for the purchase or construction of a dwelling on or after 2nd December 1963 or, if an owner-builder, have commenced construction on or after that date.

Persons who have saved less than \$1,500 may qualify for a reduced grant. Moneys already expended on the purchase of land or on the purchase or construction of a dwelling may be included in acceptable savings. An application for a grant must be lodged not later than 12 months after signing a contract or commencing to build, however, in special circumstances an application lodged after 12 months will be considered.

A total of 5,442 homes savings grants had been approved in South Australia to 30th June 1966, the total payment of \$2,469,000 representing an average of \$454 per grant.

OTHER HOME FINANCE SOURCES

The State Bank of South Australia advances funds provided by the State Government under the Advances for Homes Act, 1928-1958, funds provided from the Home Builders' Fund, and its own funds.

The Savings Bank of South Australia advances its own funds either as Homes Act loans guaranteed by the State Treasurer or on its own terms.

Homes Act loans are also arranged by the South Australian Superannuation Fund, in addition to loans on its own terms.

The Commonwealth Savings Bank and the private savings banks make long-term housing advances.

At 1st April 1966 maximum loans available from the above institutions varied from \$6,000 up to \$9,000, with differing rates for new and existing houses and for solid and timber frame construction. Interest rates charged ranged from 5% to 6% and periods of repayment from 15 to 40 years.

The private trading banks make overdraft advances, dependent on the credit status of the borrower, for short periods normally not exceeding 5 years. Interest rates on these advances varied between 6% and 7½%.

Life assurance companies make housing loans which are normally collaterally secured by a life assurance policy. Maximum loan limits vary considerably between companies but in general are higher than those offered by the banks. Maximum repayment terms are for up to 30 years and interest rates at 1st April 1966 varied between 6½% and 7½%.

Another source of housing finance is the building societies, details of which are given on pages 522-523. One such society makes Homes Act loans and together with another society advances moneys made available from the Home Builders' Fund.

Housing Loans Insurance Scheme

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1965, assented to on 4th May 1965 to insure approved lenders against losses arising from the making of housing loans. The main purpose of the activities of the Housing Loans Insurance Corporation is to assist people to obtain, as a single loan and at a reasonable rate of interest, the money they need and can afford to borrow to obtain a home suited to their requirements.

The Housing Loans Insurance Corporation insures loans that are made for a wide range of purposes in addition to the purchase or construction of a dwelling. The other purposes include alterations, extensions or improvements to a dwelling, and the provision or improvement of roads, kerbing and footpaths. An insured loan may be made only by an approved lender. The approved classes of lenders include banks, building societies, co-operative housing societies, friendly societies, life insurance companies and trustee companies.

PART 9

PRODUCTION

9.1. RURAL INDUSTRIES

Rural statistics are prepared from annual returns collected from every holding of one acre or more, used for the production of agricultural products or the raising of livestock (including poultry) and the production of livestock products.

Returns are collected from some 29,000 holdings in South Australia each year. Particulars relate to rural operations for one complete year ended 31st March but where harvesting of some crops (mainly fruit) has not been completed by that date, returns are collected shortly afterwards.

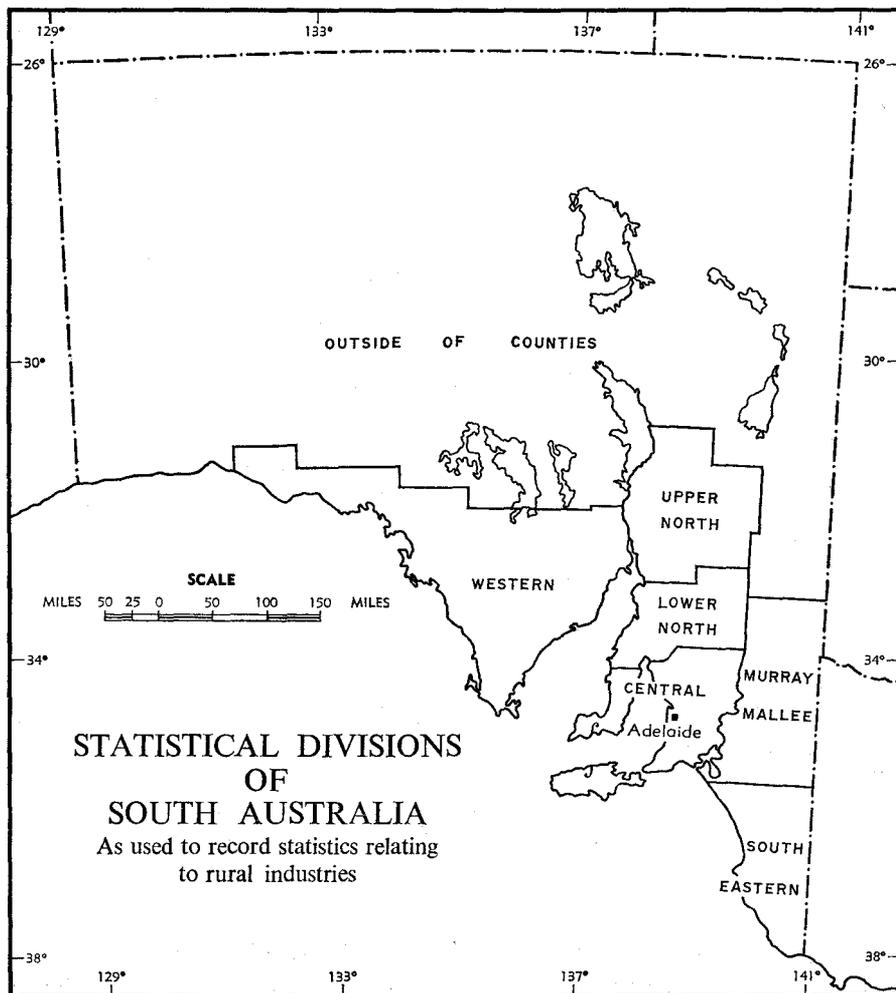
An owner or occupier who works more than one holding is normally required to report details for each holding. However, where the holdings are near to one another and are in effect worked as one farm, a composite return is obtained, and is treated as covering a single holding in the district in which the main farm is situated.

Statistical divisions used for rural production statistics are shown on Map 9. These divisions are a combination of a number of counties which are proclaimed areas with immutable boundaries. The area beyond the counties is for all practical purposes treated as a seventh division. These divisions should not be confused with statistical divisions referred to in relation to other statistics; such divisions, as shown in the detailed map inside the back cover, are based on combinations of local government areas.

The number and area of holdings in each division for the past three years are shown in the following table.

Rural Holdings, Statistical Divisions, South Australia

Statistical Division	Holdings			Area of Holdings		
	1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
	Number			'000 Acres		
Central	12,575	12,603	12,642	5,809	5,770	5,821
Lower North	3,295	3,252	3,244	4,989	4,953	5,010
Upper North	1,209	1,189	1,172	9,305	9,292	9,291
South Eastern	4,278	4,285	4,273	5,397	5,429	5,434
Western	2,422	2,416	2,440	18,205	18,172	18,168
Murray Mallee	4,783	4,856	4,837	8,180	8,251	8,132
Outside of Counties ..	149	153	151	107,020	105,087	107,538
Total	28,711	28,754	28,759	158,905	156,954	159,394



STATISTICAL DIVISIONS OF SOUTH AUSTRALIA
As used to record statistics relating to rural industries

MAP 9

A classification of rural holdings by size and by type of main activity was made in 1960. The following table gives a summary of all rural holdings, those under wheat and barley, and those carrying sheep and cattle classified by area of the holding in 1959-60.

Classification of Holdings by Size and Principal Activities, South Australia 1959-60

Size of Holding	Total Holdings	Holdings with					
		Wheat for Grain	Barley for Grain	Oats for Grain	Sheep	Dairy Cattle	Beef Cattle
Acres		Number					
1- 99 ...	10,078	196	230	128	1,294	3,682	161
100- 199 ...	2,096	159	198	120	960	1,440	163
200- 499 ...	3,328	1,031	1,042	672	2,517	2,140	442
500- 999 ...	4,341	2,459	2,436	1,751	3,974	2,950	778
1,000-1,999 ...	4,165	2,360	2,536	2,072	3,933	2,866	841
2,000-4,999 ...	2,994	1,676	1,713	1,541	2,830	1,989	588
5,000 and over.	1,525	635	531	585	1,407	884	450
Total	28,527	8,516	8,686	6,869	16,915	15,951	3,423

The classification of holdings by type of main activity is based on estimates of gross receipts of each activity made from data reported on the returns submitted for the year ended 31st March 1960.

The following tables gives a summary of the type of activity of rural holdings in each statistical division.

Rural Holdings Classified by Type of Activity, South Australia, 1959-60

Type of Activity	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	Number of Holdings							
Commercial holdings—								
Sheep—Cereal grain	1,463	1,318	399	351	1,701	1,109	—	6,341
Sheep	1,464	287	410	2,070	232	327	105	4,895
Cereal grain ..	671	900	95	25	164	110	—	1,965
Beef cattle	31	—	1	45	—	9	30	116
Dairying	1,819	77	33	735	12	179	—	2,855
Vineyards	376	39	—	2	—	1,003	—	1,420
Fruit (other than vine)	854	31	9	13	—	725	—	1,632
Vegetables—								
Potatoes ..	119	—	—	33	—	—	—	152
Other and mixed ..	777	32	31	12	1	142	—	995
Poultry	432	29	10	8	4	32	—	515
Pigs	101	29	4	19	10	21	1	185
Other	82	13	5	16	4	20	—	140
Multi-purpose ..	1,238	266	80	129	76	297	—	2,086
Total classified ..	9,427	3,021	1,077	3,458	2,204	3,974	136	23,297
Unclassified—								
Sub-commercial	2,203	320	126	499	92	352	1	3,593
Unused, special, etc.	963	83	52	241	89	203	6	1,637
Total holdings	12,593	3,424	1,255	4,198	2,385	4,529	143	28,527

HISTORY OF FARMING DEVELOPMENT

The first moves away from Adelaide occurred very soon after the settlement was established. Delays in having the country surveyed had prevented the

planned occupation of farm lands and some of the more determined settlers made for the country in an attempt to make a living from the land. Because these settlers had come from a green, well-watered land and because the country to the north of Adelaide seemed to be too dry and dusty for cultivation, the first moves were to the hills districts near Mount Barker and the fertile southern areas of Strathalbyn, Willunga and Yankalilla. In these first few years, large numbers of sheep and cattle were imported from New South Wales and a considerable part of the present settled area of the State had been occupied for pastoral purposes by 1850.

When the demand for grain increased there was a move to farm additional areas. With no equipment other than hand tools, clearing virgin land was a formidable task. Because it carried light bush and little timber and was handy to the port facilities at Adelaide, the plain country centred on Gawler was the next area opened to farming. The production of excellent crops on these plains led to the opening of large tracts of land north as far as Port Augusta. By 1860 farming was established in the South East and had commenced in lower Eyre Peninsula. The sheep population had reached nearly 3 million.

The country in Central, Lower North, Upper North and South Eastern Divisions was being developed and most of the rich wheat areas in Central, Lower North and Upper North had been occupied by 1880. Large areas of this land were heavily timbered with mallee eucalypt which has a large root system, the clearing of which presented a major problem to the farmers. The introduction of the techniques of flattening the scrub with large rollers made from old steam boilers, burning this scrub, sowing a scratch crop and then burning the stubble to kill regrowth enabled this land to be opened up. Two inventions were of importance—the stump-jump plough which made tilling on this land possible and the mechanical reaper which made large-scale farming economical.

By 1900 all but three of the counties had been declared but the settlement on new farming lands between 1880 and 1900 was not significant. However, the next twenty years saw a considerable extension of the cultivated areas, despite a disastrous drought experienced in 1914. In this period the area under crop and lying fallow increased by 50%. The areas developed were mainly the difficult light soils of the Murray Mallee and Eyre Peninsula. The influence of farmers leaving the low rainfall northern counties and taking their experience of farming under marginal conditions to these two areas together with the wide acceptance of the need for artificial fertilizer in cereal farming produced the marked success which followed. In 1901 artificial fertilizer was used on only 37% of the area cropped while in 1920 the figure was 87%.

The very high prices obtained for agricultural products after World War I and the Government drive for greater production resulted in the opening up of extensive areas of mallee lands. The area under cultivation reached a peak of 8 million acres in 1930 but within two or three years of this time it was realized that the type of crop-fallow rotation in general use was seriously damaging the light soils of these "marginal" farming areas and by 1935 the area under cultivation had been reduced to 7.3 million acres. Sheep numbers increased steadily from 6 million to 10 million in the 1930's.

World War II had a very marked effect on the area under cultivation, which fell to 4.5 million acres in 1943-44 and the drought of the following season caused sheep numbers to fall to less than 7 million. From this time, modern farming techniques were applied. Mixed sheep-cereal farming was rapidly extended, crop-pasture and crop-pasture-fallow rotations were widely adopted,

and large areas of marginal mallee lands brought into economic production. Improved strains of cereals were introduced and larger quantities of superphosphate used on cereals and pastures. By these means the area under cultivation today has reached 12 million acres and the number of sheep now exceeds 17 million. The increased production obtained since 1940 has come from the adoption of better farming methods rather than the opening of new land.

CHARACTERISTICS OF FARMING AREAS

GEOGRAPHY AND CLIMATE

Two thirds of the area of the State from the northern boundary down to latitude 32°S is mainly desert and unsuitable for agriculture. The rainfall is low and erratic, coming mainly from thunderstorms, and averages less than 8 inches per annum. High day temperatures during a large part of the year produce a very high rate of evaporation.

South of latitude 32°S is an area where the rainfall is rather more regular and somewhat higher; this land, mostly semi-arid, is transitional between the desert and the agricultural regions. Small areas are planted to cereals and extensive areas adjacent to the River Murray are irrigated from the waters of the river and devoted to horticulture and viticulture.

A third region extending as far as latitude 36°S enjoys an average annual rainfall varying according to locality between 10 and 25 inches per year and has a reliable growing season of 5 months or more. This is the main agricultural region of the State and much of the area is devoted to ley farming, producing wheat, barley, oats, fruit and vegetables and carrying sheep and cattle.

The south-eastern part of the State has a rainfall in excess of 20 inches per year but physiography is not congenial to agriculture, most of the usable area being devoted to grazing and afforestation.

Average Rainfall Over Agricultural Areas

Cereal crops (of which wheat is the most important) are sown following opening rains, which are normally expected in April or May. The growing season varies between districts, but generally can be considered as the eight months April to November, and good rains during this period are vital to the success of the season's harvest.

A further calculation of average rainfall for each county in which a significant amount of crops is grown (33 counties at present) is obtained by taking the mean of recordings at a number of stations spread through the area. An average, weighted by the area under crop in each county, is then calculated for each statistical division, and the entire agricultural area of the State. Details are given in the next two tables.

The average rainfall for the wheatgrowing season fell as low as 6.83 inches in the 1914 drought and 6.28 inches in 1959. In both the Upper North and Murray Mallee Divisions, average falls of under 5 inches have been experienced. The highest average over the growing season was 18.46 inches in 1909, while in the South Eastern Division the average frequently exceeds 20 inches. A more detailed discussion, together with maps and with special reference to the cereal growing season was included on pages 5-9 of South Australian Year Book 1966.

Average Rainfall Over Agricultural Areas, Statistical Divisions, South Australia
Wheatgrowing Seasons

Statistical Division	1961	1962	1963	1964	1965	1966 (p)
	Inches					
Central	12.71	11.97	17.59	17.78	11.14	12.22
Lower North	13.67	9.89	16.19	14.75	11.13	10.32
Upper North	11.26	7.46	12.98	12.89	10.09	8.86
South Eastern	14.92	19.44	15.01	25.23	15.55	16.51
Western	10.47	9.62	13.76	15.31	9.74	11.96
Murray Mallee	11.00	7.42	12.91	13.51	9.29	7.71
Total	11.99	10.24	14.93	15.85	10.51	10.99

(p) Preliminary.

The next table gives a dissection of the State figures shown above for each of the 8 months of the wheatgrowing season.

Average Rainfall Over Agricultural Areas, Monthly, South Australia
Wheatgrowing Seasons

Month	1961	1962	1963	1964	1965	1966 (p)
	Inches					
April	3.39	0.18	1.76	1.58	0.52	0.23
May	0.66	2.67	3.04	1.31	2.00	1.44
June	1.07	1.34	2.98	1.75	1.34	1.88
July	1.95	0.99	3.14	3.18	1.88	2.37
August	1.79	1.64	1.93	1.45	2.28	1.14
September	1.20	0.88	0.88	2.87	1.24	2.00
October	0.32	2.21	0.93	1.71	0.23	1.23
November	1.61	0.33	0.27	2.00	1.02	0.70
Total wheatgrowing season	11.99	10.24	14.93	15.85	10.51	10.99

(p) Preliminary.

CHARACTERISTICS OF STATISTICAL DIVISIONS

In this section, some general details are given regarding soil types and natural vegetation in each statistical division.

Central Division

This division has an area of nearly 6 million acres in rural holdings. The topography, soils and rainfall vary more than in any other part of the State.

The Kangaroo Island and Yorke Peninsula regions are both relatively flat with shallow brown soils over limestone or sand over clay. These soils are loose and coarse and are generally known as mallee soils. On the southern part of Yorke Peninsula are areas of calcareous sands and in the northern parts of Kangaroo Island there are areas of fertile red-brown earths with some areas of deep acid sands. The central area of the division is dominated by the Mount Lofty hills with leached sandy loam overlying a heavy clay and large areas of rocky outcrops or shallow soil over rock, fertile valleys or deep loam grading to red-brown earths on some slopes.

The elevated areas of the peninsula to the south of Adelaide contain large pockets of acid-grey soils, while the northern and eastern portions of the division comprise mainly mallee type soils and red-brown earths.

Natural vegetation varies from red gums, blue gums, peppermints, sheoaks and many types of shrubs and grasses on the Mount Lofty hills to savannah regions adjacent to the hills area. Mallee type eucalypt, scattered areas of shrub and various species of annual and perennial grasses are native to the remainder of Central Division.

The combination of suitable soils, climate and rainfall and the provision of reticulated water in an area in close proximity to Adelaide has led to the development of vegetable, fruit and dairying industries in the fertile valleys and undulating country associated with the Mount Lofty hills. Yorke Peninsula is the main barley growing area in Australia, and wheat is grown extensively in all areas except Kangaroo Island and the higher rainfall areas near and to the south of Adelaide. Sheep are grazed generally throughout Central Division.

Lower North Division

This is the smallest of the six divisions with some 5 million acres in rural production. The western and south-western portions are coastal plains, for the most part mallee soils of all types—sandy, grey, loamy and shallow red. The central area is undulating hill country with open valleys and associated flats; the hills have large areas of shallow soils and rock outcrops while the valleys and flats are mostly red-brown earth, sandy and loamy mallee soils with some heavy brown soils. The lightly undulating plains in the eastern section are mainly mallee soils.

The hill or range country was originally open grassland with savannah woodland in the wetter areas. The coastal plains were covered with mallee eucalypt, native shrubs and grasses while the eastern plains carried some low mallee scrub.

Lower North Division produces 20 to 25% of the grain grown in the State. The range country is largely unimproved and is used for grazing sheep on natural grasses. Most of the studs which produce the South Australian type Merino sheep are located in this area.

Upper North Division

The whole of the division containing 9 million acres in rural holdings is dominated by the Flinders Ranges, grading from precipitous slopes with little if any topsoil in the north, to hill country in the south. This hill country changes through undulating country to the semi-arid plateau of the interior.

Because the rainfall is low and the evaporation rate high most of the area which is not precipitous is used for grazing and cannot be used for agriculture. Only in parts of the south-western quarter is the rainfall sufficient for the growing of wheat.

South Eastern Division

With over 5 million acres devoted to rural production this is the second smallest division. The area is characterized by many ranges of low hills or dunes, lying parallel to the coast, but merging into the east-west pattern of the dunes further north. Deep sands are often associated with these hills which usually have a limestone base or core. Large areas of copper-deficient and zinc-deficient soils have been made productive by the use of these trace elements in

plant fertilizers. This previously unproductive land is now carrying large numbers of livestock and producing excellent crops. In the southern half of the division, considerable areas of dark soils occupy the plains between the ranges and because the ranges are parallel to the coast with virtually no natural drainage, these areas usually have a high water table. This combination led to considerable submerging of the land in winter and extensive artificial drainage has been needed to control the level of the water table to permit cropping and the cultivation of pastures. Near the coastline extensive sand dune formations of low fertility render large tracts of land completely unproductive.

The natural vegetation of the northern regions is mainly mallee eucalypt with yacca, broombush and banksia. The higher rainfall areas to the south produce red, blue and swamp gums with native grasses, while white tussock and wallaby grass occur in some areas.

The country is mainly devoted to grazing, nearly 40% of the improved pasture in the State being in the division. Sheep grazing is fairly general throughout, while beef cattle and dairy cattle are concentrated mainly in the southern portion. The area under crop is only about 5% of the total area cropped in the State.

Western Division

This is by far the largest division with over 18 million acres devoted to rural production. A large part has mallee type soils mixed with small areas of heavier loams. There is a dune system along large tracts of the western coastline grading to limestone inland of the dunes. In the southern extremity of Eyre Peninsula are large areas of sandhills. In the south-eastern section there are considerable areas of red-brown soils, with in many cases ironstone gravel in the topsoil. The north-eastern section of the division is mainly desert relieved only by the Middleback Ranges consisting for the most part of hard sandstone.

The natural vegetation is predominantly mallee eucalypt and sheoak with scattered sugar gums and native pines on the hills. Broombush is found in places on mallee soils. Speargrass and spinifex grow on the coastal sand dunes and the arid north-eastern desert carries scattered mulga with saltbush and bluebush.

Although yields are moderate, the large area under cultivation produced 32% of the State's total harvest of cereals for the 1965-66 season, with wheat being the main crop. The major pastoral activity is sheep grazing.

Murray Mallee Division

This division has 8 million acres used for rural production. A large part of the area is undulating, with sandy rises and firmer sandy or sand-loam flats. The rises run roughly east-west following the direction of the prevailing winds. Near the River Murray there are shallow brown soils over limestone while in the southern parts the soils are mainly mallee types. The natural vegetation is predominantly mallee eucalypt with scattered patches of native pines and sheoaks.

The main crops are wheat and barley with small areas of oats grown for forage and cereal rye for soil stabilization. Because the growing season is short and rainfall light and erratic, most of the area cropped in the northern regions is wheat, with most of the barley being grown in the southern section. Irrigation areas are scattered along the River Murray, in many cases extending no further than two or three miles from the river. About one half of the area of orchards and vineyards in the State is concentrated in these irrigated areas.

The division carries about 10% of the sheep and dairy cattle, the sheep being grazed throughout the area and the dairy cattle being concentrated along the flood flats of the Lower Murray.

Outside of Counties

The whole area is fairly flat with low mountains or mountain ranges intruding in three or four places. The soils are varied in character, sometimes capable of growing vegetation but unproductive in the absence of adequate rainfall. In this region are found the thin red soils of the Nullarbor Plains, the desert sand hills, the gibber deserts, the sand plains and the spinifex areas.

Approximately 75% of the area of the State is "Outside of Counties" and no part of this area receives an average annual rainfall of more than 8 inches. Not only is the rainfall low but it is quite irregular and large areas receive no useful falls for very long periods. High daytime temperatures experienced over a large part of the year cause rapid surface evaporation.

The native vegetation consists of those species which have become adapted to the climatic conditions of the region. The trees are scattered mulga with some native pines on the hills and areas of saltbush and bluebush. The few annual plants which are found have very rapid life cycles, being quick flowering and producing large quantities of seed. Large areas of the north-west and north-east are almost devoid of vegetation, being merely sand or gibber deserts.

The region cannot support any agriculture but an area of more than 100 million acres is leased for pastoral purposes and carries about 100,000 beef cattle and 1 million sheep.

RURAL POPULATION

The number of persons of all ages residing permanently on rural holdings in South Australia in March during the past ten years is shown in the following table. These figures include those temporarily absent at the time, but exclude visitors, etc. Rural population has increased by only 2% during the ten year period, while the State population has risen by almost 25%.

Persons Permanently Resident on Rural Holdings, South Australia

At 31st March

Year	Males	Females	Persons	Year	Males	Females	Persons
1957....	57,029	49,878	106,907	1962	59,441	52,243	111,684
1958....	58,061	50,901	108,962	1963	58,668	51,825	110,493
1959....	57,989	51,087	109,076	1964	58,510	51,854	110,364
1960....	58,889	52,320	111,209	1965	58,016	51,361	109,377
1961....	59,098	52,245	111,343	1966	57,932	51,298	109,230

RURAL EMPLOYMENT

In the following table particulars are given of permanent and temporary rural employment and salaries and wages paid during the last 5 years. It should be noted that information for females permanently engaged is not entirely

satisfactory because of the difficulty of distinguishing between domestic duties and rural activities. (Females engaged mainly in domestic duties are excluded from the table.)

Rural Employment and Wages, South Australia

At 31st March	Permanent Workers				Temporary Workers	Salaries and Wages (a)	
	Owners, Lessees, Etc.	Relatives (Not Paid Wages)	Employees	Total		To Permanent Workers	To Temporary Workers
						\$'000	\$'000
				MALES			
1962.....	24,061	1,734	7,947	33,742	15,140	11,726	8,372
1963.....	23,748	1,696	7,890	33,334	14,106	12,108	8,732
1964.....	23,553	1,396	8,268	33,217	12,496	12,836	9,066
1965.....	23,136	1,207	8,247	32,590	10,984	13,491	9,952
1966.....	23,035	912	8,172	32,119	10,585	14,064	10,407
				FEMALES			
1962.....	1,122	462	499	2,083	4,661	458	801
1963.....	1,018	413	460	1,891	4,715	459	835
1964.....	717	204	501	1,422	5,339	503	952
1965.....	714	162	456	1,332	5,310	485	1,157
1966.....	525	69	393	987	5,178	439	1,066

(a) During year ended 31st March.

FARM MACHINERY

Particulars of farm machinery on rural holdings in South Australia for each of the last six years, and in each statistical division at 31st March 1966 are given in the next two tables.

Farm Machinery on Rural Holdings, South Australia

At 31st March

Type of Machine	1961	1962	1963	1964	1965	1966
Shearing machines—						
Machines	14,317	14,532	14,595	14,885	15,172	15,386
Stands	26,568	27,278	27,528	28,149	28,844	29,291
Milking machines—						
Machines	7,589	7,707	7,553	7,438	7,328	7,040
Units	18,235	18,831	18,836	19,057	19,135	18,833
Rotary hoes and rotary tillers	4,620	4,873	4,989	5,260	5,670	5,883
Tractors—						
Wheeled	27,269	28,289	28,497	29,841	30,772	30,984
Crawler	3,405	3,499	3,174	3,390	3,392	3,014
Grain drills—						
Combine	14,893	15,221	15,251	15,284	15,617	15,589
Other	4,867	4,865	5,065	5,074	5,168	5,201
Fertilizer distributors	8,000	8,271	8,213	8,413	8,743	8,893
Harvesters, headers and strippers	12,799	12,831	12,677	12,652	12,659	12,393
Forage harvesters	(a)	525	645	660	701	764
Pick-up balers	3,422	3,534	3,791	4,149	4,270	4,609

(a) Not collected.

Farm Machinery on Rural Holdings, Statistical Divisions, South Australia
March 1966

Type of Machine	Statistical Division						Total
	Central	Lower North	Upper North	South Eastern	Western (a)	Murray Mallee	
Shearing machines—							
Machines	4,539	2,518	972	3,001	2,514	1,842	15,386
Stands	7,687	4,780	2,025	6,001	5,444	3,354	29,291
Milking machines—							
Machines	3,608	866	212	1,434	342	578	7,040
Units	9,986	1,697	384	4,661	539	1,566	18,833
Rotary hoes and rotary tillers	2,966	677	221	583	458	978	5,883
Tractors—							
Wheeled	10,875	4,073	1,178	4,371	4,457	6,030	30,984
Crawler	1,072	225	126	512	730	349	3,014
Grain drills—							
Combine	4,727	3,049	841	1,570	2,942	2,460	15,589
Other	1,420	529	111	830	1,290	1,021	5,201
Fertilizer distributors	3,829	680	125	2,119	954	1,186	8,893
Harvesters, headers and strippers	3,669	2,416	614	1,045	2,584	2,065	12,393
Forage harvesters	272	82	20	178	94	118	764
Pick-up balers	1,741	848	202	1,008	357	453	4,609

(a) Includes Outside of Counties.

AGRICULTURE

Most of the land area of South Australia is arid or semi-arid and cannot be used for agricultural production. This severe natural limitation means that even with modern farming methods only 12 million of more than 150 million acres in rural holdings are devoted to cropping or permanent improved pasture. The area under crop in recent years has been between 5 and 6 million acres. Most of this area is planted to cereals for the production of grain, hay and forage. About 100,000 acres are used for the production of fruit and vegetables.

The numbers of holdings growing 20 or more acres of the principal cereals and 1 acre or more of the principal fruits and vegetables are shown in the following table.

Rural Holdings Growing Principal Crops, South Australia

Holdings (a)	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	Number					
With 20 acres or more of—						
Wheat	8,913	9,434	9,881	9,902	9,657	9,387
Barley	8,912	7,920	7,146	7,196	6,890	6,688
Oats	6,200	4,174	4,967	5,704	5,034	4,879
With 1 acre or more of—						
Grapes	2,939	2,990	3,056	3,054	3,091	3,082
Citrus fruits	1,472	1,566	1,653	1,686	1,704	1,707
Other orchard fruits	3,300	3,344	3,288	3,280	3,302	3,298
Potatoes	745	746	850	692	614	670

(a) Holdings growing more than one of the crops shown are counted for each crop.

The cereals wheat, barley and oats sown for grain account for about 80% of the total area cropped in South Australia. Hay and green forage of all kinds exceed 14% and the remainder of the area is devoted mainly to orchards, vineyards and vegetable production. Climatic conditions, particularly the relatively low winter rainfall and the dry hot summer, favour cereal growing; one advantage

being the low incidence of stem rust, a serious disease in the moister areas of the Australian wheat belt.

The area sown to the more important crops during the last five seasons is given in the following table.

Area Sown to Principal Crops, South Australia

Crop	1961-62	1962-63	1963-64	1964-65	1965-66
	'000 Acres				
Grain—					
Wheat	2,229.2	2,595.1	2,802.2	2,726.8	2,744.9
Barley	1,270.9	1,052.9	1,123.1	1,094.7	1,098.1
Oats	323.7	415.6	500.6	443.8	454.6
Rye	32.3	29.3	31.3	43.9	36.4
Hay—					
Oaten	82.7	116.3	140.7	110.1	111.8
Other	125.9	171.1	216.9	204.2	186.8
Green forage	272.7	367.4	378.1	462.5	474.0
Vegetables—					
Potatoes	5.3	5.9	5.5	5.3	5.8
Tomatoes	1.4	1.3	1.2	1.0	1.1
Other	10.0	9.9	9.8	9.3	9.7
Fruit—					
Grapes	57.8	58.3	58.7	58.9	58.7
Oranges	13.1	15.3	16.5	17.4	18.3
Apples	5.7	5.9	5.9	6.0	5.9
Apricots	4.5	4.5	4.5	4.7	4.8
Other	15.2	14.7	14.8	14.9	14.9
Other crops	58.2	68.5	70.0	87.0	67.4
Total area under crop ..	4,508.6	4,932.0	5,379.8	5,290.5	5,293.2

Cereal growing played a significant part in the early development of South Australia. The success of the first crops on the Adelaide plains led to a strong demand for suitable wheat land, but expansion of the cereal industry was halted shortly before 1880 when the downward trend of the average yields brought the realization that the exploitation of the soil had seriously reduced the level of fertility.

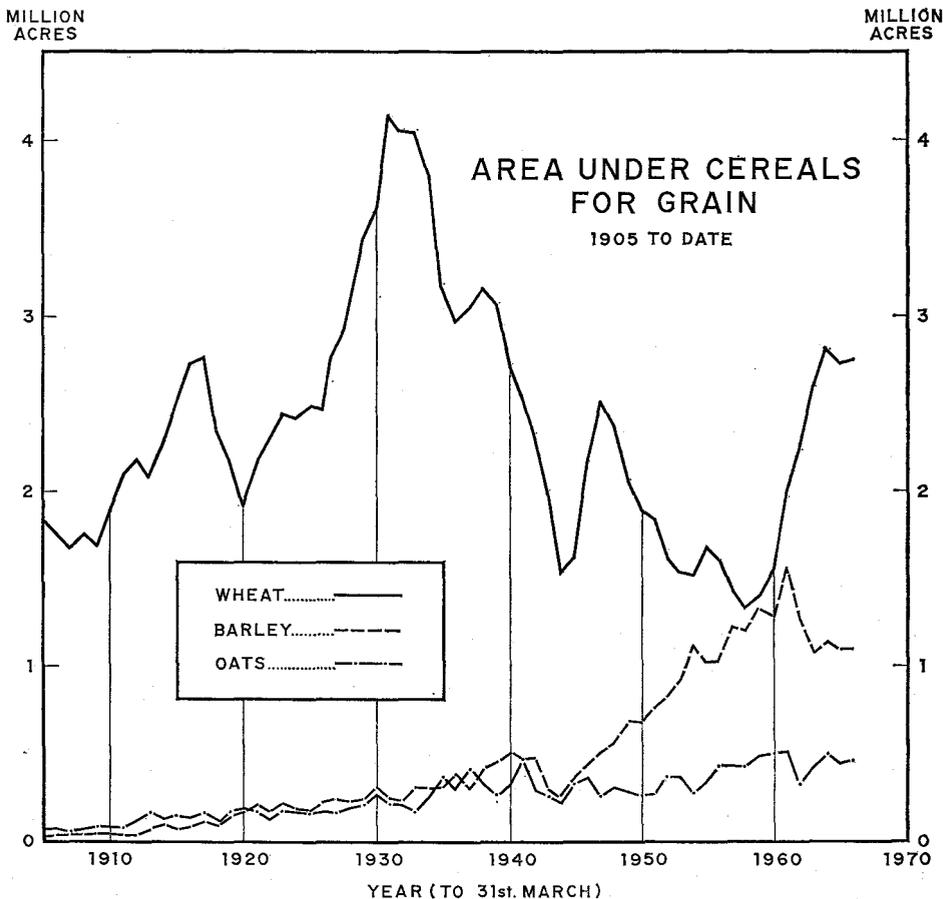
Experiments revealed the deficiency of phosphates in South Australian soils and showed that the application of superphosphate, linked with rotation farming, would revive them. The widespread adoption of this practice at the turn of the century resulted in higher yields and a further expansion of the cereal areas. The fallowing technique was also being used to boost yields but its use failed to replace organic matter consumed causing the deterioration of the soil structure. Furthermore farmers were over-tilling and towards the 1930's wind and water so severely eroded the unprotected soil surface that thousands of acres were laid waste. To overcome the erosion problem, soil conservation services were established. The value of contour cultivating and pasture establishment was demonstrated and subsequently adopted by landholders with considerable success. Also demonstrated was the method of stabilizing sandhill drifts by sowing them to cereal rye.

With soil erosion arrested, attention was focused on finding ways of maintaining the natural physical structure of the soil. Research revealed nitrogen as the key factor directly related to soil fertility and this led to the introduction of nitrogen-building legume pastures. Another advance made at this time was the discovery

of trace element deficiencies in certain areas, particularly the manganese deficiency in the soils of Yorke Peninsula and the molybdenum, copper and zinc deficiencies in other parts of the State.

The adoption in recent years of more suitable cropping programmes with the resulting increased yield and profitable association with woolgrowing has firmly established the cereal industry.

The extent of fluctuations since 1905 in the area under the three main cereal crops is illustrated by the following graph.



IRRIGATED CULTURE

The most important irrigation areas are those located in the Murray Valley. A description of the development and types of irrigation schemes along the River Murray is given in Part 8.2. pages 277-278.

The remainder of the areas under irrigation are located mainly in the Central and South Eastern Divisions where irrigation is applied predominantly to vegetables, hay and green forage crops and to pastures.

The main crops are grapes, citrus fruit and stone fruit in the Upper Murray, and green forage and pastures in the reclaimed swamp areas of the Lower Murray. Details for individual areas in 1964-65 are given below.

**River Murray Irrigation Areas^(a): Area and Production of Principal Crops
1964-65**

Name of Area	Area				Production				
	Green Forage and Pasture (b)	Vines		Orchards	Vines			Oranges	Peaches
		For Drying	For Wine		Total Grapes Produced	Grapes Used for Wine	Currants, Sultanas and Raisins Made		
	Acres	Acres	Acres	Acres	Tons	Tons	Tons	'000 Bushels	'000 Bushels
Upper Murray—									
Berri	140	2,569	2,283	3,708	32,854	16,712	4,545	469.7	134.1
Cadell	22	401	131	379	2,325	666	475	36.8	6.8
Cobdogla	45	395	756	104	8,716	6,175	720	9.2	3.0
Cooltong	103	121	297	937	3,372	2,531	240	183.0	28.3
Holder	2	51	223	554	1,738	1,367	96	69.0	12.3
Loveday	238	877	1,148	461	14,979	9,129	1,616	35.8	5.2
Loxton	171	1,637	1,904	3,479	27,955	16,661	3,154	830.7	108.4
Moorook	141	158	207	719	2,353	1,410	269	91.3	22.4
Nookamka	16	916	927	312	13,576	7,563	1,691	27.9	2.9
Ral Ral	221	555	234	290	4,229	1,373	813	1.9	13.9
Renmark	715	3,550	1,876	3,479	28,628	10,247	5,244	325.0	250.8
Sunlands	—	—	93	1,579	201	201	—	—	4.2
Waikerie	18	288	1,221	2,817	11,382	9,764	442	434.9	113.7
Other	326	607	303	1,874	5,045	1,769	933	162.3	213.0
Total	2,158	12,125	11,603	20,692	157,353	85,568	20,238	2,677.5	919.0
Lower Murray—									
Cowirra	996	—	—	—	—	—	—	—	—
Jervois	5,517	—	—	3	—	—	—	0.3	—
Monteith	1,123	—	—	1	—	—	—	0.1	—
Mypolonga	1,328	—	6	1,005	44	43	—	272.7	23.0
Neeta	673	—	—	—	—	—	—	—	—
Pompoota	674	—	—	—	—	—	—	—	—
Other	1,569	—	—	21	—	—	—	0.9	0.2
Total	11,880	—	6	1,030	44	43	—	274.0	23.2

(a) Excludes areas and yields of crops grown by irrigation on the River Murray and elsewhere not in the above irrigation areas.

(b) Total within irrigated areas, including non-irrigated forage and pastures.

The following table shows the approximate area of all irrigated culture in South Australia for the seasons 1961-62 to 1965-66. Of the areas shown below, about 70% of orchards, over 80% of vineyards and about 30% of green forage and pastures are in the River Murray Irrigation Areas listed in the previous table.

Area Under Irrigated Culture^(a), South Australia

Season	Orchards	Vineyards	Vegetables	Green Forage	Other Crops	Pasture	Total
				Acres			
1961-62	25,236	27,167	11,312	3,753	9,590	31,342	108,400
1962-63	26,876	27,384	11,548	3,804	10,591	32,610	112,813
1963-64	28,787	27,954	10,541	4,451	12,315	33,822	117,870
1964-65	30,094	28,286	9,917	4,303	14,575	35,964	123,139
1965-66	31,089	28,850	10,665	3,642	12,995	41,594	128,835

(a) Approximations only.

FERTILIZERS

Nearly all soils in the agricultural areas of South Australia are deficient in phosphoric acid, and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements, manganese, copper, zinc and molybdenum are added to the superphosphate to rectify the chronic shortage of these elements.

A summary of the area of crops and pastures treated and the quantities of fertilizer used in 1965 is shown in the following table.

Principal Crops and Pasture Fertilized, South Australia 1965

Type of Crop	Area Fertilized	Fertilizer Used					Per Acre
		Superphosphate		Other	Total		
		Without Trace Elements	With Trace Elements				
	'000 Acres	Tons	Tons	Tons	Tons	Cwt	
Wheat	2,742	134,231	5,744	1,058	141,033	1.03	
Barley, oats and rye	1,940	89,895	6,926	660	97,481	1.00	
Vegetables	13	1,562	2,048	4,123	7,733	11.67	
Fruit trees and vines	59	2,652	1,971	6,694	11,317	3.82	
Other and unspecified crops .	115	6,544	728	296	7,568	1.31	
Total crops....	4,869	234,884	17,417	12,831	265,132	1.09	
Pasture	5,093	253,317	42,113	1,400	296,830	1.17	
Total	9,962	488,201	59,530	14,231	561,962	1.13	

The following tables show the area of crops and pastures treated and the quantity of fertilizer used in each division in 1965, and in the State for the years 1956 to 1965.

Use of Artificial Fertilizers, Statistical Divisions, South Australia 1965

Statistical Division	Fertilizer Used						
	To Manure Crops				To Top-dress Pastures		
	Area Fertilized	Proportion of Total Area Cropped	Fertilizer Used	Fertilizer Used per Acre	Area Fertilized	Fertilizer Used	Fertilizer Used per Acre
	'000 Acres	Per Cent	Tons	Cwt	'000 Acres	Tons	Cwt
Central	977	89.99	62,401	1.28	1,202	72,816	1.21
Lower North	947	93.19	45,798	0.97	256	11,895	0.93
Upper North	213	93.15	8,601	0.81	29	1,411	0.98
South Eastern	199	80.56	11,989	1.20	2,603	159,376	1.23
Western (a)	1,581	93.25	83,920	1.06	534	26,998	1.01
Murray Mallee	952	93.34	52,423	1.10	469	24,334	1.04
Total	4,869	91.99	265,132	1.09	5,093	296,830	1.17

(a) Includes small quantities Outside of Counties.

Use of Artificial Fertilizers, South Australia

Year	Fertilizer Used						
	To Manure Crops				To Top-dress Pastures		
	Area Fertilized	Proportion of Total Area Cropped	Fertilizer Used	Fertilizer Used per Acre	Area Fertilized	Fertilizer Used	Fertilizer Used per Acre
	'000 Acres	Per Cent	Tons	Cwt	'000 Acres	Tons	Cwt
1956	3,400	85.44	175,350	1.03	3,677	214,601	1.17
1957	3,463	88.63	182,248	1.05	4,005	236,291	1.18
1958	3,692	89.03	192,168	1.04	3,716	218,728	1.18
1959	3,679	90.64	188,733	1.03	3,471	202,895	1.17
1960	4,326	87.11	209,387	0.97	3,300	189,704	1.15
1961	4,063	90.11	206,047	1.01	3,583	198,186	1.11
1962	4,415	89.52	221,011	1.00	3,750	209,551	1.12
1963	4,788	89.01	238,905	1.00	3,993	226,678	1.14
1964	4,775	90.25	254,268	1.07	4,714	274,558	1.16
1965	4,869	91.99	265,132	1.09	5,093	296,830	1.17

PLANTING AND HARVESTING OF CROPS

The main crops of South Australia are normally planted and harvested during periods as listed below.

Usual Months of Planting and Harvesting, South Australia

Crop	Planting	Harvesting
Cereals—		
Wheat	April-June	November-January
Barley	May-July	November-January
Oats	April-June	November-January
Fruit—		
Grapes .....	..	February-May
Citrus .....	..	May-February
Apples .....	..	January-April
Apricots .....	..	December-January
Peaches .....	..	December-March
Pears .....	..	January-April
Vegetables—		
Potatoes	July-January	November-June
Tomatoes—		
Field	September-February	January-June
Glasshouse	March-June	July-January

WHEAT

Wheat has always been a crop of major importance to the economy of South Australia although in recent years this importance has declined in relation to both the value of agricultural and pastoral production and the value of total State production. For the five-year period 1909-10 to 1913-14 wheat averaged 38% of agricultural and pastoral production and 23% of total State production while for the period 1960-61 to 1964-65 the percentages were 24 and 9 respectively. The increase in woolgrowing in the first instance and the rapid industrialization of the State in the second have been the significant factors in this decline.

The expansion of the wheat industry in the first 50 years of the colony was made possible by the development of the stripper, a machine which considerably reduced the labour and costs of harvesting. For a period South Australia was the largest wheat producing State, but it now ranks fourth in order of importance, and for the 10 harvests ending 1964-65 averaged 15% of Australian wheat production.

The first stage of the development of the wheat industry saw a rapid expansion of the wheat area until 1,970,000 acres were sown in 1886-87, yielding for the first time a 10 million bushel harvest. Smaller acreages were then sown until in 1909-10 a second great surge of development began, culminating in the highest recorded area of 4,180,513 acres in 1930-31.

A complete reversal in the acreage trend occurred after 1932-33 due to the impact on the industry of the economic crisis of the 1930's following immediately in the wake of four severe droughts during 1926-29. About this time it was realised that wheat farming had been extended into areas where the inadequate rainfall and unsuitable land made wheatgrowing uneconomic and a number of these properties on "marginal" lands were abandoned. In 1940 the Marginal Lands Act gave authority for properties to be purchased by the Government and leased to settlers to enlarge their holdings. Grants were made to assist these settlers in making grazing rather than wheatgrowing their major enterprise. Most of the properties were repurchased in the period 1940-47.

A swing towards barley-growing at the same time exerted a further depressing effect on the area sown to wheat. This trend continued until 1958-59 when the area sown to barley almost equalled the area sown to wheat. However, recently the wheat acreage has increased greatly, to more than double that of barley.

In the past 20 years a feature of the industry has been a steady improvement in average yields, due mainly to improved farming practices including the adoption of nitrogen-building clovers in the rotation. The average yield per acre for the 10 seasons ended 1964-65 was 17.53 bushels, a record of 23.56 bushels being attained in 1960-61.

Wheatgrowing Districts

Wheatgrowing in South Australia is virtually restricted to the belt between the 8 inch and 18 inch rainfall isohyets for the period April-November inclusive. The principal wheat producing districts are Eyre Peninsula, the Central and Lower North regions and the Murray Mallee. These districts accounted for over 90% of the area sown in 1965-66.

Wheat Sown for Grain: Area and Yield, Statistical Divisions, South Australia

Season	Statistical Division						Total
	Central	Lower North	Upper North	South Eastern	Western (a)	Murray Mallee	
	AREA ('000 Acres)						
1956-57 ..	232	363	94	19	487	243	1,438
1957-58 ..	202	352	91	16	461	209	1,331
1958-59 ..	220	367	90	21	501	208	1,407
1959-60 ..	230	421	111	29	572	187	1,550
1960-61 ..	310	502	130	38	680	309	1,969
1961-62 ..	346	540	138	59	764	382	2,229
1962-63 ..	399	602	170	70	910	444	2,595
1963-64 ..	417	637	180	66	1,002	500	2,802
1964-65 ..	413	611	167	60	1,037	439	2,727
1965-66 ..	398	601	168	55	1,069	454	2,745
	YIELD ('000 Bushels)						
1956-57 ..	5,919	10,583	2,498	318	8,298	3,816	31,432
1957-58 ..	2,957	5,781	948	329	3,692	1,207	14,914
1958-59 ..	5,490	9,766	2,136	615	11,215	2,810	32,032
1959-60 ..	2,621	3,861	947	440	2,937	1,123	11,929
1960-61 ..	7,854	14,470	3,464	927	14,806	4,875	46,396
1961-62 ..	6,741	11,274	1,737	1,199	8,421	4,482	33,854
1962-63 ..	7,156	10,876	2,106	1,699	11,951	4,551	38,339
1963-64 ..	9,198	15,687	3,832	1,322	17,235	6,697	53,971
1964-65 ..	9,459	14,712	3,377	1,210	17,823	6,236	52,817
1965-66 ..	6,663	10,418	2,111	1,224	15,031	4,529	39,976

(a) Includes small plantings Outside of Counties.

Varieties of Wheat

The early wheatgrowers recognized the need to develop varieties of wheat suitable for South Australia's dry conditions and began by experimenting with varieties obtained from countries with a similar climate. One of these was the variety of Du Toit which was introduced from South Africa and because of its early maturity and moderate resistance to stem rust became very popular. This variety was destined to feature in the pedigree of many prominent wheat varieties of the future.

Although stem rust, which can be a serious problem in other States, is rarely troublesome in South Australia, breeders have still considered rust resistance as

important as other objectives such as yield, baking quality and resistance to other diseases.

Of the varieties sown in the 1965-66 season Insignia, Heron, Gabo, Sabre and Dirk were the five most important. Insignia, the leading variety, accounted for 37% of the total area sown, its main attributes being that it is early maturing, has a short strong straw and is easily threshed at harvest without showing any tendency for the grain to crack. Next in order of importance were Heron (18%) and Gabo (14%), both having very similar features to Insignia.

The similar climatic requirements of the three leading varieties reflect the suitability of this type of wheat for South Australia. The sharp cut-off of spring rains, the short growing season and strong winds have demanded their particular characteristics. The leading varieties of wheat sown for all purposes for the years 1963-64 to 1965-66 are shown in the following table.

Principal Varieties of Wheat Sown, South Australia

Variety	Area			Proportion of Total Area		
	1963-64	1964-65	1965-66	1963-64	1964-65	1965-66
	'000 Acres			Per Cent		
Claymore	94	61	48	3.3	2.2	1.7
Dirk	282	246	208	9.9	8.9	7.5
Gabo	536	447	381	18.8	16.1	13.6
Heron	143	322	489	5.0	11.6	17.5
Insignia	1,092	1,104	1,045	38.3	39.8	37.4
Pinnacle	73	64	60	2.6	2.3	2.1
Sabre	338	262	222	11.9	9.5	7.9
Wongoondy	61	50	40	2.1	1.8	1.4
Other	230	216	305	8.1	7.8	10.9
Total area...	2,849	2,772	2,798	100.0	100.0	100.0

Research

Under the *Wheat Tax Act* 1965 a tax of a quarter of a cent per bushel is levied on all wheat delivered to the Australian Wheat Board. The proceeds are then credited to the Wheat Research Trust Account for use by the respective State Wheat Industry Research Committees.

Each committee allocates the amounts available for research and reports the expenditure approved to the Wheat Industry Research Council. The Commonwealth Government also makes contributions for wheat research, up to an amount equal to the wheat tax levied from the growers. The Wheat Industry Research Council recommends the avenue of research on which this grant should be spent.

Wheat research in South Australia is directed mainly at producing better wheat varieties and improving soil structure.

Roseworthy Agricultural College is engaged in a continuing wheat breeding programme designed to produce new varieties with improved yield, quality and disease resistance. To extend this programme and to assist with varietal recommendations the Department of Agriculture conducts wheat variety trials at various centres, and a wheat quality survey to define areas from which wheat of a certain minimum protein content can be expected.

Scientists at the Waite Agricultural Research Institute are studying organic matter and soil structure in relation to fertility in wheat soils and also the effects of high nitrogen levels on wheat varieties and the subsequent effect of increased growth on the use of soil moisture. Assistance in soil study is being

given by the Department of Agriculture, which is investigating the effects of fallowing on soil moisture, soil nitrogen, grain yields and grain protein. In addition fertilizer trials are being conducted with the object of improving basic knowledge of fertilizers for wheat.

Continuing trials are being conducted to ascertain suitable medics, clovers and lucernes for the wheatgrowing areas.

Marketing

Australian Wheat Board

The Board consists of a chairman, a finance member, a person engaged in commerce with experience of the wheat trade, a representative of flour mill owners, a representative of employees and 10 representatives of wheatgrowers (two from each mainland State).

The Board has control over the receipt and disposal of all wheat and wheat products. It also controls the handling, storage and shipment of wheat. Under the stabilization plan, the Board is the sole authority for marketing wheat within Australia and for marketing wheat and flour for export.

In its first full season, 1939-40, the Wheat Board received 195 million bushels. Over the past 6 seasons wheat receipts have increased markedly resulting in a record delivery in excess of 345 million bushels during 1964-65.

Deliveries to the Australian Wheat Board

Season	South Australia	Australia	Season	South Australia	Australia
	'000 Bushels			'000 Bushels	
1956-57	29,154	120,129	1961-62	30,738	224,290
1957-58	12,535	81,320	1962-63	35,121	285,722
1958-59	29,549	199,417	1963-64	51,660	307,834
1959-60	9,112	179,338	1964-65	49,991	346,508
1960-61	43,706	251,481	1965-66	36,160	234,373

During the year ended 30th November 1965 total exports of wheat (including wheat equivalent of flour and wheat products) were a record 270 million bushels. The value of the Wheat Board's sales on both the local and export market is shown below.

Australian Wheat Board Sales of Wheat and Wheat Flour

Crop Year	Sales		Value	
	Local	Export	Local	Export
	'000 Bushels		\$'000	
1955-56	56,923	122,867	75,944	158,270
1956-57	62,620	56,897	85,437	80,937
1957-58	54,626	26,444	77,312	36,669
1958-59	53,654	144,722	77,796	190,939
1959-60	59,338	118,674	87,986	156,989
1960-61	54,920	195,582	83,255	261,906
1961-62	52,371	171,412	82,486	244,990
1962-63	51,180	233,806	81,042	317,292
1963-64	56,612	250,281	82,282	357,660
1964-65	74,729	270,835	108,924	362,337

Bulk Handling

The South Australian Co-operative Bulk Handling Ltd which was incorporated on 7th December 1954 is the sole bulk grain handling authority in this State and is owned, financed and controlled by the growers. At 30th June 1966 the Co-operative had a storage capacity of 48.9 million bushels (of which 40.2 million bushels was available for wheat) with construction planned or under way for additional storage capacity of between 4 and 5 million bushels.

South Australia was the last of the major cereal-growing States to adopt bulk handling methods. However, the success of the first bulk installation at Ardrossan of 1 million bushels capacity, which began operating in 1952, paved the way for rapid development. The Co-operative purchased the Ardrossan silo from the Australian Wheat Board after a Bill had been passed on 7th July 1955 giving the Co-operative the exclusive right to handle bulk grain in South Australia.

Finance for the construction of storages came initially from a bank advance, and in addition growers who were members of the Co-operative were required to pay a toll of 1.7 cents for each bushel delivered to the silo in the first year. Thereafter the toll for members and non-members was 5 cents per bushel and 3.4 cents per bushel respectively. After 12 years of membership, members are gradually refunded all tolls paid. From time to time further bank advances have been obtained to accelerate the building programme to meet the increased demand for storage space.

The bulk handling operations of the State have been divided into six divisions—Ardrossan, Wallaroo, Thevenard, Port Lincoln, Port Pirie and Port Adelaide—each of which provides a terminal port as a shipping outlet for the country silos within the division. The bulk capacity of the respective divisions for each of the three major cereals is shown in the following table.

**Bulk Handling Capacity, South Australia
31st December 1966**

Division	Wheat	Barley	Oats
		'000 Bushels	
Port Adelaide	11,570	2,910	500
Ardrossan	2,935	1,180	—
Wallaroo	7,015	1,410	—
Port Pirie	5,952	110	—
Port Lincoln	9,045	2,015	150
Thevenard	3,685	—	400
Total	40,202	7,625	1,050

During the 1965-66 season the Co-operative received over 35 million bushels of bulk wheat representing 97% of total State deliveries, far less than the 46.3 million bushels (93% of total deliveries) of the 1964-65 season.

A certificate showing particulars of the wheat received from a grower is forwarded by the bulk handling authority to the Australian Wheat Board, which then makes payment to the grower.

Under the system of pooling wheat, fees for the handling of wheat by the Co-operative are paid by the Wheat Board.

Grading of Wheat

The grading of wheat for export is based on a fair average quality standard (f.a.q.). A separate standard is determined for each of the four main wheat

producing States by a committee of representatives of the Wheat Board, bulk handling authorities, State Departments of Agriculture, farmers, millers and shippers. Samples of wheat from the several wheatgrowing districts are mixed in the proportion grown in the districts and the f.a.q. weight is determined from the sample. These weights are used as a guide in determining standards of wheat delivered to the Wheat Board.

Since 1957-58 in South Australia, two standards have been fixed in each season except the 1960-61 season when three were fixed. Currently the two standards are known as F.A.Q. and Hard (called Semi-hard prior to December 1966), the latter being used for wheat of a better quality meeting two main requirements—that the type of wheat is one of a number of specified hard varieties and secondly, that it is of a uniform vitreous appearance of which not more than 10% is mottled or bleached. Because of hard wheat's better baking qualities, resulting in a keener overseas demand, growers of this grade receive a premium of up to 5 cents per bushel. Growers delivering inferior wheat (grain containing excessive foreign matter) or lightweight wheat receive reduced payments per bushel.

This method of setting f.a.q. standards for export marketing is peculiar to Australia, as other countries sell to fixed grades or according to sample. The standards adopted in each of the 10 seasons 1956-57 to 1965-66 are shown in the next table.

F.A.Q. Standards of Wheat, South Australia
(Weight in lb. of a bushel of wheat)

Season	F.A.Q.	Hard	Season	F.A.Q.	Hard
1956-57	65½	—	1961-62	63½	63
1957-58	65½	66	1962-63	62½	63½
1958-59	63¾	63½	1963-64	64½	64½
1959-60	63½	63	1964-65	62¾	63
1960-61 (a)	64½	64	1965-66	63	62½

(a) A third standard of Soft—64½ lb.—was fixed in 1960-61.

Wheat Stabilization Plan

Wheat grown in Australia is marketed under a government stabilization scheme which provides for the fixing of a home consumption price for each season, the pooling of the proceeds of local and overseas sales, the guarantee of a minimum price equal to the estimated cost of production and the operation of a stabilization fund into which are paid the proceeds of a tax on exports.

The first post-war Wheat Stabilization Plan operated between 1948 and 1953. Subsequent stabilization plans were introduced in 1954 (for seasons 1953-54 to 1957-58), 1958 (for seasons 1958-59 to 1962-63) and 1963 (for seasons 1963-64 to 1967-68).

Under the present plan the Commonwealth Government guaranteed to growers a return of \$1.44 per bushel in the first year of the plan, on up to 150 million bushels of wheat exported from the crop. The guaranteed return is based on production cost provided by an economic survey of the wheat industry carried out by the Bureau of Agricultural Economics and can be varied in each season of the plan in accordance with movements in an index of the cost of production. In arriving at the home consumption price a small amount is added to the guaranteed price to cover the cost of transporting wheat from the mainland States to Tasmania. For the season 1965-66 the home consumption price was \$1.53.

Exported wheat is subject to a tax which is equivalent to the excess of returns from export sales over the guaranteed return. The export tax, which is paid into the stabilization fund, is restricted to a maximum rate of 15 cents per bushel. In addition the balance in the stabilization fund may not exceed \$60 million, any surplus being returned to the growers.

The stabilization fund is used to make up deficiencies in respect to 150 million bushels from each crop where the average export realization falls below the guaranteed return. In the event of the fund being unable to meet the deficiency the Commonwealth Government is required to meet its obligations under the guarantee.

International Wheat Agreement

The fifth International Wheat Agreement came into effect on 1st August 1962 for a period of three years, but has been extended until 31st July 1967. Under this agreement the participating importing countries have undertaken to buy each year from the exporting countries a stated percentage of their total commercial import requirements. Previously, participating exporting countries competed to supply at prices within a prescribed range but under a provision of the latest agreement it is not necessary for a maximum price declaration to be made.

The main objectives of the agreement are—

- (i) to assure supplies of wheat and wheat-flour to importing countries and markets for wheat and wheat-flour to exporting countries at equitable and stable prices;
- (ii) to promote the expansion of the international trade in wheat and wheat-flour and to ensure as free a flow of this trade as possible in the interests of both exporting and importing countries;
- (iii) to overcome the serious hardships caused to producers and consumers by burdensome surpluses and critical shortages of wheat.

Prices

The table below shows the trend in export and domestic prices of Australian wheat for the years 1956-57 to 1965-66.

Export and Domestic Prices of Australian Wheat

Year	Export Price per Bushel (a)	Home Price per Bushel
	\$	\$
1956-57	1.35	1.38
1957-58	1.45	1.43
1958-59	1.38	1.47
1959-60	1.33	1.50
1960-61	1.35	1.53
1961-62	1.44	1.58
1962-63	1.44	1.59
1963-64	1.53	1.46
1964-65	1.43	1.47
1965-66	1.43	1.53

(a) Average of the twelve monthly prices, year ended July.

The export prices shown in the table are the basic selling prices for f.a.q. bulk wheat, f.o.b. The home prices are those set by the Wheat Board for bulk wheat (f.o.r.) sold to millers for gristing into flour for consumption in Australia. The

prices charged by the Board for wheat for stock feed in Australia are the same as those charged for wheat for human consumption. Before 1953-54 differential rates were charged in some years.

BARLEY

Production

South Australia is by far the most important barley producing State and in 1964-65 the acreage sown represented more than 50% of the Australian total and yielded 55% of the grain produced. Of the area sown in South Australia, 92.8% was two-row barley for grain, reflecting the suitability of certain areas of the State for the production of high quality malting barley. For malting purposes a plump mellow grain with fine skin coverings can only be obtained when the ripening period is somewhat prolonged by cool conditions, without much high temperature or drying winds.

Although formerly a crop of comparatively minor importance, barley growing increased greatly after the Second World War to the extent that a few years ago it seriously rivalled wheat as the major grain crop. For the three consecutive harvests, 1956-57 to 1958-59, there were more bushels of barley than bushels of wheat produced, but actual weight was less since a bushel of barley weighs only 50 lb. compared with 60 lb. for a bushel of wheat.

Area and Yield of Barley for Grain, Statistical Divisions, South Australia

Season	Statistical Division						Total
	Central	Lower North	Upper North	South Eastern	Western (a)	Murray Mallee	
	AREA ('000 Acres)						
1956-57 ..	381	254	26	23	245	293	1,222
1957-58 ..	376	252	24	23	252	285	1,212
1958-59 ..	412	268	28	28	282	314	1,332
1959-60 ..	410	250	25	38	262	305	1,290
1960-61 ..	466	292	32	51	322	393	1,556
1961-62 ..	407	221	17	37	266	323	1,271
1962-63 ..	357	171	14	25	213	273	1,053
1963-64 ..	368	186	13	26	222	308	1,123
1964-65 ..	364	173	11	27	210	310	1,095
1965-66 ..	365	173	11	24	205	320	1,098
	YIELD ('000 Bushels)						
1956-57 ..	13,143	8,965	762	464	4,612	6,057	34,003
1957-58 ..	7,146	3,698	219	579	3,006	2,904	17,552
1958-59 ..	12,929	8,685	843	761	7,634	6,813	37,665
1959-60 ..	4,575	1,849	186	512	2,168	2,567	11,857
1960-61 ..	14,216	9,621	859	881	8,542	8,114	42,233
1961-62 ..	7,177	4,154	206	668	3,916	5,172	21,293
1962-63 ..	6,682	2,827	153	708	3,600	4,035	18,005
1963-64 ..	9,698	4,984	266	493	4,333	4,562	24,336
1964-65 ..	11,326	4,647	229	623	4,562	5,545	26,932
1965-66 ..	7,081	2,847	106	501	3,838	4,141	18,514

(a) Includes small plantings Outside of Counties.

Unlike wheat, barley growing has nearly always been confined to very suitable districts resulting in high and remarkably stable yields. During the period 1901-02 to 1935-36 the highest yield was 20.00 bushels per acre and excepting for the severe drought of 1914-15 the lowest was 13.67 bushels per acre. The subsequent increase in barley growing in districts subject to greater climatic

variations, e.g. Murray Mallee and Eyre Peninsula, has been responsible for greater average yield fluctuations since 1936-37 but at the same time the average yield has increased, the record yield being 28.27 bushels per acre in 1958-59.

Yorke Peninsula, reputed to be the best barley growing area in Australia, has been the major producing district in South Australia since World War I. In the 1965-66 season this area contributed just over 37% of the total crop. It has an ideal climate for barley growing as the moisture-laden breezes off the gulfs on either side retard ripening.

More recently, barley growing has become prominent on the red mallee soils of the moister coastal regions of Eyre Peninsula and the lighter soils of the southern Murray Mallee region.

Varieties

The most widely grown barley variety is Prior, which for the three seasons ended 1965-66 averaged nearly two thirds of the total area sown. This variety, thought to be developed from English Archer malting barley, was first grown by Mr S. Prior of Brighton, South Australia. Prior is capable of producing grain of very high malting quality under favourable conditions but it suffers from two major deficiencies—it is susceptible to neck break and shattering if strong winds are experienced when the crop is nearly ripe and it is not well adapted to conditions of high soil fertility.

A variety, known as Noyep, is similar to Prior but is earlier maturing and is suitable to areas where a sudden cut-off in spring rainfall is experienced. These characteristics have resulted in a significant switch to this variety from 1% in 1961-62 to 19% of total area sown in 1965-66.

Other varieties of less importance are Maltworthy, which is more resistant to wind damage than Prior but of inferior commercial malting quality and Research, much later maturing than Prior, which is recommended only for the lower South East.

Research

Because of the inherent similarities, the barley industry has in many instances benefited from the technological advances achieved by the wheat industry, viz the use of superphosphate and the inclusion of pastures in rotation, but certain problems peculiar to barley have necessitated the undertaking of extensive research.

The deficiencies of the major variety Prior have been the subject of intensive investigation and research work by the Department of Agriculture. To overcome weaknesses in the straw of Prior which is responsible for the heavy loss of grain when crops are almost ripe, two methods known as windrowing and rolling have been devised. The aim of both methods is to lay the crop down out of the wind at a time when grain formation is completed, but before the straw is dry enough to be brittle.

Another problem causing concern is the unfavourable effect increased soil fertility is having on quality. This has been most noticeable on Yorke Peninsula where the increased use of clover pastures and heavier dressings of superphosphate have greatly increased soil fertility. Excess nitrogen induces rank growth which is detrimental to grain quality.

In experiments at Turretfield and Urania the effects of various fertility levels on different barley varieties are being observed to discover if any variety can approach the ideal of combining high yield with high quality on clover soils.

Marketing

The marketing of barley is under the control of the Australian Barley Board which operates in South Australia and Victoria and provides an orderly marketing system for barley grown in these States.

In the first season of South Australian and Victorian joint marketing in 1942-43 the Board received 3,810,000 bushels. Since then, barley receipts have increased considerably and in the 1960-61 season the Board received a record total of 44,624,000 bushels.

Australian Barley Board Receipts, South Australia

Season	Two-Row			Six-Row		Total
	Malting	Milling	Feed	Malting	Feed	
	'000 Bushels					
1957-58	1,846	5,781	5,959	6	72	13,664
1958-59	6,867	17,033	10,081	82	960	35,023
1959-60	2,563	1,940	3,233	1	59	7,796
1960-61	8,966	15,278	12,880	79	1,177	38,380
1961-62	996	4,162	11,860	4	204	17,226
1962-63	4,210	6,318	3,328	3	88	13,947
1963-64	5,621	8,036	6,343	12	348	20,360
1964-65	6,947	10,211	5,166	30	269	22,623

The Board has been able to dispose of each season's receipts with little difficulty. Major export markets are the United Kingdom, Europe and Japan.

Following recommendations submitted in a report by an investigating committee in October 1963 a bulk handling scheme for barley has been introduced. In 1963-64, the first year of its operation, bulk barley was received direct from growers at terminal ports in South Australia, a total of 1,172,113 bushels being handled and in 1964-65 2,368,222 bushels were handled. In 1964-65 bulk barley was received for the first time at other than terminal silos. Storage capacity at 30th June 1966 had increased to 6.8 million bushels.

For marketing purposes all barley is classified on sample before delivery. Classification is firstly by row variety and secondly by quality—Malting (No. 1 and No. 2), Milling (No. 3) and Feed (No. 4 and No. 5) for two-row and Malting and Feed (No. 4 and No. 5) for six-row.

The prices paid to growers in the 1964-65 season ranged from \$1.20 per bushel for two-row bagged barley of Malting No. 1 quality to 82.5 cents per bushel for six-row bagged barley of No. 5 (feed) quality. Growers who delivered barley in bulk received 7.08 cents less per bushel.

The payments to the growers are made in a series of four advances, the first of approximately 80 cents per bushel for first quality barley being made on delivery.

In 1957 agreement between brewers, maltsters and the Board was reached on a formula for fixing the price of malting barley. Prices of barley for distilling and pearling purposes are determined after the malting price has been fixed and prices for feed are determined monthly.

The home consumption prices determined by the Board for barley for season 1964-65 and preceding years are shown below.

Price per Bushel of Barley for Home Consumption

Season	Two-Row Malting (No. 1)	Distilling	Pearling	Two-Row Feed (No. 4)
	\$	\$	\$	\$
1957-58—Bagged	1.27	1.22	1.22	1.15
1958-59—Bagged	1.33	1.26	1.26	0.95
1959-60—Bagged	1.32	1.24	1.24	1.10
1960-61—Bagged	1.36	1.28	1.28	1.00
1961-62—Bagged	1.39	1.32	1.32	1.00
1962-63—Bagged	1.41	1.33	1.33	1.10
1963-64—Bagged	1.35	1.28	1.28	1.10
1964-65—Bagged	1.37	1.29	1.29	1.10
Bulk	1.28	1.21	1.21	1.03

OATS

The following table shows the area of oats sown for grain, for hay and for forage and the production of grain and hay in recent years.

Oats, South Australia

Season	Area Sown for			Total Area	Production	
	Grain	Hay	Forage		Grain	Hay
	'000 Acres				'000 Bushels	'000 Tons
1958-59	481	163	201	845	11,992	273
1959-60	505	118	190	813	2,504	75
1960-61	512	153	242	907	11,478	243
1961-62	323	83	224	630	4,391	102
1962-63	416	116	307	839	5,770	147
1963-64	500	141	315	956	9,149	185
1964-65	444	110	397	951	8,977	157
1965-66	455	112	404	971	5,622	118

The milling qualities of most oats grown in South Australia do not meet the requirements of overseas markets and only a small proportion of the harvest is exported; most of the crop is used as animal fodder. As is the case with barley, some of the area sown for grain and hay is grazed until June or July then closed to sheep to allow re-growth to a crop. Part of the area sown for forage is left to stand until it is used as dry grazing in autumn, when other fodder is not plentiful.

In 1965-66, 83% of the total area of oats was sown to three varieties—Avon 426,000 acres, Kent 194,000 acres and Kherson 191,000 acres.

RYE

Rye is one of the minor crops, but there has been development of its use to control sand drift and to help stabilize the light soils of the Murray Mallee in recent years. The sands are deficient in two main nutrients (nitrogen and phosphorus) and rye is sown, with a mixed superphosphate-ammonia fertilizer, early in the season. Its rapid early growth while the ground is still warm and before the strong winds of winter cause sandblast is at present the most effective form of control of drifting sand.

Rye provides early greenfeed and its use as such and the production of a few bushels of grain per acre on some farms are valuable adjuncts to the use for soil stabilization. Although most grain is used for stock feed, varying quantities are exported in different years for milling. Rye hay is poor quality material and only a few hundred tons are produced each year.

In 1965-66, 36,000 acres of rye for grain yielded 186,000 bushels. Record production was 446,000 bushels from 57,000 acres in 1958-59.

HAY

The quantity of hay produced varies considerably from year to year according to seasonal conditions and the need to replace stocks used during the previous season. The main crops cut for hay in recent years have been oats, clover and meadow hay which together account for considerably more than half of all hay produced. The quantity of lucerne hay produced has increased from a few thousand tons 20 years ago to 81,000 tons in 1964-65.

Hay: Area and Production, South Australia

Season	Oaten	Wheaten	Lucerne	Barley and Rye	Clover and Grass	Total
AREA ('000 Acres)						
1958-59	163	50	32	17	158	420
1959-60	118	52	21	18	36	245
1960-61	153	52	36	15	137	393
1961-62	83	34	24	9	59	209
1962-63	116	44	30	15	82	287
1963-64	141	41	38	15	123	358
1964-65	110	40	43	11	110	314
1965-66	112	46	38	15	88	299
PRODUCTION ('000 Tons)						
1958-59	273	85	53	24	236	671
1959-60	75	43	34	12	42	206
1960-61	243	88	62	22	201	616
1961-62	102	46	44	9	85	286
1962-63	147	55	55	16	134	407
1963-64	185	57	65	18	163	488
1964-65	157	60	81	13	176	487
1965-66	118	54	66	14	116	368

Between 50,000 and 100,000 tons of silage are produced each year and in certain areas this is an important supplementary stock food.

VEGETABLES

The market garden industry in South Australia is characterized by a large number of growers, most of whom cultivate a relatively small garden. Many of the gardens form part of a larger enterprise. A large part of the production of the industry comes from properties within easy reach of the Adelaide market.

Of the total area of approximately 17,000 acres devoted to market gardens, districts adjacent to Adelaide account for 11,000 acres producing all types of vegetables, including large quantities of celery and early tomatoes for export. An area of some 2,000 acres in Upper North Division (mainly on the coastal plains near Port Pirie) is devoted to the production of peas, early tomatoes and pumpkins for Adelaide and for export to the Melbourne market. Nearly 3,000 acres along the River Murray are devoted to production of peas, pumpkins and melons

for the Adelaide market, tomatoes for local markets and small areas of most other vegetables.

The following table shows the area and production of the principal vegetables for human consumption in South Australia in 1964-65 and 1965-66.

Vegetables for Human Consumption, South Australia

Vegetable	Area		Unit of Quantity	Production	
	1964-65	1965-66		1964-65	1965-66
	Acres	Acres			
Beans	275	219	bushel	56,765	52,010
Cabbages	330	365	dozen	155,473	164,405
Carrots	318	331	ton	4,464	4,453
Cauliflowers	498	549	dozen	197,246	211,396
Celery	289	289	crate	197,658	203,772
Lettuce	422	459	case	225,062	239,086
Melons	257	385	ton	1,310	2,096
Onions	1,146	1,148	ton	11,061	10,069
Peas	4,333	4,075	bushel	301,643	245,024
Potatoes	5,247	5,748	ton	48,400	56,471
Pumpkins	828	1,126	ton	5,081	6,425
Tomatoes	956	1,083	half-case	1,378,075	1,474,238
Turnips	197	240	ton	1,396	2,018
Other.....	501	549	..	..	..
Total	15,597	16,564	..	..	..

The bulk of the potato production comes from the central and southern Adelaide hills and from the Mount Gambier area. The average yield has risen progressively from 5½ tons per acre in 1947-48 to almost 10 tons per acre in recent years. This improvement is largely due to better quality seed, improved fertilizers and to advances in pest and disease control.

The South Australian Potato Board was constituted under authority of the Potato Marketing Act, 1948, to control the sale and delivery of potatoes by growers. It fixes the maximum and minimum prices and the conditions under which potatoes may be sold. Members of the Board are representatives of retail sellers, merchants and growers of potatoes.

Most green peas are grown in the Port Pirie-Mambray Creek area, in the hills to the south of Adelaide, and in the Upper Murray irrigation areas. The crop from the Port Pirie area has a ready market in Melbourne, the supplies being refrigerated and sent by express rail to prevent deterioration of quality.

Celery produced in South Australia meets a steady demand from interstate markets and production has been about 200,000 crates annually for the past few years. Nearly all of the celery is grown on the Adelaide plains adjacent to the city.

The Adelaide plains produce most of the South Australian tomatoes, which are nearly all grown in glass houses. Significant quantities, mostly for canning and juice production in local factories, are now grown in the Upper Murray irrigation areas. In recent years higher yields have resulted from the introduction of better varieties.

FRUIT

Orchard Fruit

A large variety of fruit crops is grown in South Australia. The main types of fruit are oranges, peaches and apricots (predominantly grown in the irrigation

settlements of the Upper Murray) and apples (nearly all grown in the Adelaide Hills). The following table relating to 1965-66 production shows the concentration of fruitgrowing in Central and Murray Mallee Divisions.

**Production of Principal Fruit Crops, Statistical Divisions, South Australia
1965-66**

Fruit	Statistical Division			Other Areas	State
	Central	Lower North	Murray Mallee		
	'000 Bushels				
Citrus fruit—					
Oranges—					
Navel	165.8	2.7	1,175.4	0.6	1,344.5
Other	64.1	1.1	1,272.3	0.3	1,337.8
Other citrus fruit	29.2	0.7	198.8	0.2	228.9
Non-citrus fruit—					
Apples	1,297.0	1.3	6.9	2.3	1,307.5
Apricots	182.2	4.2	635.5	4.8	826.7
Peaches	89.5	2.2	1,208.3	2.5	1,302.5
Pears	267.3	1.9	238.8	0.7	508.7
Plums	28.4	0.6	4.4	0.5	33.9
Prunes	44.5	12.5	4.6	0.4	62.0

Citrus growing is concentrated in the irrigation settlements of the Upper Murray where 90% of the total crop is produced. The industry has shown its greatest expansion in the last decade; production first reached 1,500,000 bushels in 1955-56 and 2,500,000 bushels in 1962-63 while by 1964-65 a record level of over 3,400,000 bushels was achieved. This increase is due largely to the extensive orange tree plantings in newly-developed irrigation schemes, including those of Sunlands and Golden Heights near Waikerie. Another factor has been a considerable change from furrow to overhead sprinkler irrigation for citrus trees planted since 1950. This change, coupled with advances in irrigation timing techniques, has raised the potential yield of recent plantings.

Over 20% of the State's orange production is exported, this being about 60% of total orange exports from Australia.

The following table of citrus trees of bearing age and production during the past 5 seasons shows the predominance of navel and valencia oranges in the State's citrus industry. Other types of oranges, lemons, limes and grapefruit, etc., together represent only about 10% of total citrus production.

Citrus Fruits: Trees and Production, South Australia

Season	Oranges				Lemons and Limes	Grapefruit and Other Citrus	Total Citrus
	Navel	Valencia	Mandarin	Other			
	TREES OF BEARING AGE ('000)						
1961-62	320	313	13	13	20	28	707
1962-63	330	338	16	12	19	28	743
1963-64	332	356	17	12	19	29	765
1964-65	348	387	21	10	19	28	813
1965-66	361	407	26	10	21	29	854
	PRODUCTION ('000 Bushels)						
1961-62	892	964	34	35	39	122	2,086
1962-63	1,269	1,201	57	38	48	163	2,776
1963-64	1,032	1,018	41	34	36	159	2,320
1964-65	1,428	1,726	62	34	42	145	3,437
1965-66	1,344	1,252	49	37	43	186	2,911

Apple growing is the principal non-citrus fruit industry. Although the area of apple orchards has decreased by some 50% over the last 40 years, production has gradually increased, partly because of the removal of lower yielding orchards and partly due to the general adoption of supplementary irrigation and lighter pruning practices. The yield per bearing acre, which averaged 197 bushels for the 10 seasons ended 1961-62, rose to 281 bushels in 1963-64 and to 337 bushels in 1964-65 but fell to 278 bushels in 1965-66. About 20 to 25% of the crop is exported each year either as fresh, pulped or preserved apples.

Pears are grown in the Adelaide Hills, in the Barossa Valley and on the Murray irrigation settlements. The yield from the 1964-65 harvest was a record 574,000 bushels from 1,664 acres. Pear acreage reached a peak in 1922, then declined gradually until 1952. An expansion of the canned fruit industry has caused a subsequent increase in plantings along the River Murray.

The stone fruits industry is becoming more important following development in the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 157,000 bushels from 2,064 acres was fairly typical for the crop until that time, but by 1965-66 the yield was a record 1,303,000 bushels from 4,776 acres. In the same period production of apricots has risen from 507,000 to 1,170,000 bushels in 1964-65. South Australia is the major apricot-producing State, with the greater part of the crop being dried and much of the remainder being canned.

Cherries, plums and prunes and almonds are the most important of the remaining crops.

Non-Citrus Orchard Fruit: Trees and Production, South Australia

Season	Apples	Pears	Peaches	Apricots	Plums	Prunes	Cherries
TREES OF BEARING AGE ('000)							
1961-62	546	165	348	364	35	71	52
1962-63	559	169	366	357	33	66	51
1963-64	544	172	367	361	32	63	49
1964-65	550	174	385	366	30	62	49
1965-66	536	173	395	365	28	57	50
PRODUCTION ('000 Bushels)							
1961-62	1,276	434	842	806	46	58	50
1962-63	1,496	412	841	868	38	64	35
1963-64	1,341	524	979	929	33	58	54
1964-65	1,625	574	1,173	1,170	38	72	42
1965-66	1,308	509	1,303	827	34	62	54

South Australia accounts for almost the entire Australian production of dried apricots, peaches, pears, nectarines and figs—mostly in the Upper Murray areas and the Barossa Valley. A relatively small quantity of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

Production in 1965-66 included 34,936 cwt of dried apricots, 13,635 cwt of dried peaches and 4,512 cwt of dried pears.

The Dried Fruits Board, constituted under the Dried Fruits Act, 1934-1941, regulates marketing in South Australia by determining a quota for home sale of dried fruits in each year. By advertising or other means, the Board may encourage the consumption of dried fruits.

Grapes

Approximately 42% of Australia's vineyard area is located in South Australia where the bulk of the grapes grown are used for winemaking. In 1965-66 South Australia produced 23.9 million gallons of wine and 15,100 tons of dried vine fruit representing 70% and 14% respectively of total Australian production.

The following table shows the area, production and utilization of grapes for the seasons 1956-57 to 1965-66.

Area, Production and Utilization of Grapes, South Australia

Season	Area of Vines	Total Grape Production (Fresh)	Wine Production (a)	Dried Fruit Production		
				Currants	Sultanas	Raisins
	Acres	Tons	'000 Gallons	Cwt	Cwt	Cwt
1956-57	57,409	177,406	24,038	78,820	181,900	12,420
1957-58	57,439	199,032	26,400	96,480	195,820	30,300
1958-59	56,749	194,351	25,132	90,620	221,400	25,060
1959-60	56,853	157,275	21,576	56,880	128,680	55,160
1960-61	56,897	178,290	25,061	90,860	115,900	19,120
1961-62	57,836	220,002	30,831	54,840	189,020	24,460
1962-63	58,266	164,808	20,785	52,140	187,420	32,720
1963-64	58,679	211,719	27,102	90,660	244,820	18,360
1964-65	58,857	234,297	28,022	100,875	264,054	62,440
1965-66	58,730	183,802	23,884	63,063	193,794	44,498

(a) Excludes grape spirit added.

Grapes are grown commercially in South Australia in non-irrigated areas of 19 to 26 inch rainfall, and in much drier areas (frequently with less than a 10 inch rainfall) where irrigation is available.

The expansion of grape growing in the foothills and plains near Adelaide was most pronounced between 1845 and 1860. Some vineyards still remain in the suburbs, but they are gradually disappearing. Main plantings are of wine grapes but some table grapes are also grown.

The Barossa Valley, some 40 miles north of Adelaide, is today the largest non-irrigated grape growing area in Australia. The valley was first occupied and planted to vines in the mid 19th century; the Orlando vineyards were commenced in 1847, Yalumba in 1849 and Seppeltsfield in 1851. Wine varieties predominate in this region although a few currants are grown for drying.

Extensive areas of vineyards are located in the southern districts lying 12 to 25 miles south of Adelaide. Nearness to the sea provides this area with a much more temperate climate than the Barossa Valley which is subject to frosts. The southern districts also are devoted mainly to grapes for winemaking with some currants for drying.

In 1888 the Chaffey brothers founded the irrigation settlements of Mildura (Victoria) and Renmark. After World War I returned soldiers were settled on these irrigated areas and this provided the South Australian vine industry with one of its most significant periods of expansion; the area under vines in the State rose from 31,000 acres in 1918-19 to over 50,000 acres in 1924-25. These settlements now are by far the most important grape growing areas in the State and in 1964-65 accounted for 41% of the area under vines and 67% of grapes produced. Because of the rather harsh climate, and the suitability of the area for production of dried vine fruit, little attention was paid in the early stages to growing grapes for wine. However, in about 1930 it was found that fortified wines and spirits could be produced and since then the area of wine varieties has increased to the extent that it now exceeds the area of drying varieties. The wine industry is now firmly based on irrigated production, and the trend is for a rising proportion of wines produced in these districts.

Other wine growing areas include Langhorne Creek, some 40 miles south-east of Adelaide, an area around Clare and Watervale in the Lower North and

Coonawarra in the South Eastern Division. Coonawarra has a cooler climate than other grape growing areas, resulting in a later vintage, and an underground water table near the surface provides a reserve of water through the summer months. Only wine grapes are grown and the area is renowned for its production of high quality dry red wines.

The following table gives particulars of area of vines and production of grapes in the main statistical divisions in 1965-66.

**Area and Production of Vines, Statistical Divisions, South Australia
1965-66**

Statistical Division	Area			Production of Fresh Grapes			
	Wine	Table	Drying	Wine	Table	Drying	Total
	Acres			Tons			
Central	28,068	55	723	42,611	75	1,280	43,966
Lower North ..	2,807	5	308	3,986	4	529	4,519
South Eastern ..	676	—	—	564	—	—	564
Murray Mallee.	13,876	235	11,974	82,695	1,129	50,928	134,752
Remainder of divisions ...	—	3	—	—	2	1	3
Total State	45,427	299	13,005	129,855	1,210	52,737	183,802

The production of dried vine fruits—sultanas, currants, raisins and lexias—is confined mainly to the irrigation districts of the Upper Murray, particularly the Renmark, Berri, Loxton and Cobdogla irrigation areas. Sultanas represent 64% of the total quantity of dried vine fruit.

OTHER CROPS

Other crops cultivated in South Australia include field peas, nursery products, cut flowers, pasture seeds, vegetable seeds, chicory and linseed.

In 1965-66, 30,000 acres of field peas were grown for grain yielding 242,000 bushels, virtually all of this area being located in the cereal growing districts north of Adelaide. Field peas are grown mainly as a livestock fodder, or for processing into split peas.

Most of the lucerne and other pasture seeds are grown in the cooler, moist regions, particularly in the South East. During the 1965-66 season the South East produced 8,000 of the State's 20,000 bags of lucerne seed.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide. In addition there are several fruit tree nurseries in the horticultural districts of the River Murray.

VALUE AND PRICES OF CROPS

The estimated gross value of agricultural production for South Australia in the 1964-65 season was \$178,132,000. Gross value is defined as the value placed on recorded production at wholesale prices realized in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value at the principal market.

In the following table gross values of principal crops for the seasons 1959-60 to 1964-65 are shown.

Gross Value of Principal Crops, South Australia

Crop	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
	\$'000					
Cereals—						
Wheat	16,495	68,001	51,515	56,285	77,660	74,550
Barley	10,999	37,977	22,952	19,152	26,399	30,135
Oats	2,122	5,618	2,627	3,939	5,219	5,044
Rye	149	214	185	170	200	330
Grass seeds	1,102	1,117	787	1,239	1,956	2,637
Hay	6,806	9,245	4,427	7,034	8,414	8,336
Green fodder	1,737	1,814	1,402	2,204	2,187	3,015
Field peas	173	740	522	709	890	892
Orchard and berry fruit—						
Citrus	4,185	5,157	5,527	5,445	5,578	7,182
Apples	2,992	3,422	3,182	3,944	3,088	3,859
Apricots	1,761	1,934	2,184	2,415	2,749	3,181
Peaches	1,315	1,436	1,556	1,737	1,812	2,490
Other	2,558	2,581	2,476	2,446	2,773	3,154
Vine fruit—						
Wine grapes	5,288	6,715	8,376	5,666	7,888	8,877
Table grapes	167	184	151	179	178	189
Currants, raisins, etc.....	3,128	3,095	3,599	4,024	5,501	7,269
Vegetables—						
Potatoes	2,017	3,192	4,095	2,389	2,340	6,048
Green peas	800	1,015	770	864	843	736
Other	6,546	7,124	6,483	7,297	8,654	8,894
Other crops	753	854	1,206	1,278	1,306	1,314
Total	71,092	161,437	124,022	128,417	165,634	178,132

Market prices of principal crops grown in South Australia for years 1960-61 to 1964-65 are set out below.

Prices of Agricultural Products, South Australia

Crop	Unit	1960-61	1961-62	1962-63	1963-64	1964-65
		\$	\$	\$	\$	\$
Cereals—						
Wheat (a)—						
Bulk	bushel	1.437	1.516	1.468	1.433	1.412
Bagged	bushel	1.507	1.603	1.547	1.511	1.491
Barley (a)	bushel	0.916	1.121	1.110	1.114	1.153
Oats	bushel	0.513	0.725	0.775	0.611	0.668
Rye	bushel	0.831	1.144	1.225	1.349	1.295
Vegetables—						
Potatoes (a)	ton	78.53	84.71	45.08	45.91	125.18
Onions	ton	94.17	122.50	66.89	100.98	75.17
Tomatoes—						
Glasshouse	$\frac{1}{2}$ case	3.85	3.20	3.25	4.10	3.56
Other	$\frac{1}{2}$ case	2.18	1.60	1.93	1.66	2.27
Fruit—						
Apples	bushel	2.85	2.38	2.91	2.34	2.40
Apricots	bushel	4.27	3.83	3.57	3.98	5.05
Peaches	bushel	5.92	4.23	4.77	5.22	4.92
Pears	bushel	3.38	3.12	3.38	2.81	2.83
Oranges—						
Navel (a)	bushel	2.93	3.04	2.12	2.62	2.35
Other (a)	bushel	3.32	2.42	1.90	2.35	1.89
Grapes—						
Table	ton	172.67	145.45	166.45	183.20	162.00
Wine (b)	ton	48.77	48.70	48.81	53.00	56.07

(a) Average price realized.

(b) Weighted average price at winery.

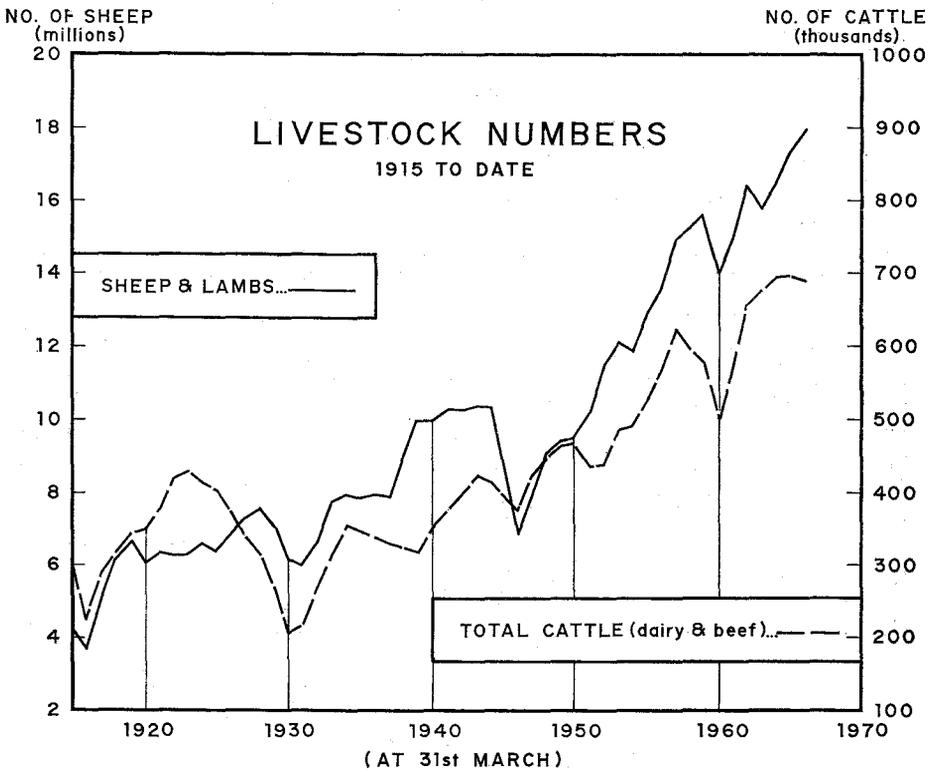
Wheat prices, which were as low as 23c per bushel in 1930-31, have shown little fluctuation in recent years, and have not been below \$1.30 per bushel since the 1948-49 season. Prices of other cereals, however, are subject to marked variations from year to year. For example, since 1947-48, average barley prices per bushel have been as high as \$1.68 and as low as 84c, while in the same period oats prices have been as high as \$1.17 and as low as 42c per bushel.

PASTORAL AND DAIRYING

Pastoral activities, with sheep grazing predominant, are widespread in South Australia, and are pursued under widely varying climatic conditions from the arid saltbush plains in the far north through to the lush, well-watered pastures of the South East. The South East and the moister southern coastal regions provide grazing for a significant portion of the livestock in this State.

At present livestock numbers are at record levels having increased markedly in recent years. The bulk of this expansion of the industry has been confined to the heavier rainfall districts. Carrying capacity has been boosted particularly by the introduction and adoption of new and improved pastures.

The increase in numbers of sheep and cattle in South Australia since 1915 is illustrated in the graph below.



The Dog Fence

This fence is an unbroken barrier of wire netting five to six feet high extending for more than 5,000 miles through South Australia, along the South Australia-New South Wales and the New South Wales-Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States

from the ravages of dingoes (native dogs). The part of the fence within South Australia, as shown on the map inside the back cover of this volume, extends in a tortuous line from the head of the Great Australian Bight to the New South Wales border for a distance of nearly 1,500 miles. The whole of the sheep population of South Australia is now confined within the area enclosed by the Dog Fence, which effectively excludes the dingoes.

PASTURES

Over the last 11 years the area of sown pastures has more than doubled; this is illustrated in the following table.

Area Under Pasture^(a), Statistical Divisions, South Australia

Date	Statistical Divisions						Total
	Central	Lower North	Upper North	South Eastern	Western (b)	Murray Mallee	
	'000 Acres						
March							
1956..	654	194	46	1,441	279	234	2,848
1957..	1,057	403	62	1,740	493	498	4,253
1958..	1,019	357	71	1,865	522	515	4,349
October							
1958..	928	440	79	1,615	616	520	4,198
1959..	896	254	44	1,428	509	485	3,616
1960..	1,050	340	51	1,790	663	704	4,598
1961..	1,132	374	57	2,025	828	829	5,245
1962..	1,142	366	64	2,140	787	859	5,358
1963..	1,133	365	61	2,246	883	886	5,574
1964..	1,240	411	60	2,431	1,035	1,037	6,214
1965..	1,303	417	63	2,590	1,099	1,089	6,561

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

(b) Includes Outside of Counties.

To a very large extent the discovery of the relationship between clovers and soil fertility has been responsible for this rapid development of pastures. The nitrogen-building clovers have, in the cereal districts, raised both fertility and crop yields while at the same time providing ready grazing of high nutritional value for livestock. Murray Mallee and Western Divisions have been transformed through the sowing of more and improved pastures from unstable farming districts to highly productive areas.

Until recently most pasture plants available flourished only in the higher rainfall zones and therefore pasture improvement was confined for the most part to the Central and South Eastern Divisions. At that stage Mount Barker sub. clover was the predominant pasture. New varieties have now been introduced, including Clare, Geraldton, Dwalganup and Yarloop sub. clovers. These are suited to the hard setting soils of the important wheatgrowing area extending northward from Adelaide to Jamestown.

Another type of legume, known as medics, has been found to be suitable for the drier cereal country, especially the mallee soils. Four medics are grown—Commercial Barrel, Barrel 173, Harbinger and Snail. Lucerne is also extensively grown; it thrives under irrigation yet still grows in areas with as little as 10 inches of rainfall per annum. It is both salt-resistant and drought-resistant and is grown in most areas of the State. Strawberry clover is the important legume on the black soils of the South East.

The most important perennial grasses in the better rainfall areas are phalaris tuberosa, perennial rye grass and cocksfoot while most widely used in the medium to low rainfall areas is the annual, wimmera rye grass.

The naturalized annual grasses which occur over the whole of the State contribute substantially to total pasture production.

Details of fertilizers used on pasture are given on page 330.

SHEEP

Numbers and Distribution

The pastoral industry was the first to become established, mainly because there was an assured overseas market for wool, hides and tallow. The fertile plains north of Adelaide, as well as the Adelaide hills, offered ready grazing and by 1856, only 20 years after the first settlement, there were about 2 million sheep in the State. This trend continued with sheep numbers increasing to 7.6 million in 1891, a peak that was not exceeded until 1932.

The severity of the droughts during this period is reflected in the reduced flocks of 1902 (4.8 million) and 1915 (3.7 million).

After 1932 sheep numbers steadily increased, exceeding 10 million by 1940, but again a drought severely reduced the numbers to less than 7 million in 1946. Thereafter the sheep population increased steadily as improved farming techniques raised the grazing capacity of the pastoral and wheat-sheep zones. At 31st March 1966 a record 17,993,000 sheep were being maintained.

By far the greatest concentration of sheep is in the South Eastern Division, particularly in the southern portion of the division where the high rainfall and fertile soils provide ample year-round grazing. In the upper South East large scale land development schemes have, in the last decade, doubled the sheep carrying capacity in many areas by the application of trace elements to deficient soils.

A similar scheme was undertaken on Kangaroo Island (Central Division) where the sheep population rose from 258,000 in 1956 to 696,000 in 1966. Central Division contains the next largest sheep population with sheep fairly evenly distributed throughout, heaviest concentrations being on Yorke Peninsula, Kangaroo Island and in the southern Adelaide hills region.

In Western Division sheep grazing is concentrated mainly in the southern portion of Eyre Peninsula. The only other division with more than 2 million sheep is Lower North where a large proportion of sheep raising is associated with cereal growing.

**Sheep Numbers, Statistical Divisions, South Australia
At 31st March 1957 to 1966**

Year	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	'000							
1957.....	3,292	2,184	1,238	3,337	2,346	1,389	1,198	14,984
1958.....	3,227	2,058	1,200	3,968	2,346	1,364	1,074	15,237
1959.....	3,392	2,079	1,190	3,930	2,461	1,381	1,201	15,634
1960.....	2,969	1,678	1,081	3,591	2,168	1,271	1,267	14,025
1961.....	3,298	1,927	1,054	3,932	2,298	1,393	1,050	14,952
1962.....	3,670	2,191	1,111	4,315	2,514	1,649	965	16,415
1963.....	3,466	1,941	1,038	4,444	2,366	1,529	954	15,738
1964.....	3,619	2,114	1,135	4,375	2,460	1,592	1,107	16,402
1965.....	3,804	2,156	1,087	4,945	2,532	1,684	1,081	17,289
1966.....	3,830	2,091	1,113	5,508	2,553	1,816	1,082	17,993

The distribution in statistical divisions of sheep flocks classified by size of flock at 31st March 1960 is given in the following table.

**Sheep Flocks Classified by Size of Flock, Statistical Divisions, South Australia
31st March 1960**

Number of Sheep in Flock	Statistical Division						Total	
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee		Outside of Counties
	Number of Flocks							
Under 50	756	146	49	162	25	78	—	1,216
50- 99	455	96	23	93	23	45	—	735
100- 199	834	256	77	170	37	125	—	1,499
200- 499	1,920	1,096	331	506	383	661	3	4,900
500- 999	1,188	791	295	787	980	697	2	4,740
1,000- 1,999	592	256	159	910	542	247	6	2,712
2,000- 4,999	174	73	75	356	132	46	29	885
5,000- 9,999	10	16	16	57	15	6	26	146
10,000-19,999	—	5	11	11	5	1	26	59
20,000 or more	—	—	2	—	3	1	17	23
Total flocks ...	5,929	2,735	1,038	3,052	2,145	1,907	109	16,915

At present about 22% of the total sheep population consists of lambs and hoggets under 1 year. This proportion has remained fairly constant for a number of years although it is subject to some fluctuations. For example, as the next table shows, lamb numbers, which had fallen after some relatively poor lambing seasons, were built up considerably during the 1961-62 season.

**Age and Sex of Sheep, South Australia
31st March 1957 to 1966**

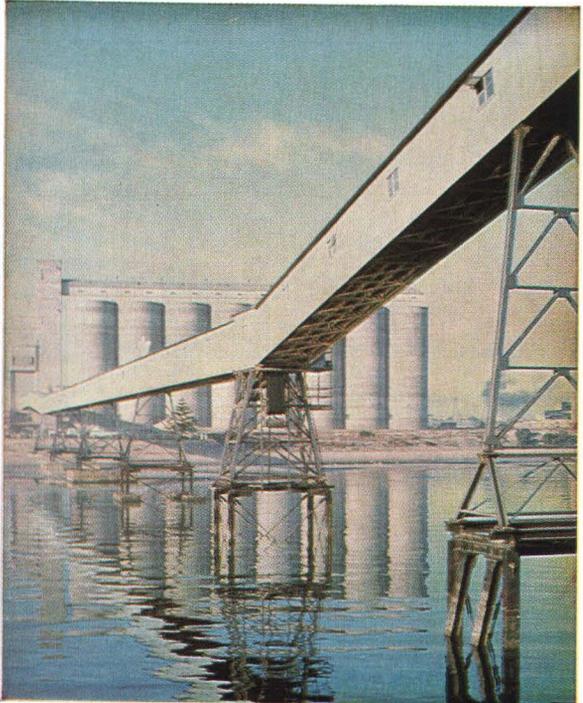
Year	Rams	Breeding Ewes	Other Ewes	Wethers	Lambs and Hoggets (under one year)	Total Sheep
	'000					
1957....	184	6,976	720	3,647	3,457	14,984
1958....	189	6,579	1,045	3,987	3,437	15,237
1959....	198	7,284	826	4,264	3,062	15,634
1960....	188	6,489	883	3,588	2,877	14,025
1961....	187	7,397	690	3,854	2,824	14,952
1962....	190	7,531	786	4,110	3,798	16,415
1963....	196	7,258	812	4,144	3,328	15,738
1964....	199	7,545	772	4,277	3,609	16,402
1965....	208	7,938	813	4,515	3,815	17,289
1966....	218	8,165	831	4,694	4,085	17,993

Breeds of Sheep

The predominant breed in South Australia is the Merino which accounts for over 80% of the total sheep numbers. The South Australian Merino having a robust constitution and a capacity to travel long distances to water has adapted well to the hot, dry conditions of the interior. Because of the particularly arid nature of the South Australian climate, pioneer breeders have developed a large framed type of Merino, yielding an exceptionally high clip of medium to broad quality wool.

Of the remaining recognized breeds, the Australasian breeds, Corriedale and Polwarth, are most important. These are dual purpose sheep, used for mutton and at the same time producing wool of good quality. The Corriedale is a fixed cross between Lincoln rams and Merino ewes while the Polwarth is a fixed comeback bred from the mating of Merino rams with Lincoln-Merino ewes.

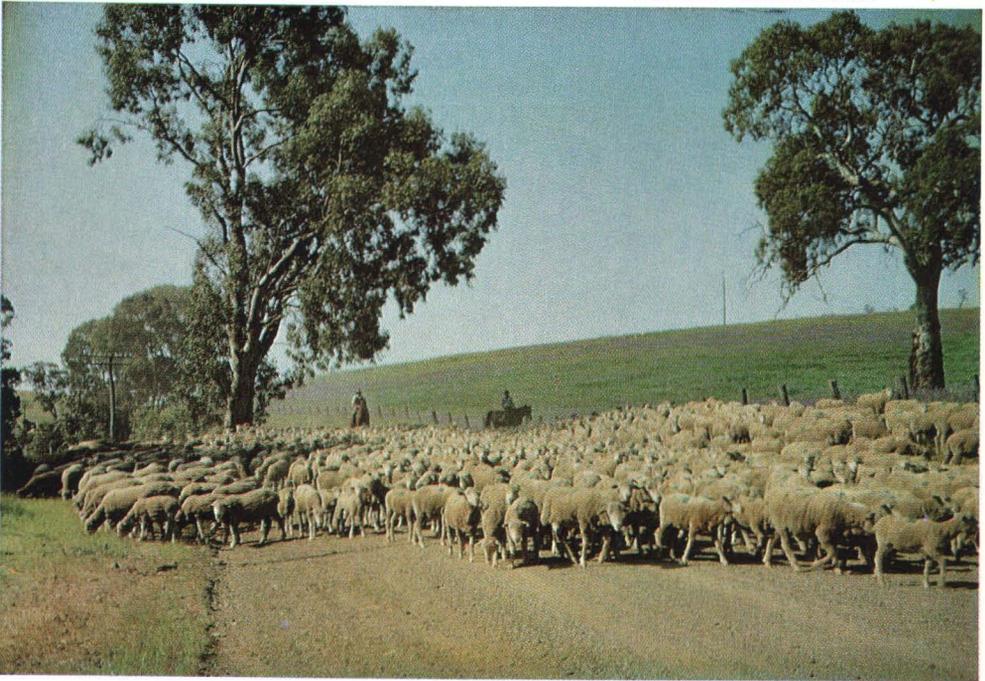
Wheat silos and bulk handling facilities at Port Lincoln

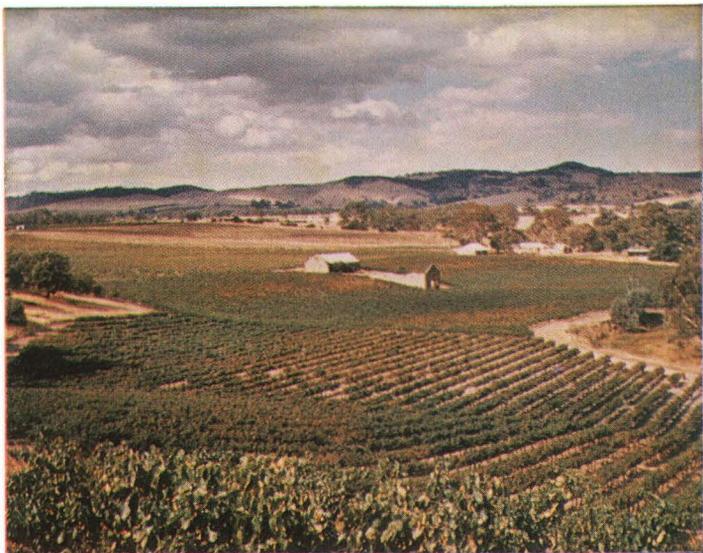


S.A. Govt Tourist Bureau

Travelling sheep in the mid-North near Melrose

S.A. Govt Tourist Bureau





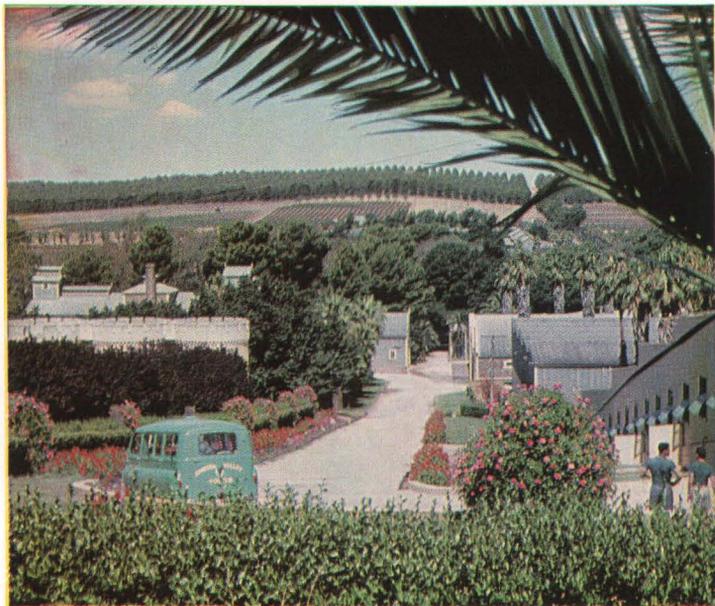
S.A. Govt Tourist Bureau

Vineyards in the Barossa Valley

Wine-making is one of South Australia's oldest industries. The Barossa Valley, about 40 miles north of Adelaide, was first occupied and planted to vines in the 1840's. Mainly wine varieties of grapes are grown in this region, which is the largest non-irrigated grape growing area in Australia.

One of the long established wineries in the Barossa Valley

S.A. Govt Tourist Bureau



British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes mainly to produce fat lambs but also useful types of comeback and crossbred wools.

British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are utilized principally for production of export lambs.

Breeds of Sheep at 31st March 1962 to 1966, South Australia

Breed	1962	1963	1964	1965	1966
	'000				
Merino	13,772.3	13,152.7	13,897.0	14,581.2	14,981.0
Corriedale	932.7	943.7	923.0	1,003.2	1,092.9
Dorset Horn	40.4	39.3	41.4	42.0	44.7
Border Leicester	28.5	26.0	19.6	19.4	22.9
Polwarth	81.8	88.4	80.8	99.7	104.0
Romney Marsh	32.0	29.9	25.8	26.3	23.4
Ryeland	4.9	5.0	4.8	4.3	4.5
Southdown	7.0	6.6	5.8	5.5	5.5
Suffolk	17.2	16.7	15.9	13.4	14.7
Other	4.4	4.7	4.0	4.1	4.1
Merino-Comeback ...	306.4	285.8	257.7	284.2	260.7
Crossbred	1,186.9	1,138.7	1,126.7	1,205.2	1,434.7
Total	16,414.5	15,737.5	16,402.5	17,288.5	17,993.1

Lambing

In 1965 a record number of ewes (7,505,000) were mated and lambs marked totalled 5,954,000. Early reports from farmers indicated that they intended to mate almost 8 million ewes in 1966—approximately 5.2 million to Merino rams, 1.3 million to other longwool rams and 1.4 million to shortwool rams.

The lambing percentage (*i.e.*, of lambs marked to ewes mated) has never quite reached 80% in South Australia, although it has been regularly over 70% for a number of years. This represents a considerable improvement over the period prior to World War II when the percentage quite often fell below 60% and occasionally below 50% in drought years.

Details of lambs marked and the lambing percentage in each statistical division in recent years are given in the next table.

Lambing, Statistical Divisions, South Australia

Season	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
LAMBS MARKED ('000)								
1961	1,397	879	401	1,349	754	614	250	5,644
1962	1,343	841	366	1,322	675	633	263	5,443
1963	1,282	778	346	1,371	679	587	359	5,402
1964	1,400	893	359	1,384	751	675	277	5,739
1965	1,426	823	372	1,630	735	681	287	5,954
LAMBING PERCENTAGE (a)								
1961	83.6	81.4	74.3	84.9	76.6	79.5	56.8	79.8
1962	82.2	80.3	74.8	83.2	72.3	78.7	60.4	78.5
1963	80.9	77.5	71.8	84.9	73.5	75.6	77.4	78.9
1964	83.5	81.4	71.4	84.6	76.3	79.7	62.1	79.8
1965	82.7	77.3	72.4	86.8	74.0	78.2	62.1	79.3

(a) Percentage of lambs marked to ewes mated.

Sheep Shearing and Wool-clip

In the agricultural areas of the State there is a predominance of shearing during the late winter and spring months, August to November. Shearing in the South Eastern Division occurs somewhat later, with some 75% of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Outside of Counties) there are two main seasons, March-April and July-August.

The total wool clip, including crutchings, exceeded 200 million lb. for the first time in 1964-65. More than 90% of this wool is obtained from adult sheep.

The average fleeceweight in South Australia is well over 12 lb. per head for adult sheep. This is significantly higher than the yield obtained in other States, and is due primarily to the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

Sheep and Lambs Shorn, Wool-clip and Average Fleeceweight, South Australia

Classification	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	NUMBER SHORN ('000)					
Sheep	12,629	13,798	14,442	14,096	14,832	15,468
Lambs	2,753	3,879	3,417	3,540	3,911	4,282
Total	15,382	17,677	17,859	17,636	18,743	19,751
	WOOL CLIP ('000 LB.)					
Sheep	145,605	168,750	168,647	172,588	175,998	186,812
Lambs	9,776	14,776	12,419	13,137	14,829	15,975
Crutchings	7,495	8,679	8,788	9,062	9,232	9,958
Total	162,876	192,205	189,854	194,787	200,059	212,745
	AVERAGE FLEECEWEIGHT (a) (LB.)					
Sheep	12.12	12.86	12.29	12.89	12.49	12.72
Sheep and lambs	10.59	10.87	10.63	11.04	10.67	10.77

(a) Includes crutchings.

A breakdown of the State figures for 1965-66 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas (Outside of Counties) and to a lesser extent Upper North Division.

The relatively light average fleece obtained in South Eastern Division is probably explained partly by the lower proportion of Merino sheep in this area (at 31st March 1966 only 68% of total sheep in South Eastern Division were Merinos, compared with a total State figure of over 83%), but more importantly by the lighter wool quality of the Merino and the smaller framed sheep in this area.

Sheep and Lambs Shorn, Wool Clip and Average Fleeceweight
Statistical Divisions, South Australia
1965-66

Classification	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	NUMBER SHORN ('000)							
Sheep	3,418	1,838	960	4,618	2,241	1,501	892	15,468
Lambs	869	547	291	1,320	562	453	241	4,282
Total	4,287	2,385	1,251	5,938	2,802	1,955	1,133	19,751
	WOOL CLIP ('000 lb.)							
Sheep	39,750	22,307	12,423	54,283	27,492	18,490	12,066	186,812
Lambs	3,029	1,985	1,121	4,975	1,855	1,658	1,352	15,975
Crutchings	2,159	1,176	656	2,807	1,474	1,048	637	9,958
Total	44,939	25,468	14,200	62,065	30,821	21,196	14,056	212,745
	AVERAGE FLEECEWEIGHT (a) (lb.)							
Sheep	12.26	12.78	13.63	12.36	12.93	13.01	14.24	12.72
Sheep and lambs ..	10.50	10.68	11.35	10.45	11.00	10.84	12.40	10.77

(a) Includes crutchings.

WOOL INDUSTRY

Organization of the Australian Wool Industry

The *Wool Industry Act* 1962 made provision for the replacement of three separate instrumentalities (the Australian Wool Bureau, the Wool Research Committee and the Australian Wool Testing Authority) by a single overall body, to be known as the Australian Wool Board. The Board is thus responsible for the control and co-ordination of wool promotion, research and testing and acts as an advisory authority on wool marketing. The Board was inaugurated on 1st May 1963, being made up of 11 members, viz a chairman, six woolgrower representatives, three members with special qualifications and a representative of the Commonwealth Government.

Following the establishment of the Board, the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation formed the Australian Wool Industry Conference. Principal functions of the Conference are to nominate woolgrower representatives for appointment to the Australian Wool Board; to recommend what rates of levy should be paid by woolgrowers for promotion and research, and to review the activities of the Board at least once a year.

For research and promotional purposes levies have been imposed on shorn wool produced in Australia since 1936. The rate levied was 5 cents per bale until 1944 and 20 cents per bale in 1945. The levy was suspended in 1945 and contributory charges were imposed on woolgrowers. In 1952 the levy was resumed and set at 40 cents per bale; on 1st August 1960 it became 50 cents per bale; and during the 1961-62 season the levy was raised to \$1.00 per bale. In addition, the wool research levy was introduced in 1957 and was set at 20 cents per bale.

From 1st July 1964 a new levy, which includes the amount to be allocated to research, was fixed at a maximum rate of 2% of the gross value of shorn wool sold. For 1964-65 the rate for the combined levy was 1½% and for 1965-66 it was 2%.

Production of Wool

With the average cut per head increasing over time wool production has been increasing at a greater rate than the sheep population, and in fact has more than doubled in the past 20 years.

Total wool production consists of shorn wool (including crutchings) plus fellmongered wool, dead wool and wool exported on skins. Fellmongering is the process of removing wool from the pelt by bacterial action (sweating) or by treatment with chemicals. Dead wool is picked from the carcass of dead sheep.

Wool Production and Value, South Australia

Season	Production				Value of Wool Production
	Shorn Wool	Fell-mongered and Dead Wool	Wool Exported on Skins	Total	
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	\$'000
1956-57	175,274	2,944	10,590	188,808	114,578
1957-58	168,194	1,827	15,822	185,843	84,708
1958-59	170,645	1,353	14,844	186,842	67,595
1959-60	180,236	733	17,320	198,289	85,382
1960-61	162,876	713	13,824	177,413	70,484
1961-62	192,205	1,670	13,109	206,984	85,801
1962-63	189,854	952	16,538	207,344	92,514
1963-64	194,787	15,713		210,500	113,409
1964-65	200,059	15,677		215,736	94,328
1965-66	212,745	16,888		229,633	103,635

By 1891 wool production had risen to 57 million lb. when the average fleece weight was nearly 8 lb. per head. Then with sheep numbers at a slightly lower level, wool production fluctuated seasonally between 36 million and 64 million lb. until 1925 when it rose to 69 million lb.

The effects of the four year drought from 1927 to 1930 temporarily reduced the level but the improvement of the following seasons and the subsequent restocking caused a sharp increase in production. In 1938 the weight of wool produced exceeded 100 million lb. for the first time. Production then remained relatively stable until 1945-46 when it dropped significantly following the reduction in flocks caused by the 1944 drought. The industry recovered quickly and in 1947-48 a record 116 million lb. of wool had been produced, achieved by an increase in the numbers shorn and an exceptionally high average fleece of 10.87 lb. The rising trend has since continued with current production now exceeding 220 million lb.

Prior to 1946-47 the annual wool value had not exceeded \$14 million and was relatively stable.

The marked changes in the value of wool produced since then have been mostly due to frequent and substantial price fluctuations rather than variations in the quantity produced.

On the resumption of the auction system in 1946-47 wool prices increased sharply, reaching a peak in the record 1950-51 season when demand for wool was intensified by the Korean crisis. Gross value of production in that year exceeded \$132 million.

Demand eased in the following years causing values to fall, although a recovery in prices combined with a significant increase in production in 1956-57 raised gross value of production to \$114 million. Over the seasons 1957-58 to 1962-63 value varied between \$67 million and \$92 million but rose to \$113 million in 1963-64 following record wool production and somewhat higher prices. Wool production was slightly higher in 1964-65 but value was down to \$94 million.

Quality of Wool

In general terms, quality refers to the diameter of wool fibre, which is usually indicated by the evenness and number of crimps or waves. Crimp is the main determinant of quality; the smaller and more even the crimp, the finer the wool.

Fineness is generally specified in terms of spinning ability, and in Australia is expressed generally in terms of Bradford Counts, which in practice, signify the number of hanks of yarn, each measuring 560 yards, obtainable from one pound weight of tops if spun to its fullest capacity. There are no commercial means of testing a batch of wool in its greasy state and therefore quality counts must of necessity be estimates based on the experience of the wool expert. Quality counts range from as high as 90s to 100s for superfine Merino down to 32s for some English long wool breeds.

Other factors influencing grading are soundness (tensile strength), length of staple, condition, colour and style.

The South Australian Merino generally produces wool of a much broader quality than the Merino of the eastern States. The following table shows that only 0.1% of wool sold in the 1965-66 season was 64/70s and finer; the corresponding New South Wales figure was 22.3%.

Quality Analysis of Greasy Wool Sold at Auction in South Australia

Predominating Quality of Bale	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	Per Cent						
64/70s and finer	0.4	0.3	0.2	0.2	0.2	0.3	0.1
64s	2.0	1.3	1.2	1.3	1.0	1.1	0.7
64/60s	8.5	4.8	4.2	6.1	5.5	5.3	4.9
60/64s	22.0	16.0	15.6	17.5	15.8	15.1	16.2
60s	40.9	40.5	40.6	39.8	42.1	41.4	43.3
58s	17.7	26.2	26.9	24.3	24.6	25.2	23.9
56s	5.3	6.8	7.3	7.1	6.9	7.6	7.4
50s	1.5	1.8	2.0	1.6	1.6	2.0	1.9
Below 50s	0.3	0.4	0.4	0.3	0.3	0.4	0.3
Oddments	1.4	1.9	1.6	1.8	2.0	1.6	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The quality distribution of wool has remained relatively constant with over 80% classified between 58s and 60/64s quality. In the following table bales of wool of South Australian origin sold at auction in Australia in the 1965-66 season are classified by spinning quality and the statistical division of origin.

**Quality of Greasy Wool^(a), Statistical Divisions, South Australia
1965-66**

Predominating Spinning Quality	Statistical Division of Origin							Total (b)
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	Bales							
64/70s and finer.....	230	18	—	1,548	125	67	7	1,995
64s	252	201	184	3,049	324	353	464	4,839
64/60s	3,255	2,412	2,429	7,405	5,247	3,143	2,547	26,441
60/64s	17,092	9,993	6,905	24,632	21,610	12,235	5,225	97,876
60s	30,953	16,605	11,740	33,832	25,998	17,568	9,330	146,330
60/58s	25,333	12,436	8,116	25,553	15,996	11,130	8,284	107,117
58s	37,056	15,402	9,996	43,056	15,654	12,413	13,112	146,851
56s	16,587	2,253	1,330	27,938	3,696	3,065	2,540	57,489
50s	5,259	101	15	12,012	683	611	13	18,740
Below 50s	549	16	3	3,502	86	207	—	4,368
Oddments	1,320	364	232	2,592	1,277	1,475	852	8,125
Total	137,886	59,801	40,950	185,119	90,696	62,267	42,374	620,171

(a) Wool of South Australian origin sold at auction in Australia.

(b) Including bulk-classed, interlotted and dealers' wool sold in Adelaide, but of unidentified origin.

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14% of the wool's greasy weight the wool has to be treated by the carbonizing process.

In a normal season just over 75% of South Australian wool is free of, or contains only light burr and seed; almost 15% contains medium or heavy burr and seed and some 10% is carbonizing wool.

Incidence of Vegetable Fault in Wool Sold at Auction In South Australia

Season	Free or Near Free	Light Burr and/or Seed	Medium Burr and/or Seed	Heavy Burr and/or Seed	Carbonizing Wool	Combing Oddments	Total
	Percentage of Total Number of Bales						
1956-57 ..	35.5	38.7	10.6	2.3	11.0	1.9	100.0
1957-58 ..	34.9	37.2	11.8	3.0	11.4	1.7	100.0
1958-59 ..	35.5	38.1	11.7	2.6	10.4	1.7	100.0
1959-60 ..	35.7	36.9	12.4	3.6	10.1	1.3	100.0
1960-61 ..	39.4	38.3	9.9	1.9	8.7	1.8	100.0
1961-62 ..	38.6	37.4	10.2	2.2	10.1	1.5	100.0
1962-63 ..	34.9	40.5	11.2	2.6	9.0	1.8	100.0
1963-64 ..	32.9	44.7	10.5	2.3	7.7	1.9	100.0
1964-65 ..	27.8	45.1	12.5	3.2	9.8	1.6	100.0
1965-66 ..	26.8	43.3	14.2	3.8	10.6	1.3	100.0

Wool Marketing

Approximately 8% of wool grown in South Australia is sold outside the auction system. Of the South Australian wool passing through the auction system approximately 85% is sold at the Adelaide Sales with the remainder, predominately of South Eastern origin, going to Victorian selling centres. A similar inflow of wool occurs from western New South Wales and to a lesser extent from western Victoria.

On receipt into a wool store each bale is weighed and then stacked. When a catalogue is to be prepared for the buyers, clips are listed and particulars of the various lots to be shown are supplied by the broker. A proportion of the required bales is then taken from the stacks and sent to the show floors for inspection. A valuation of every lot, based on current market rates is made by the broker for the protection of the grower at the auction.

At the Wool Exchange, the sales are conducted with great rapidity taking on average for a normal market only 8 seconds to dispose of an individual lot or line of wool. On completion of the sale the bales are returned to the stacks to await instructions from the buyers. When required for shipment the bales are usually dumped, *i.e.* pressed to half their original size and banded to economize on shipping space.

Adelaide is the sole wool selling centre in South Australia, handling over $\frac{1}{2}$ million of Australia's 5 million bales annually. Twelve or thirteen sales are held each season depending on the quantity of wool expected to be offered.

During the main spring shearing season sales are held every two or three weeks, lengthening to monthly or longer intervals over the remainder of the year. Pastoral wools provide the bulk of the offerings in the early spring months with agricultural wools becoming more prominent as the season progresses. Wools from the South East and other high rainfall areas make up a considerable proportion of the offerings in the summer months. Towards the end of the season wools are drawn from various parts of the State.

Details relating to Adelaide wool sales during the past eight seasons compared with 1950-51, the year of boom prices, are as follows:

Adelaide Wool Sales

Season	Wool Sold (Scoured and Greasy)		Amount Realized	Average Price Per Lb. (Greasy)	In Store at End of Season
	Bales	Weight			
	Number	'000 Lb.	\$'000	Cents	Bales
1950-51 ..	383,630	117,032	125,956	107.63	6,304
1958-59 ..	546,768	172,316	65,542	38.03	7,952
1959-60 ..	502,820	155,677	69,827	44.85	38,997
1960-61 ..	495,021	158,560	63,644	40.14	55,607
1961-62 ..	573,002	182,630	75,956	41.59	41,359
1962-63 ..	563,370	180,672	81,064	44.87	33,900
1963-64 ..	569,845	182,560	98,983	54.22	41,033
1964-65 ..	570,976	179,066	79,045	44.14	52,853
1965-66 ..	591,641	187,129	87,402	46.71	40,197

Reserve Price Scheme

A Wool Marketing Committee was appointed by the Australian Wool Board on 20th June 1963 to inquire into current methods of marketing wool and in particular to investigate the operation of a Reserve Price Scheme within the auction system.

In its report of July 1964, the Committee made the following recommendations—

The Australian clip should be marketed by a Reserve Price Scheme under the control of a statutory body to be known as the Australian Wool Marketing Authority.

At the commencement of each wool selling season the Authority should set a floor price based on—

- (a) the level of reserve prices fixed by other countries,
- (b) the average price for wool in the previous season,
- (c) economic conditions in the major consuming countries, and
- (d) the relationship between price of wool and other competitive fibres.

In addition to setting the average reserve price, the Authority should prepare a "Table of Limits", *i.e.* corresponding reserve prices for each of the types of wool offered, and should buy in at the floor price when any lot fails to reach this reserve. Wool brought by the Authority would then be placed on the market at some later date when prices were more favourable.

For the effective operation of the scheme, a capital fund should be established from contributions by growers and the government.

A referendum of woolgrowers throughout Australia rejected this scheme. Overall, 52% of woolgrowers voted against the scheme, but in South Australia 65% were not in favour.

Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realized in other States, this being partly attributable to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales.

Average prices realized for greasy wool at Adelaide sales were below 6 cents per lb. in the depression years of the early 1930's and then fluctuated between about 8 and 12 cents. Between 1945-46 and 1949-50 the price rose sharply to 48 cents and more than doubled to nearly 108 cents in 1950-51. There was an immediate drop to half this level in the following year and since then prices have been somewhat more stable, the lowest level in recent years being 38 cents and the highest 54 cents. Details of average prices of greasy Merino and Crossbred wool of various grades over the last 10 seasons are given below.

Average Wool Prices, Adelaide Sales

Description	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	Cents per Lb.									
Greasy Merino—										
Superior	99	75	55	66	58	64	69	82	65	76
Good	81	64	48	57	50	52	59	70	57	67
Average	72	55	44	51	45	47	54	62	51	58
Wasty and inferior	60	45	36	42	38	39	43	53	41	47
Super lambs	80	60	45	55	50	53	58	71	67	62
Good lambs	61	42	35	41	37	38	42	50	45	47
Average lambs...	43	30	22	27	25	23	27	38	31	34
Inferior lambs ...	37	23	17	21	17	20	21	28	24	26
Greasy Crossbred—										
Super Comebacks	88	68	53	62	52	57	62	77	59	68
Fine Crossbred ..	75	62	51	57	53	54	60	75	57	67
Medium Crossbred	67	54	46	54	52	51	55	72	52	63

CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31st March 1966 only about 3% of those used mainly for meat production and a little over 5% of those for milk production were in South Australia.

**Cattle Numbers, Statistical Divisions, South Australia
31st March 1966**

Classification	Statistical Division							Total
	Central	Lower North	Upper North	South Eastern	Western	Murray Mallee	Outside of Counties	
	'000							
Associated with milk production—								
Bulls (a)	3.1	0.6	0.2	1.4	0.2	0.6	—	6.2
Cows—								
In milk	62.1	4.9	1.5	12.1	2.1	9.8	—	92.7
Dry	27.9	3.6	1.1	24.5	1.4	3.8	—	62.3
Heifers—								
Springing	9.8	1.0	0.3	8.4	0.4	1.3	—	21.2
Other	15.8	1.2	0.4	4.4	0.5	2.4	—	24.6
Calves under one year	21.8	2.4	0.7	11.1	1.2	3.5	—	40.7
House cows	1.7	0.8	0.3	1.6	1.0	0.8	0.1	6.3
Total	142.1	14.4	4.5	63.5	6.9	22.2	0.1	253.9
Associated with meat production—								
Bulls (a)	1.9	0.8	0.3	4.3	0.5	0.4	1.3	9.5
Cows and heifers	38.1	10.0	6.6	110.8	7.7	10.0	49.7	233.0
Calves under one year	20.2	6.0	3.2	64.6	5.5	6.3	15.3	121.2
Other cattle	9.9	2.5	1.5	34.1	1.2	2.6	20.7	72.5
Total	70.1	19.2	11.7	213.9	14.9	19.2	87.0	436.1
Total cattle	212.2	33.7	16.2	277.4	21.8	41.4	87.2	690.0

(a) Aged one year or over, used or intended for service.

Beef Cattle

Beef cattle numbers have increased rapidly in the last 15 years, exceeding 200,000 for the first time in 1952 and passing 300,000 by 1956. At 31st March 1966, 436,000 cattle associated with meat production were recorded, and although this figure is not strictly comparable with earlier figures (because of a change of classification adopted in 1964) it provides a good guide to the growth of the industry. In 1966 about 49% of beef cattle were in the South Eastern Division, 20% were Outside of Counties, 16% in Central Division, and smaller numbers in other parts of the State. In the northern pastoral areas, Shorthorns are the predominant breed and there are lesser numbers of Herefords; in the South East, Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus, while in the Central Division near Adelaide, where a number of studs are located, several breeds are well represented.

The northern pastoral region is traditionally the breeding area for beef cattle but in recent years there has been a trend towards moving cattle which were bred in this drier country to the better rainfall areas for fattening. The rapid increase in the area of sown pastures has contributed to the increase of beef cattle in southern parts of the State, since cattle do not crop the grasses as closely as sheep and thus are less likely to damage newly sown pastures.

Until recently most of the beef cattle were Outside of Counties, and it was not until 1957 that numbers in this area represented less than 50% of the State total. The marked switch during the last 16 years from Outside of Counties to the

South East, and to other parts of the State, is illustrated in the following table. The actual number of beef cattle in Outside of Counties in 1966 was 87,000 compared with 115,000 in 1950.

Proportion of Beef Cattle in Statistical Divisions, South Australia

Statistical Division	1950	1953	1957	1961	1966 (a)
	Per Cent				
Central	7	8	10	13	16
South Eastern	25	24	31	40	49
Outside of Counties	60	59	49	34	20
Other areas	8	9	10	13	15
Total	100	100	100	100	100

(a) Proportions relate to "Cattle for meat production".

Dairy Cattle

Dairy cattle numbers have not increased to any degree for many years and the total number of cattle associated with milk production at 31st March 1966 (254,000), differs very little from the dairy cattle population 20 years ago. Distribution within the State is also little changed although there has been some tendency for concentration in the principal dairying areas.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures, but many of the mixed farms in the better cereal growing country carry dairy herds and these represent nearly half of the dairy cows in the State. Dairy production on these farms is almost entirely in the form of cream for butter making, whereas the properties in the sown pasture areas mainly market whole milk, either for consumption in the Adelaide area or for cheese making.

Commercial dairying activities are to be found mainly within an 80 mile radius of Adelaide. Of greatest importance is the Adelaide hills district, comprising the Mount Lofty Ranges and areas as far south as Cape Jervis and Encounter Bay. This district embraces some of the best dairy land in the State and includes most of the properties devoted specifically to dairy farming. Although some herds are grazed on natural pastures improved only by top dressing with superphosphate, the most common type is sown pasture consisting of subterranean clover in combination with perennial grasses such as perennial rye grass or phalaris.

Dairy production is mainly in the form of whole milk for consumption in Adelaide but the surplus from the flush period of the year is converted into cheese at factories situated at several centres throughout the Adelaide hills.

Most of the dairy breeds are represented; Friesians and Jerseys predominate, with Guernseys, Australian Illawarra Shorthorn, Ayrshires and their crosses in use to a lesser extent.

Other areas inside the 80 mile radius are the Lower Murray swamps and the Lakes District. The Lower Murray swamps extending from Mannum to Wellington are reclaimed areas ideally suited to dairying pursuits, combining the attributes of suitable climate, good soil, and convenient location and an abundant water supply. The swamps have a very high carrying capacity. A significant proportion of the produce is sold as whole milk in the Adelaide market, the remainder being used for cheese, butter and casein production. The cattle are predominantly Friesian. The farms are flood irrigated through sluice gates in the levees and

distributing channels. Surplus water is led into a drainage system and pumped back into the river.

The Lakes District owes much to the completion of barrages across the mouth of the Murray which has helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. This has greatly contributed to the improvement of productivity of this area and has also had the effect of maintaining a greater control over the level of the water in the river, thereby greatly facilitating irrigation of the reclaimed swamps upstream. The outlet for dairy products is generally towards the processing plants situated on the Murray. On the eastern side both cream and milk are produced whilst on the western side most of the produce is sold as whole milk. Where cream is produced, pig-raising is complementary to dairying. The dairy cattle are principally Jersey breed and enjoy a high reputation for productive ability.

Outside the 80 mile radius, the most important dairying area is the Lower South East, where the high rainfall and the reasonably low evaporation rate combine to allow a fairly long growth period after the autumn and winter rains and spring flush of feed. The intensity of dairying varies with the different areas, being greatest on the richer soils. These soils are the peat and peat-type soils close to the coast and the rich volcanic soils around Mount Gambier.

Most breeds are well represented in the district, the Jersey and Friesian being slightly more popular than other breeds.

DAIRY PRODUCE

Milk

Total milk production in any one year is not known precisely. However, as actual details are known of two major components of total milk utilization in South Australia, viz the amount consumed by factories in the production of milk, cheese and other milk products and home consumption in the Metropolitan Milk Board area, a carefully considered estimate can be made.

The following table shows the estimated production of whole milk and the quantity of this milk used for various purposes in 1955-56 and later seasons.

Production and Utilization of Milk, South Australia

Year	Total Milk Produced	Milk Used for					Other Purposes
		Butter		Factory Cheese (a)	Home Consumption		
		On Farm	In Factory		Milk Board Area	Outside Milk Board Area	
'000 Gallons							
1955-56	90,342	940	35,449	27,467	15,216	9,902	1,368
1956-57	89,882	919	36,278	25,963	15,359	9,984	1,379
1957-58	80,606	802	29,886	23,012	15,536	9,908	1,462
1958-59	82,121	783	29,879	24,280	16,267	9,379	1,533
1959-60	78,572	720	25,892	23,729	16,999	9,636	1,596
1960-61	87,029	645	29,817	27,504	17,591	9,800	1,672
1961-62	95,504	604	33,100	32,314	17,859	9,907	1,720
1962-63	95,378	553	31,229	33,492	18,282	10,206	1,616
1963-64	97,523	531	32,622	33,989	18,631	9,791	1,959
1964-65	102,330	458	33,435	37,857	18,991	9,805	1,784

(a) Factory production accounts for virtually all cheese produced.

The Metropolitan Milk Board is constituted to regulate the treatment and marketing of milk within the Metropolitan Milk Board area. The duties of the Board include the fixing of the metropolitan producing district and the granting of milk producers' and treatment licences. The Board may fix the prices of milk and sweet cream and may make recommendations on the quotas of milk and cream which can be sold as such.

Butter and Cheese

The quantities of butter and cheese produced during the last 10 years were as follows—

Butter and Cheese Production, South Australia

Year	Butter (a)	Cheese (b)	Year	Butter (a)	Cheese (b)
	'000 lb.			'000 lb.	
1955-56	19,541	28,297	1960-61	15,610	28,245
1956-57	19,260	26,787	1961-62	16,861	32,835
1957-58	16,061	23,510	1962-63	16,608	33,967
1958-59	16,103	25,088	1963-64	16,791	34,236
1959-60	14,151	24,483	1964-65	17,392	38,836

(a) Includes factory and farm production.

(b) Factory production only.

PIGS

In South Australia pigs are normally kept as a sideline on mixed farms or in conjunction with dairy cattle and there are relatively few holdings specializing in pigs.

Although there are substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices, over time the numbers have remained remarkably stable. The total number exceeded 200,000 for the first time in 1966, yet it was over 160,000 as early as 1884. Of the record number of 223,500 pigs at 31st March 1966, over 60% were in Central and Lower North Divisions. Total numbers were made up of 4,000 boars, 29,300 breeding sows and 190,200 other pigs.

MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing only about 6% of total Australian production. The following table shows the number of livestock slaughtered for human consumption and the production of meat during the last 10 years. Slaughterings and meat production on rural holdings are included in these figures.

Livestock Slaughtered and Meat Produced, South Australia

Season	Livestock Slaughtered for Human Consumption			Meat Production (Bone-in-Weight)			
	Cattle and Calves	Sheep and Lambs	Pigs	Beef and Veal	Mutton and Lamb	Pigmeat	Total
		'000			Tons		
1956-57 ..	252	2,329	124	40,262	42,563	7,367	90,192
1957-58 ..	283	3,278	175	41,070	53,681	9,516	104,267
1958-59 ..	287	3,145	179	42,167	55,001	9,451	106,619
1959-60 ..	238	3,899	171	33,281	62,760	9,161	105,202
1960-61 ..	174	2,784	183	26,647	52,242	9,574	88,463
1961-62 ..	201	3,140	232	30,061	55,390	11,558	97,009
1962-63 ..	254	3,467	235	36,420	58,919	11,810	107,149
1963-64 ..	279	2,996	214	39,759	52,864	11,163	103,786
1964-65 ..	275	3,100	241	37,268	55,392	12,656	105,316
1965-66 ..	277	3,474	298	36,513	60,738	15,223	112,474

The Metropolitan and Export Abattoirs Board has the sole right within the Metropolitan Abattoirs area to slaughter stock for export as fresh meat in a frozen condition. It controls the handling and distribution of meat within this area and may fix the maximum number of stock sold in any one day in a Board controlled market.

Average market prices of some of the principal classes of livestock are set out below. Prices fluctuate considerably from year to year, but were generally fairly high in 1966.

Livestock, Average Prices at Adelaide Market
1962 to 1966

Class of Stock	1962	1963	1964	1965	1966
	\$	\$	\$	\$	\$
Fat cattle—					
Bullocks and steers—					
Prime, medium ..	102.06	104.65	121.34	129.71	139.35
Good.....	88.57	90.00	104.35	117.08	122.47
Cows—					
Prime, medium ..	81.48	85.67	100.51	120.50	136.80
Good.....	64.10	71.71	84.22	104.29	116.89
Calves—					
Prime vealers ...	44.60	44.51	49.61	51.12	60.96
Good.....	30.53	31.04	37.92	35.06	44.24
Fat sheep—					
Merino wether—					
Prime	6.14	8.07	9.61	9.25	9.84
Medium	4.48	6.30	8.02	7.89	8.31
Lambs—					
Prime, medium ..	6.54	7.09	8.22	9.24	8.44
Good.....	5.18	6.18	7.28	8.01	7.61
Pigs—					
Choppers	50.33	84.77	78.12	66.45	64.02
Baconers	32.20	39.17	41.61	37.73	36.67
Porkers	17.01	21.97	22.54	19.37	19.98

The Australian Meat Board controls the export of meat, its sale and distribution overseas, and advises on matters relating to quality and grading of meat for export. The trading powers of the Board enable it to purchase and sell meat in its own right for the purpose of developing existing markets or creating new markets where there are special problems or circumstances which preclude the effective participation of private traders.

Finance for the Board's operations is derived from a levy imposed under the *Livestock Slaughtering Levy Act* 1964-1965. The levy is payable on the slaughter of all cattle (over 200 lb. dressed weight), sheep and lambs for human consumption.

At present Australia has meat agreements with the United Kingdom under a 15-year agreement signed in 1952, and with the United States of America following an agreement made in 1964.

OTHER RURAL INDUSTRIES

Poultry Farming

The main concentration of poultry farmers is found close to Adelaide, with almost 87% of table poultry sold in 1965-66 coming from the Central Statistical Division.

The poultry farming industry can be divided into two categories—the production of eggs, and the raising of poultry for meat. The annual average egg production controlled by the South Australian Egg Board was 11.8 million dozen in the 5 years ended 1953-54, 11.3 million dozen over the next 5 years and 10.1 million dozen in the 5 years ended 1965-66. However, these figures do not take into account movement of eggs interstate independently of the Egg Board, which may represent a significant proportion of total egg production.

Statistics collected relating to the sale of table poultry show a rapid expansion in this side of the industry. In 1965-66 the number sold was 3,072,000, this being over 6 times the number sold 5 years previously.

Poultry Industry^(a), South Australia At 31st March

Particulars	Unit	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
		Number					
Hens and pullets	'000	1,603	1,714	1,550	1,534	1,553	1,408
Other fowls and chickens	'000	244	280	357	495	508	753
Ducks	'000	49	54	52	55	59	71
Turkeys	'000	51	64	50	55	60	71
Geese	'000	20	21	20	19	18	17
Table poultry sold.	'000	474	650	1,213	1,595	2,229	3,072
Egg production (b)	'000 dozen	10,491	11,387	9,918	8,731	9,261	11,198

(a) Excludes poultry kept in backyards, etc.

(b) Recorded by the South Australian Egg Board.

Beekeeping

Beekeeping in South Australia is only a small industry, for in 1965-66 there were less than 800 keepers with 5 or more hives. Of necessity, most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

Beekeeping^(a), South Australia

Season	Beekeepers	Hives		Honey Produced '000 Lb.	Yield of Honey per Productive Hive Lb.	Beeswax Produced '000 Lb.
		Productive	Un-productive			
1961-62	No. 906	No. 61,545	No. 10,162	8,405	137	123
1962-63	842	51,010	18,590	4,147	81	56
1963-64	857	63,142	8,535	9,721	154	134
1964-65	781	58,728	13,900	6,527	111	90
1965-66	793	65,522	9,333	9,929	152	136

(a) Excludes particulars for producers having less than five hives.

9.2. MINING, FORESTRY AND FISHERIES

MINING

INTRODUCTION

In common with all industrialized countries, South Australia has a well developed and growing mineral industry. While iron ore is the major product, the State also has very large resources of industrial minerals which make up a significant proportion of the total annual value of mineral production—almost \$68 million in 1965.

Prior to the founding of the colony in 1836, small quantities of salt had been gathered in the salt lakes of Kangaroo Island. Soon after settlement was established at Adelaide, the first metallic mineral discoveries were made in the silver-lead lodes of Glen Osmond and copper ores of Montacute. Of much greater significance, however, were the discoveries of carbonate copper ores at Kapunda in 1843 and at Burra in 1845 followed in 1860 by the major copper fields of Wallaroo and Moonta. While the first two were comparatively short lived, the Wallaroo-Moonta field prospered, surviving as a major copper producing field for 63 years until final closure in 1923. The relative importance of copper in the early years of the State can be seen from the following figures.

Value of Mineral Production to 31st December 1918, South Australia

	\$
Copper	27,815,508
Iron ore	2,993,466
Salt	1,768,258
Gold	1,313,840
Gypsum	238,832
Other	2,199,212
Total	36,329,116

Details of production in various years since 1841 are given in the Statistical Summary on page 545.

Gold was discovered at Echunga in 1852 followed by discoveries at Barossa in 1868, Waukarina 1872, Woodside 1881, Mannahill 1885, Teetulpa 1886 and Tarcoola in 1900. While these fields attracted interest for a short time, all were small by world standards and most faded quickly into obscurity.

The major mineral industry of today, iron mining in the Middleback Ranges, had its beginnings early in the century as a supplier of flux to the lead smelters at Port Pirie. It was developed as a source of iron ore for blast furnaces in the eastern States in 1915 and now supplies a major proportion of the requirements of the Australian steel industry. A further development is the establishment of an integrated steel industry at Whyalla.

Industrial minerals such as salt, gypsum, talc, barite, and limestone have grown in importance in recent years. The quantity and value of production of the major minerals for years 1963 to 1965 are listed below.

Mining and Quarrying Production, South Australia

As recorded by the Director of Mines

Mineral	Quantity			Value		
	1963	1964	1965	1963	1964	1965
	'000 Tons			\$'000		
Metal mining—						
Iron ore	4,242	4,367	4,392	37,880	38,991	38,850
Pyrite concentrate	83	86	93	1,163	1,202	1,307
Other .....	..	..	..	3	20	11
Fuel mining—						
Coal (sub-bituminous) ...	1,512	1,736	2,016	2,895	3,296	3,263
Non-metal mining—						
Barite	7	11	10	91	116	137
Clay	488	596	492	682	811	734
Dolomite	201	222	245	318	382	425
Gypsum	498	581	560	1,186	1,392	1,346
Limestone	1,574	1,542	1,562	2,365	2,321	2,346
Opal .....	..	..	..	2,287	2,632	3,019
Salt	459	440	513	1,836	1,761	2,051
Talc and soapstone	7	8	10	77	96	155
Other .....	..	..	..	123	117	131
Total mining .....	..	..	..	50,905	53,137	53,776
Construction material—						
Quarrying	11,430	14,213	13,148	11,526	14,459	14,087
Total mining and quarrying .....	..	..	..	62,431	67,597	67,863

.. Not applicable.

INDIVIDUAL INDUSTRIES

Details of mining of individual minerals are given below. Reference should also be made to an article in Part 1.3., pages 19-20 which contains particulars of the location of mineral resources. Map 5 on page 21 shows a number of localities referred to in this section.

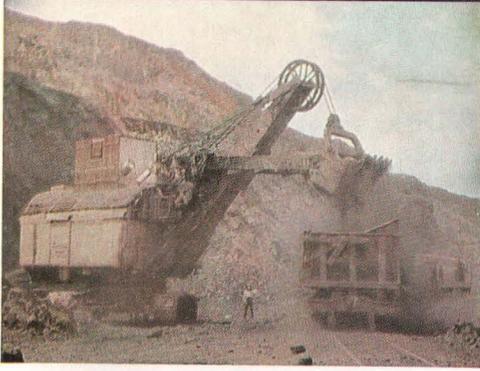
Iron Ore

The only proved high grade iron ores of South Australia lie in the Middleback Ranges to the west of Whyalla. The ranges are composed primarily of iron-rich rocks in which occur local concentrates of high grade ore.



Woods and Forests Department

Morning sunlight filtering through a *Pinus radiata* forest, planted in 1913,
at Caroline near Mount Gambier



Loading iron ore on to rail-
way trucks at Iron Monarch

S.A. Govt Tourist Bureau

Steelworks at Whyalla—a view along the structural mill showing a section
being rolled

Broken Hill Pty Co. Ltd



The Iron Monarch deposit near Iron Knob has provided the bulk of the iron ore for Australia's steel industry for many years. Production from this and the smaller deposits of Iron Prince and Iron Baron is now maintained by the Broken Hill Pty Co. Ltd at the rate of over four million tons annually. The bulk of the ore is shipped to Newcastle and Port Kembla, but a proportion is used for the production of pig iron in the Whyalla blast furnace. Recent developments at Whyalla have included the new, larger blast furnace and an integrated steel plant, together with a considerable expansion of the town.

Reserves of high grade iron ore, though large, are limited in extent, being estimated at about 170 million tons. The grade of ore at 62% iron is exceptionally high by world standards, with the deposit at Iron Monarch having added importance for its high manganese content. In view of the known limitation of high grade ore, the Broken Hill Company has carried out an active exploration programme, and is also planning future use of the very large reserves of low grade siliceous ores known to exist in the Middleback Ranges.

The South Australian Government is conscious of the need for further reserves of iron ore, and has carried out extensive exploration in the Middleback Ranges and elsewhere. Current Department of Mines work is directed at several deposits on Lower Eyre Peninsula, some of which hold promise of substantial tonnages of low grade ore.

Barite

There are widespread occurrences of barite (barytes) throughout the Adelaide System rocks of South Australia. Deposits are located in a number of areas including the Mount Lofty and Flinders Ranges and the Olary district. Its main use is in the paint industry and as a drilling mud in oil drilling.

For some years the principal producer has been the Oraparinna mine in the Flinders Ranges, this being the largest producer of high-grade barite in Australia.

Gypsum

South Australian deposits contain by far the largest part of Australian reserves of gypsum. The deposits have in general been formed in coastal basins cut off from the ocean, giving rise to extensive deposits of rock gypsum. The most important coastal deposits are found at Lake MacDonnell, Stenhouse Bay and on Kangaroo Island. Inland deposits mainly of seed gypsum occur at Moonabie, Lake Fowler, Cookes Plains and along the Murray River.

The gypsum deposits have been worked extensively over the past 50 years to provide the bulk of Australasian requirements for the plaster industry and for portland cement manufacture. Present production now exceeds 500,000 tons annually.

Reserves of high grade gypsum in Lake MacDonnell have been proved by the Department of Mines to exceed 500 million tons, sufficient to meet Australia's requirements for many generations. Because of its remote location on the West Coast of South Australia, development of the deposit has been slow. However, with installation of bulk loading equipment and the development of overseas markets, considerable expansion of operations at Lake MacDonnell may be expected.

Salt

The semi-arid climate and high evaporation rate along much of South Australia's coast line, together with the high salinity of the gulf waters, create very favourable conditions for the production of salt by solar evaporation. The availability of sites close to cheap transport led to the establishment of solar salt works at the head of Spencer Gulf near Port Augusta and at Whyalla, at Price on the eastern shore of Yorke Peninsula, and in 1940 at Dry Creek near Adelaide. In addition several operators recover salt from shallow salt-lakes on Yorke Peninsula and elsewhere.

At present South Australia produces about 450,000 to 500,000 tons annually, and provides some 80% of Australia's salt requirements. The industry is capable of very great expansion to cope with any increase in demand.

Opal

Precious opal was discovered in 1915 at Coober Pedy and in 1930 at Andamooka. From very small beginnings the value of opal production has grown till it now exceeds \$3 million annually.

In spite of the value of opal being won at present, opal mining remains a small scale operation. Both Andamooka and Coober Pedy are small outback settlements with few amenities and with floating populations. The distances from Port Augusta to Andamooka and Coober Pedy are 200 and 400 miles respectively.

Mining at both centres is relatively shallow, rarely exceeding 90 feet. The extent of the opal fields is not known as there has been no systematic exploration, but it is probable that the fields will continue to yield the gem for many years.

Pyrite

In the vicinity of Nairne, 30 miles south-east of Adelaide, there has long been known to exist an enormous body of iron pyrite extending for a distance of at least six miles. Until 1950 this deposit was of little economic significance. However, a world shortage of sulphur, upon which the fertilizer industry is dependent for sulphuric acid, made it necessary to utilize local sources at that time.

Limited exploration of the deposit was made by private enterprise, and extended by the Department of Mines and resulted in the proving over some two miles in length, of 14 million tons of mineable ore containing 10% of recoverable sulphur.

Development, sponsored and aided by the Government, was then undertaken as a joint enterprise by local companies. Regular production commenced in 1955 and an annual output in excess of 80,000 tons of concentrate containing the equivalent of 30,000 tons of sulphur is utilized for acid and fertilizer manufacture at Birkenhead.

Talc

The principal occurrences of talc are to be found at Mount Fitton in the Northern Flinders Ranges and in the Gumeracha district. From these sources approximately 8,000 tons a year are mined to supply 90% of Australia's requirements.

The Mount Fitton talc is particularly high grade, and is in demand for use by the cosmetic industry. Lower grade material is used in the rubber, paint, and ceramics industries.

Coal

South Australia is deficient in bituminous coal resources and the only mining is of sub-bituminous coal at Leigh Creek. The field was discovered in 1888 during dam sinking operations, leading to an unsuccessful attempt at underground mining in the years 1892-1908.

The present development of the field commenced with Department of Mines boring operations in 1941. The Electricity Trust of South Australia assumed control of the field in 1948 and developed it as a source of fuel for the Port Augusta power station. Meanwhile testing by the Department of Mines continued for some years, proving a total of 55 million tons of coal available by open cut methods and a further 81 million tons of underground reserves.

Coal production in 1965 was over two million tons. Almost the entire production is railed to Port Augusta for use in power generation to supply a large proportion of the State's requirements of electric power.

Limestone and Dolomite

The combined tonnage of limestone and dolomite extracted each year is in excess of 1,750,000 tons.

The principal deposits mined are limestone at Rapid Bay and dolomite at Ardrossan for the steel industry, limestone at Penrice for the chemical industry, lime sand at Wardang Island for the metallurgical industry, and limestone at Angaston and Klein Point for the cement industry. In the process of development are the very large lime sand deposits of Coffin Bay. It is anticipated that approximately one million tons of sand will be taken from Coffin Bay each year and railed to Port Lincoln for transhipment to the Whyalla smelters and interstate.

Limestone Production, South Australia

Excluding limestone used as building stone, road materials, etc.

Classification	1961	1962	1963	1964	1965
	'000 Tons				
Flux.....	353.5	604.2	751.8	591.9	602.6
Cement.....	535.9	580.5	594.5	713.5	692.3
Chemical.....	196.8	195.6	214.6	222.3	244.8
Other.....	19.1	19.8	13.2	13.8	22.0
Total	1,105.3	1,400.1	1,574.1	1,541.5	1,561.7

Clay

South Australia possesses a wide variety of clays which are used for industrial purposes such as cement manufacture, building bricks and roofing tiles, refractory ware, pottery and ceramic purposes. Because of the scarcity of local timber supplies, softwoods excepted, much greater use is made of clay bricks for construction in South Australia than in other parts of the Commonwealth. The clay brick industry is concentrated near Adelaide.

There are also widely distributed occurrences of special clays for ceramic and refractory ware, the most noteworthy being the ball clay at Woocalla, china clay at Mount Crawford, and fire clay at Birdwood, Littlehampton, Tea Tree Gully, Booleroo Centre, and Lincoln Gap.

Clay Production, South Australia

Classification	1961	1962	1963	1964	1965
	'000 Tons				
Brick clay and shale	311.3	338.2	407.3	517.1	386.3
Cement clay (shale)	11.7	14.6	13.0	21.1	29.2
Fire clay	25.6	20.8	29.5	27.2	27.4
Kaolin and ball clay	2.1	2.2	3.8	4.5	7.4
Pottery clay	46.8	30.4	34.7	26.0	41.8
Total	397.5	406.2	488.3	595.9	492.1

The Department of Mines, together with the Australian Mineral Development Laboratories, is continually engaged in investigations relating to the usage of clay deposits encountered during geological surveys throughout the State.

Construction Material Quarrying

Post-war industrial expansion, accompanied by extensive housing programmes and highway construction has resulted in a rapidly increasing demand for construction materials. Total production has risen from less than 2 million tons in 1947 to over 14 million tons in 1964; production was 13 million tons in 1965.

A variety of building stones is quarried including Mount Lofty sandstone, a white stone which hardens in the atmosphere; Basket Range sandstone, a dark coloured stone of pleasing appearance, and Mount Gambier limestone, a polyzoal limestone of the South East. Limestone deposits have also been worked at Overland Corner, Cadell and Waikerie. A quantity of granite is extracted each year and marble occurrences are worked at Angaston, Kapunda, Macclesfield and Paris Creek. The two main sources of slate in South Australia are at Willunga and Mintaro. Both areas supply paving slate and a large quantity of Mintaro slate is dressed and polished.

Building Stone, South Australia

Type of Stone	1961	1962	1963	1964	1965
	'000 Tons				
Granite	1.5	2.2	2.4	2.1	2.9
Limestone	25.9	21.3	13.5	13.9	14.1
Marble	1.3	1.4	1.7	1.8	2.2
Sandstone	8.8	9.3	4.8	10.8	9.0
Slate	2.2	2.6	2.7	2.9	3.4
Total	39.7	36.8	25.1	31.5	31.6

Production of other construction materials is shown below. The importance and expansion in production of limestone (predominantly for construction of roads) and quartzite (mainly in the form of screenings) can be seen.

Road and Other Construction Materials, South Australia

Type of Material	1961	1962	1963	1964	1965
	'000 Tons				
Limestone.....	4,258	4,188	4,127	6,051	5,449
Quartzite	3,270	2,827	3,146	3,624	3,759
Sand	1,863	1,516	2,031	1,854	1,795
Other materials	1,992	2,035	2,101	2,653	2,113
Total	11,383	10,566	11,405	14,182	13,116

MINERAL DEVELOPMENTS

The natural gas discovery at Gidgealpa has developed into a commercial prospect with the success of the first two holes on the nearby Moomba structure. Following studies of the field by both the Mines Department and an overseas consultant, reserves have been estimated at 800 million cubic feet, with probable total reserves of about 1,440 million cubic feet.

A survey of the natural-gas market in South Australia established the feasibility, as a commercial proposition, of a pipeline to convey gas from the field to the major potential consumers in the Adelaide area. These consumers are the Electricity Trust of South Australia, the South Australian Gas Company and the major industrial consumers of fuel.

A study of the natural gas pipeline proposal was made in which estimates were based on the assumption that the pipeline utility would be operated by a Natural Gas Pipelines Authority set up by the Government which would merely transport the gas on a cost of service basis with the gas being produced on the field and sold in the Adelaide area by the producers. The initial cost of an 18in. pipeline, 481 miles long, has been estimated at \$31 million. Total cost to bring the pipeline system to maximum capacity within 20 years, including compressor stations and loop lines, has been estimated at \$76 million.

In March 1967, Parliament passed the Natural Gas Pipelines Authority Act which established the Natural Gas Pipelines Authority with powers to construct and operate pipelines for the conveyance of natural gas. Recent discussions between the Commonwealth and State Governments regarding finance for the pipeline concluded with the Commonwealth granting approval to the State to raise a \$20 million loan for construction of the pipeline.

Exploration for copper and other minerals has continued at a tempo comparable with recent years. At the end of 1966, 38 special mining leases totalling 24,057 square miles were held, principally in the Flinders Ranges and Olary province. In spite of the long history of copper discovery and development in this State, there has been negligible production of this metal for over 40 years. However, at present there is a revival of copper exploration with private companies and the Mines Department participating. During 1966 three old copper mining centres on private land (Burra, Kapunda and Callington) were under active investigation, while Government exploration activities were carried out in the Lyndhurst area.

Other minerals, either not being produced or having only minor production at present, but which may have significant development in the next few years, include—

Silver-lead. A field at Ediacara, at present being investigated by the Mines Department, shows promise as a very large low-grade lead ore body.

Molybdenite. An occurrence has been recorded at Spilsby Island, although so far it is not an economic proposition.

Manganese ores. Deposits have been recorded in the lower Flinders Ranges, and more importantly at Pernatty Lagoon. Although the State's known deposits are largely depleted, the prospects for new discoveries are good.

Nickel. The presence of nickel has been recorded in several parts of the Flinders Ranges, and in the Tomkinson Ranges of the far north-west. At present the Mt Davies area is being investigated.

Phosphate Rock. Australia's requirements at present are supplied from Pacific island deposits which are rapidly being depleted. However, the search for phosphate rock has continued in various parts of the State. Four off-shore licences totalling 16,130 square miles are at present held. In addition the Mines Department has investigated sediments of the Great Artesian Basin, including areas of the southern and western margins.

EMPLOYMENT AND WAGES

The number of persons engaged in mining and quarrying in South Australia (expressed as an average over the period of operation) is shown in the next table. The greatest increase in recent years has occurred as a result of a rapid rise in the number of opal miners at Coober Pedy and Andamooka.

Employment in Mines and Quarries, South Australia

Average Number Employed During Period Worked^(a)

Classification	1961	1962	1963	1964	1965
Mining—					
In mines with 4 or more employees	1,180	1,249	1,106	1,112	1,089
In mines with less than 4 employees	886	952	992	969	1,050
Construction material quarrying—					
In quarries with 4 or more employees ..	685	740	757	919	994
In quarries with less than 4 employees ..	316	255	263	242	239
Total	3,067	3,196	3,118	3,242	3,372

(a) Includes working proprietors.

Wages and salaries paid in the larger mines and quarries are shown below. Drawings by working proprietors are not included.

Salaries and Wages Paid in Mines and Quarries, South Australia
In Mines and Quarries With 4 or More Employees During Period Worked

Classification	1961	1962	1963	1964	1965
	\$'000				
Mining—					
Salaries	392	421	465	534	517
Wages	2,449	2,752	2,492	2,598	2,659
Construction material quarrying—					
Salaries	103	128	125	167	172
Wages	1,371	1,321	1,566	2,029	2,110
Total salaries and wages	4,316	4,621	4,648	5,328	5,457

MINING ADMINISTRATION

The Department of Mines is responsible for—

- The administration of mining legislation including the granting of mineral leases and collection of royalties and fees.
- Geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources.
- Boring to test mineral deposits and underground water supplies.
- Development of sub-surface water supplies for farming, pastoral, irrigation and mining purposes.
- The testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories.

The Mining Act, 1930-1962 deals with such subjects as authority to prospect and the acquisition of mining titles.

The Mines and Works Inspection Act, 1920-1966 regulates in respect to "the state and condition of the mine, machinery, ventilation, and all other things relating to the safety, health and well being of the employees and general public".

FORESTRY

HISTORICAL

South Australia was the first State to inaugurate a forest policy. This, however, was probably due more to need and past misgivings than to foresightedness, as much of the productive areas of the State had been denuded of their natural vegetation by the early settlers.

The first attempt came in 1873 with the passing of an Act authorizing the issue of a land order valued at \$4 per acre to landowners who planted and maintained forest areas. Unfortunately only one landowner successfully availed himself of this offer.

Forest management in South Australia dates from the Forest Board Act of 1875 when 195,000 acres were placed under the control of a Board, together with the power to proclaim further reserves. The two basic functions of the Forest Board were to promote the protection, and hence the regeneration, of natural vegetation, and to demonstrate the practicability of forestry.

By 1877 the Board had established nurseries at Bundaleer and Wirrabara in the Flinders Ranges and Mount Gambier in the lower South East of the State. It had also planted 1,000 acres of eucalypts and pines at Bundaleer and had carried out small plantings of pines around the Mount Gambier lakes. Further plantings followed at Wirrabara and Mount Burr. *Pinus radiata*, the native of California which today dominates the South Australian forestry scene, was first planted experimentally in 1876.

The first Conservator of Forests took office in 1878. The Forest Board was abolished in 1883 and the Woods and Forests Department established, the Conservator of Forests becoming departmental head. This was the first forests department to be established in the then British Empire. Forest reserves in that year stood at 150,000 acres.

In 1881 the Government introduced a scheme for the free distribution of seedlings to landowners and between 200,000 and 300,000 trees were distributed each year until 1924-25 when the scheme was terminated.

By 1890, with continued planting, particularly in northern areas, a total of over 9,000 acres had been planted and the area of reserves had increased to 225,000 acres.

During these early years a multiplicity of species was planted in an effort to determine those best suited to the local environment. From this astute experimentation there emerged a distinct pattern of development. By 1909 a pronounced swing to softwood plantings was under way although softwoods still accounted for only 12% of total plantations. The first pines were felled between 1903 and 1910, and their encouraging yield provided such an impetus for further plantings that softwoods accounted for 35% of area planted by 1920.

The future pattern of forestry development was now well established. The South East had become the centre of forestry operations and *Pinus radiata* the dominant species. The planting of hardwoods had virtually ceased, and in 1923 the Government released many of the small reserves and plantations in the north, the operation of which had ceased to be economical.

Forestry development entered a period of vigorous growth in the mid 1920's when greatly increased expenditure was available to the State authorities and when private interests, impressed by early successes with *Pinus radiata*, began developing plantations. Prior to 1924-25 the State's expenditure on afforestation had come from general revenue, but henceforth it was to come from loan funds thus permitting a considerable increase in expenditure. Furthermore, the Development and Migration Commission decided to sponsor a large scale afforestation programme and in the period 1925-1937 advanced a total of \$670,000 for this purpose. During this period the Woods and Forests Department established on average over 5,000 acres of new forest per annum and considerable areas were planted by private interests. Details of planting in this and subsequent periods are given in the following table.

Forests Planted, South Australia

Particulars	1929-1936	1937-1944	1945-1952	1953-1960
	Acres			
Area—				
State	47,500	18,650	24,050	27,746
Private	12,000	6,550	2,100	10,099
Total	59,500	25,200	26,150	37,845
	'000			
Trees—				
State	28,000	12,500	16,500	Not available
Private	7,500	4,500	1,350	
Total	35,500	17,000	17,850	

THE FOREST ESTATE

There are an estimated 23½ million acres of land classified as forests in South Australia although most is of very low grade and of little economic value. Some 2½ million acres, however, are currently considered as exploitable but half of this area yields only firewood. Although uneconomic for timber getting, many forests are of considerable value through soil conservation, and timbered areas help regulate climate and provide shelter, shade and natural beauty.

Certain areas have been set aside as State forest reserves, the area thus reserved at the 30th June 1965 being 286,207 acres. Although the total area reserved has shown little fluctuation since 1929 the area under plantation has been consistently increasing.

Indigenous Forests

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. A few species are of commercial value and these are devoted largely to the production of poles, posts, rails and sleepers. The mallee lands provide an important source of firewood.

Areas of forest reserves not yet planted with conifers are maintained in natural hardwoods but it is unlikely that further hardwood plantations will be established except in small trial areas.

Exotic Plantations

Exotic softwoods accounted for 98% of the planted forest area at 30th June 1965.

As can be seen from the accompanying tables the vast majority of planted forest is situated in the South East. With an annual rainfall in excess of 25 inches the South East has proved an ideal site for forestry activity. The Mount Lofty Ranges, geographically suitable for pine forests, contain only limited areas due to the high price of land.

The following table clearly illustrates the overwhelming importance of one species, *Pinus radiata*, in the composition of South Australian forests.

Forests, South Australia

Area Planted During 1964 and Area of Plantations at 30th June 1965

Location	Planted during 1964			Plantations at 30th June 1965		
	Softwoods		Hard-woods	Softwoods		Hard-woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
	Acres					
State Forests—						
South East—						
Penola	636	—	—	25,374	3,561	199
Mount Burr	623	88	—	27,048	1,950	168
Mount Gambier	310	48	—	17,259	1,523	21
Myora	645	106	—	10,672	428	—
Caroline	773	192	—	7,309	546	—
Tantanoola	97	8	—	6,031	228	11
Comaum	190	111	—	4,670	521	14
Other	158	43	—	2,001	203	3
Total South East	3,432	596	—	100,364	8,960	416
Central—						
Mount Crawford	65	25	1	6,317	702	508
Kuitpo	4	—	—	4,982	946	353
Reservoir areas	153	—	—	1,257	134	—
Other	136	7	—	3,621	623	149
Total Central	358	32	1	16,177	2,405	1,010
Northern	238	16	4	5,033	197	1,039
Murray Lands	—	—	—	—	15	120
Western	8	1	—	58	33	851
Total State forests	4,036	645	5	121,632	11,610	3,436
Private Forests—						
South East (a)	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	39,057	—	—
Other	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	2,820	—	309
Total private forests	2,241	1	1	41,877	—	309
Total forests	6,922	6	6	175,119	3,745	3,745

(a) Small plantations on farming properties have been included in "Other".

n.a.—Not available.

Despite the virtues of relative ease and cheapness in planting and rapid growth *Pinus radiata* is likely to play a less prominent role in future forestry expansion as areas suitable for its cultivation are now limited. Experimental plantings have proved *Pinus pinaster* to be most promising on sites unsuitable for *Pinus radiata* and this species should become increasingly prominent.

The 645 acres of "other" softwoods planted in State forests during 1964 were mostly *Pinus pinaster*, bringing the total area of that species standing at 30th June 1965 to 9,679 acres. In all, some 25 species of pines are growing in State forests, although the majority were planted in earlier periods of experimentation.

Forests, South Australia
Net Area of Plantations at 30th June

Location	1961	1962	1963	1964	1965
Acres					
State Forests—					
South East—					
Penola	26,091	26,662	27,550	28,573	29,134
Mount Burr	27,758	26,660	27,466	28,630	29,166
Mount Gambier	19,567	16,508	17,477	18,654	18,803
Myora	9,305	9,425	9,666	10,807	11,100
Caroline	4,537	5,148	6,281	7,081	7,855
Tantanoola (a)	—	5,575	5,925	6,165	6,270
Comaum	4,132	4,205	4,535	4,904	5,205
Other	1,292	1,421	1,801	2,005	2,207
Total South East ..	92,682	95,604	100,701	106,819	109,740
Central—					
Mount Crawford	6,819	6,983	7,160	7,394	7,527
Kuitpo	6,030	6,045	6,146	6,277	6,281
Reservoir areas	821	923	1,115	1,238	1,391
Other	3,869	4,020	4,121	4,198	4,393
Total Central	17,539	17,971	18,542	19,107	19,592
Northern	5,442	5,412	5,725	6,088	6,269
Murray Lands	135	135	135	135	135
Western	967	980	991	932	942
Total State forests ..	116,765	120,102	126,094	133,081	136,678
Private Forests—					
South East (b)	34,398	36,183	37,938	37,993	39,057
Other	2,622	2,532	2,664	2,889	3,129
Total private forests	37,020	38,715	40,602	40,882	42,186
Total forests ...	153,785	158,817	166,696	173,963	178,864

(a) Tantanoola forest created from land previously included in Mount Gambier and Mount Burr forests.

(b) Small plantations on farming properties have been included in "Other".

Seedlings raised in nurseries are planted out at a density of 700-900 trees to the acre. A series of thinnings, starting when the trees are about 10 years old, reduces the density to 100-150 trees to the acre at age 30. These thinnings are carried out on a commercial basis and make an important and very substantial contribution to timber and pulpwood output. The clear felling age is

aimed at not less than 40 years although for management purposes some earlier felling has been necessary in the past.

FOREST ADMINISTRATION

State Forests

State forests are administered by the Woods and Forests Department. The Conservator of Forests is departmental head and each forest reserve is in the charge of a professionally trained forester.

In earlier years when large areas of plantations were being established expenditure by the department naturally exceeded revenue, but since 1942-43 the revenue has exceeded expenditure including depreciation and interest on loans. By 1954-55 accumulated surpluses had almost matched expenditure on establishment and maintenance of plantations, and it was decided to pay future annual surpluses of the department to Consolidated Revenue.

Funds employed by the Woods and Forests Department, including its milling operations, amounted to \$22,840,000 at 30th June 1965 of which \$9,918,000 was represented by timber stands and land at net cost. During 1964-65 working account receipts from the forestry operations of the department were \$7,126,000 as against payments of \$4,204,000. During the year a contribution of \$1,080,000 was made from surpluses on operations to Consolidated Revenue.

Private Forests

Private forests accounted for approximately 24% of the planted area at the 30th June 1965. A small number of private companies operating pine plantations in the South East controlled the bulk of private forest land, the balance representing a large number of holdings of a few acres on farming properties throughout the State.

PRODUCTION

The following table gives the quantity and value of output of forest logs over the last 10 years.

Forest Log Production, South Australia

Year	Softwoods		Hardwoods	
	Quantity	Value (a)	Quantity	Value (a)
	'000 Sup. Ft (b)	\$	'000 Sup. Ft (b)	\$
1955-56	216,751	3,360,472	8,331	191,528
1956-57	208,595	2,810,816	8,206	160,252
1957-58	184,839	2,987,278	7,030	144,844
1958-59	267,880	4,337,852	6,466	150,330
1959-60	298,305	4,586,790	4,797	106,276
1960-61	265,408	4,309,898	7,192	209,162
1961-62	277,388	4,566,420	6,892	203,354
1962-63	312,304	5,169,108	5,489	122,338
1963-64	308,651	5,073,842	7,504	179,338
1964-65	322,018	5,630,964	6,944	164,411

(a) Value on mill skids.

(b) Full round measure.

Log production depends on the supply of mature trees and on thinning operations, and planned forestry management ensures that the amount of timber cut each year does not exceed new growth. As planting during the 10 years prior to 1925 was relatively light the number of mature trees available in recent years has been limited, and thinning operations have provided approximately two thirds of log production.

By contrast the extensive plantings of 1926-34 are now reaching maturity and production is therefore expected to increase rapidly in the immediate future. Forestry in South Australia has almost reached a stage where the full annual yield can be cut in perpetuity.

Other forestry products include firewood, yacca gum, wattle bark and eucalyptus oil.

EMPLOYMENT

The number of persons directly employed by the Woods and Forests Department in forestry activity in recent years is given below. The department also employs over 700 persons in milling activities.

The townships of Mount Burr (population 937 at 30th June 1961) and Nangwarry (1,318) are maintained by the department.

State Forestry Employees, South Australia At 30th June

Classification	1961	1962	1963	1964	1965
Professional staff—					
Foresters.....	35	31	33	35	35
Other.....	45	44	45	41	39
Non-professional field staff	2	8	8	7	7
Clerical staff.....	103	101	102	97	103
Labour (silvicultural forest works, etc.)	316	302	307	275	244
Total	501	486	495	455	428

The extraction of timber from State forests is carried out by contractors. At 30th June 1965 an estimated 400 persons were employed extracting timber from forests in South Australia.

RESEARCH AND ADVISORY SERVICES

The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and expansion of *Pinus radiata* resources, as well as into forestry in general.

The Woods and Forests Department maintains its own research facilities and in addition combines with the Commonwealth Forest Research Institute in operating a regional branch of the Institute at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of the C.S.I.R.O. and the Waite Agricultural Research Institute.

Research activities aimed at an expansion of forestry production include the development of fertilizers, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Preventive research is concerned with the extremely important question of soil deterioration and with combating various

diseases and pests. Permanent sample plots have been established in departmental forests as an aid to research into various aspects of forest management.

The Woods and Forests Department provides an advisory service in arboriculture and distributes, through the Belair nursery, a wide variety of trees which have been selected for their adaptability to various climatic and soil conditions.

FOREST PROTECTION

The State's hot dry summer conditions require forest managements to take considerable precautions and to maintain constant vigilance against forest fire. The clearing of undergrowth, the maintenance of fire-breaks, the manning of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include spraying to prevent the disorder known as "die-back", exposing land prior to planting to counteract the bark beetle and the eradication of the various weeds and pests which threaten young plants.

Since the discovery of the *Sirex* wood wasp in Victorian forests in 1961 constant watch has been maintained for any sign of this pest in South Australian pine forests.

FISHERIES

The entire coastline of South Australia except for the unpopulated area west of Fowlers Bay, is fished commercially. In the sheltered waters of the gulfs, Kangaroo Island, the Coorong and the West Coast bays, there are net and handline fisheries; in the open off-shore waters tuna, crayfish and shark are sought; and inland in the River Murray a small quantity of fresh water fish is caught each year.

HISTORICAL

The earliest commercial fishing industries were associated with oysters and with net and handline fishing for whiting, snapper and net-fish. Oysters were severely overfished and by 1930 supplies were reduced to such an extent that they were no longer commercially exploited. The fishing for whiting by hand line and the general net fishery have remained operative and have benefited from modern methods of handling, transporting and marketing.

Crayfish were also taken quite early in the State's history but it was not until the establishment in the mid-forties of the American market for frozen cray-tails, with its high prices, that production was substantially increased.

Shark fishing in South Australia developed in conjunction with the crayfish industry as the fishing areas were generally similar and the boats easily converted for either type of fishing. The main expansion in shark fishing occurred in the early 1950's when there was a strong demand for shark from Victoria and prices were attractive. Production which reached a maximum in 1957, decreased when the Victorian price fell and the market for shark liver oil collapsed. Recently markets have improved and production has risen substantially.

Early attempts at trawling throughout the State gave poor results except in the Great Australian Bight where several productive grounds were discovered. In an attempt to establish trawling in this area the Commonwealth Government purchased the trawler *Southern Endeavour* and the grounds were fished for a period of 18 months during 1960 and 1961. Although fish were landed in commercial quantities, financial returns were insufficient to justify continuation of the programme and the vessel was sold. The development of a trawling industry might be possible in the future when techniques and markets improve.

The most recently developed fishery in the State is that of "live bait pole" fishing for tuna. Production has increased rapidly since the first attempts at tuna fishing in the 1940's, and currently tuna provides half of the total State catch of scale fish.

ADMINISTRATION

Exploitation of the State's fish resources is controlled by two Acts, the State Fisheries Act, 1917-1962 and the Commonwealth *Fisheries Act* 1952-1959. Under the State Act, which is administered by the Fisheries and Fauna Conservation Department, provision is made for the licensing of fishermen and the registration of boats and gear. Control of fishing activity is maintained by the establishment of size limits, closed areas and closed seasons, the regulation of net sizes, and the prohibition of the use of explosive or noxious substances. There is also provision for the maintenance and improvement of port and harbor facilities. The Commonwealth Fisheries Act complements State legislation and provides for management of resources in extra-territorial waters.

FISHERMEN AND BOATS

The numbers of persons and boats engaged in commercial fishing activities are shown in the following table. Practically all boats of 55 feet and over are engaged in tuna fishing. During the off season for tuna some are used for salmon, shark or cray fishing. Boats over 25 feet and under 55 feet are engaged in taking shark and crayfish and those under 25 feet are used mainly in net and hand line fisheries. Boats and equipment were valued at \$6,258,000 in 1964-65.

Fishing: Persons and Equipment Engaged, South Australia

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65
Persons engaged (a)	6,452	6,848	7,200	8,520	9,300
Boats engaged(b)—					
Under 25 feet			1,360	1,366	2,048
25 feet and under 35		Not	180	154	125
35 feet and under 55		available	96	91	103
55 feet and over			14	25	24
Total			1,650	1,636	2,300

(a) Includes full-time and part-time licensed fishermen. Full-time fishermen estimated at 2,000 over these years.

(b) Due to increased policing of Fisheries legislation the number of boats shown for 1964-65 is not strictly comparable with previous years.

PRODUCTION

Marine Fish

Tuna, shark, whiting and salmon are the most important marine species.

Tuna are taken in the waters south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. Although purse-seining has been attempted the only successful technique to date is pole fishing with live bait. The use of spotting aircraft has increased the efficiency of fishing operations. Most tuna are landed at Port Lincoln although occasional landings have been made at Port Adelaide.

Whiting are taken commercially in Gulf St Vincent, Spencer Gulf, Investigator Strait and the West Coast bays. In many areas hand lining continues to provide profitable catches as this fish attracts a high price. In other areas of the gulfs and the West Coast, netting restrictions have been eased and large quantities of whiting and garfish are netted.

The shark fishing extends from the Victorian border in the east to Fowlers Bay in the far west. The main landing ports are the South East crayfish ports, Port Adelaide, Port Lincoln and Victor Harbor. Most shark are taken by long line but some are taken on hand lines by snapper fishermen.

Australian salmon provides useful off-season fishing for a number of tuna fishermen. The best catches are taken in Spencer Gulf and around Kangaroo Island. Most fish are landed at Port Lincoln for canning. In the South East large quantities of salmon trout are netted for crayfish bait. Of other species garfish, mulloway and snapper are highly regarded as table fish. Mulloway are netted in the Coorong, garfish are netted in the gulfs and West Coast bays and, in season, snapper are taken by hand and long line in most areas of the State.

Fresh Water Fish

Approximately 210 part-time commercial fishermen using drum nets and set lines are engaged in fishing on the River Murray for Murray cod and callop. This is the only commercial source for fresh water fish in the State because of the general lack of permanent streams and lakes. To prevent over-fishing, the river has been sectioned into "reaches" and "reserves" and each commercial fisherman is issued with a permit to fish a separate reach.

The main commercial fish species, together with their production in recent years, are listed below.

Fish: Production by Species, South Australia

Estimated Live Weight

Species	1960-61	1961-62	1962-63	1963-64	1964-65
	'000 Lb.				
Marine—					
Australian salmon.....	740	1,050	885	1,245	1,155
Bream	65	52	67	54	50
Garfish	585	505	500	620	630
Mullet	612	675	550	600	610
Mulloway	64	85	135	141	147
Ruff	365	390	460	475	530
Shark	1,682	1,582	2,632	2,397	1,937
Snapper	571	505	637	579	647
Snook	385	410	410	390	330
Tuna	4,961	7,420	7,932	12,085	10,430
Whiting.....	1,475	1,675	1,875	1,615	1,810
Other marine species	1,252	841	425	535	510
Total	12,757	15,190	16,508	20,736	18,786
Freshwater—					
Golden perch (callop)	400	300	500	400	350
Murray cod	200	150	100	75	50
Total	600	450	600	475	400
Total fish production ..	13,357	15,640	17,108	21,211	19,186

RESEARCH

In recent years the realization that research is essential for effective fisheries management has promoted several research programmes. Tuna, crayfish, salmon and shark resources are being investigated by a joint Commonwealth and States group consisting of the Division of Fisheries and Oceanography of the Commonwealth Scientific and Industrial Research Organization, the Fisheries Division of the Commonwealth Department of Primary Industry, and the Fisheries departments of New South Wales, Victoria, Tasmania and South Australia. Research is also being undertaken to determine possible uses for fish stocks which are not at present utilized. In addition, the State Fisheries and Fauna Conservation Department is conducting a whiting research programme. All programmes will provide a scientific basis for the management of the fisheries concerned.

9.3. MANUFACTURING

DEVELOPMENT

Early factory production was naturally orientated to local needs: thus brick kilns, flour mills, tanneries, distilleries and a candle and soap works were among factories recorded in the 1840's. Also in operation were the smaller establishments of saddlers and coachbuilders, while various food and clothing industries were being established. Heavy industry can probably be traced to the production of agricultural machinery, beginning with the reaper of 1843 and including the stump-jump plough of 1876.

The discovery of copper in 1843, together with later discoveries, provided an impetus to certain industrial pursuits. However, the finding of gold in Victoria in 1851 led to an exodus of skilled personnel from which the Colony's infant industries were not fully to recover for some two decades.

A highlight in the industrial progress of the State was the establishment at Port Pirie in 1889 of smelters for the processing of silver-lead ore from Broken Hill. This was primarily responsible for building up Port Pirie's population from about 900 at the 1881 Census to some 8,000 twenty years later, making the town at that time by far the largest country centre in South Australia.

There had been customs tariffs from very early days, but it was not until the 1880's that they reached a level offering protection to secondary industries. Further stimulus was provided in 1901 when the establishing of the Commonwealth provided for free trade between the States and the erection of a common tariff barrier. After World War I, manufacturing industry again expanded with the assistance of still higher tariffs.

Despite certain industrial growth, South Australia in the mid 1930's was still basically a primary producing State. It is over the last thirty years, that a really rapid growth in the relative contribution of secondary industry to total production has taken place. Development in the mid 1930's coincided with Government action which reduced company taxation and wharfage charges, and provided for a programme of low-cost housing. The needs of war provided a further stimulus to the industrialization process in the early 1940's; it is since the war, however, that the most impressive development has taken place.

In the following table various measures of industrial development have been recorded for the period since World War I.

Factory Development, South Australia

Period	Factories	Persons Employed (a)	Motive Power (b)	Value of Land, Buildings, Plant and Machinery	Value of Production
	No.	No.	Horsepower	\$'000	\$'000
Five year average					
1920-21 to 1924-25	1,578	33,382	83,887	11,415	9,789
1925-26 to 1929-30	1,823	37,617	149,891	35,816	25,344
1930-31 to 1934-35	1,710	27,409	184,797	35,206	16,308
1935-36 to 1939-40	2,025	42,337	266,051	36,680	26,338
1940-41 to 1944-45	2,172	64,778	358,940	66,218	50,210
1945-46 to 1949-50	2,788	72,302	467,009	83,876	76,564
1950-51 to 1954-55	3,410	84,490	638,220	144,164	180,598
1955-56 to 1959-60	4,211	94,045	903,699	282,584	273,508
1960-61 to 1964-65	5,608	106,262	1,370,915	512,841	398,608
Year					
1961-62	5,519	99,094	1,296,507	449,600	347,828
1962-63	5,766	105,265	1,317,292	506,571	379,142
1963-64	5,826	110,813	1,456,332	560,938	427,356
1964-65	5,887	116,183	1,598,920	645,469	498,588

(a) Average employment for whole year; includes working proprietors.

(b) Rated horsepower of engines ordinarily in use. From 1940-41 excludes motors driven by electricity of own generation, to avoid duplication.

THE CONTENT OF FACTORY STATISTICS

The period covered by the statistics is generally the twelve months ended 30th June. In cases where some other accounting period is used, returns may be obtained for that accounting period. These cases, however, are comparatively few, and their inclusion in no way impairs the comparability of the statistics in the year under review or from year to year. In preparing the statistics the following definitions have been applied:

Factory. For the purposes of the accompanying statistics a factory is defined as an establishment in which four or more persons are employed or where power-driven machinery is used in manufacturing, repairing, or assembling. It should be noted that the details relating to small establishments not classified for statistical purposes as factories are not included in the figures shown herein. Also excluded are the activities of the Commonwealth Department of Supply and the various private firms working within the Weapons Research Establishment at Salisbury and at the testing range at Woomera.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics.

Average Number of Persons Employed. All persons employed in the manufacturing activities of a factory are counted as factory employees. The figures relating to employment, therefore, exclude all those engaged in selling and distribution, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods, and retailing storemen. The figures, however, include proprietors who work in their own businesses and "out-workers".

The average number of persons employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of

these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year); this average is used only in respect of details relating to classification according to number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

Working proprietors are included in all employment figures other than those relating to age dissections, but in all cases drawings by working proprietors are excluded from salaries and wages paid.

Value of Premises and Machinery. The values shown include an allowance for rent capitalized where premises and machinery are not owned by the occupiers.

Costs of Production. This item includes the value, in the usual sense, of materials used, stores used, containers, tools replaced, materials used in repairs to plant, and the cost of power, light, lubricants and water used. In general, it does not include the value of customers' articles or materials repaired, assembled, or treated by the factory.

Value of Output. The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission, and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory exclusive of all delivery costs and charges and excise duties but inclusive of bounty, and subsidy payments to the manufacturer of the finished article.

Value of Production. The value of production is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of materials, containers, packing, power, fuel, and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. On the other hand the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason the value of production, and not the value of output is usually the more useful measure of activity.

There are many miscellaneous expenses, such as maintenance of buildings, depreciation, workers' compensation insurance, other insurances, pay-roll tax, income tax, advertising, interest on borrowed money, bad debts, and many other sundry charges, which are not taken into account. Consequently it must not be inferred that when wages and salaries are deducted from value of production the whole of the surplus is available for interest and profits.

THE CLASSIFICATION OF FACTORIES

In a number of tables in this section factories are classified by the nature of their output into 16 major classes. These classes, together with sub-classes for which factories are operating in this State, are listed below.

Where the nature of goods produced would place the factory in more than one sub-class and where its activities cannot be thus separated it is classified according to its predominant activity.

Classification of Factories

Class 1—*Treatment of non-metalliferous mine and quarry products.*

Lime, plaster of paris, asphalt.
 Fibrous plaster and products.
 Marble, slate, etc.
 Cement, portland.
 Asbestos cement sheets and mouldings.
 Other cement goods.
 Other.

Class 2—*Bricks, pottery, glass, etc.*

Bricks and tiles.
 Earthenware, china, porcelain, terracotta.
 Glass (other than bottles).
 Glass bottles.

Class 3—*Chemicals, dyes, explosives, paints, oils, grease.*

Industrial and heavy chemicals and acids.
 Pharmaceutical and toilet preparations.
 Explosives (including fireworks).
 White lead, paints, varnish.
 Oils, vegetable.
 Oils, mineral.
 Boiling-down, tallow-refining.
 Soap and candles.
 Chemical fertilizers.
 Inks, polishes, etc.

Class 4—*Industrial metals, machines, conveyances.*

Smelting, converting, refining, rolling of iron and steel.
 Foundries (ferrous).
 Plant, equipment and machinery, including machine tools.
 Other engineering.
 Extracting and refining of other metals, alloys.
 Electrical machinery, cables, and apparatus.
 Construction and repair of vehicles—
 Tramcars and railway rollingstock.
 Motor vehicles—
 Construction and assembly.
 Repairs.
 Motor bodies.
 Horse-drawn vehicles.
 Motor accessories.
 Aircraft.
 Cycles (foot and hand driven) and accessories.

Ship and boat building and repairing.
 Cutlery and small hand tools.

Agricultural machines and implements.

Non-ferrous metals—

Rolling and extrusion.

Founding, casting, etc.

Sheet metal working pressing, stamping.

Pipes, tubes, and fittings—Ferrous.

Wire and wireworking (including nails).

Stoves, ovens and ranges.

Gas fittings and meters.

Sewing machines.

Arms, ammunition (excluding explosives).

Wireless and amplifying apparatus.

Other metal works.

Class 5—*Precious metals, jewellery, plate.*

Jewellery.

Watches and clocks (including repairs).

Electroplating (gold, silver, chromium, etc.).

Class 6—*Textile and textile goods (not dress).*

Cotton spinning and weaving.

Wool carding, spinning, weaving.

Hosiery and other knitted goods.

Rope and cordage.

Canvas goods, tents, tarpaulins, etc.

Bags and sacks.

Textile dyeing, printing, and finishing.

Other.

Class 7—*Skins and leather (not clothing or footwear).*

Furriers and fur-dressing.

Woolscouring and fellmongering.

Tanning, currying and leather-dressing.

Saddlery, harness and whips.

Bags, trunks, and other goods of leather and leather substitutes.

Class 8—*Clothing (except knitted).*

Tailoring and ready-made clothing.

Waterproof and oilskin clothing.

Dressmaking, hemstitching.

Millinery.

Shirts, collars, underclothing.

Handkerchiefs, ties, scarves.

Class 8—(continued)

Gloves.
 Boots and shoes (not rubber).
 Boot and shoe repairing.
 Boot and shoe accessories.
 Umbrellas and walking sticks.
 Dyeworks and cleaning (including renovating and repairing).
 Other.

Class 9—*Food, drink and tobacco.*

Flour milling.
 Cereal foods and starch.
 Animal and bird foods.
 Chaff cutting.
 Bakeries (including cakes and pastry).
 Biscuits.
 Sugar refining.
 Confectionery (including chocolate and icing sugar).
 Jam, fruit and vegetable canning.
 Pickles, sauces, vinegar.
 Bacon curing.
 Butter factories.
 Cheese factories.
 Margarine.
 Meat and fish preserving.
 Condiments, coffee, spices.
 Ice and refrigerating.
 Salt.
 Aerated waters, cordials, etc.
 Breweries.
 Distilleries.
 Winemaking.
 Malting.
 Bottling.
 Dehydrated fruit and vegetables.
 Ice cream.
 Sausage skins.
 Other.

Class 10—*Sawmills, joinery, boxes, etc., wood turning and carving.*

Sawmills.
 Plywood mills (including veneers).
 Joinery.
 Cooperage.
 Boxes and cases.
 Woodturning, woodcarving, etc.
 Basketware and wickerware (including seagrass and bamboo furniture).
 Perambulators (including pushers and strollers).

Wall and ceiling boards (not plaster or cement).

Other.

Class 11—*Furniture of wood, bedding, etc.*

Cabinet and furniture making (including billiard tables and upholstery).

Bedding and mattresses (not wire).
 Furnishing drapery.

Picture frames.

Blinds.

Class 12—*Paper, stationery, printing, bookbinding, etc.*

Newspapers and periodicals.

Printing, Government

Printing, general (including bookbinding).

Manufactured stationery.

Process and photo-engraving.

Cardboard boxes, cartons, and containers.

Paper bags.

Paper making.

Other.

Class 13—*Rubber.*

Rubber goods (including tyres made).

Tyre retreading and repairing.

Class 14—*Musical instruments.*

Gramophone and gramophone records.

Pianos, piano-players, organs.

Other.

Class 15—*Miscellaneous products.*

Plastic moulding and products.

Brooms and brushes

Optical instruments and appliances.

Surgical and other scientific instruments and appliances.

Photographic material (including developing and printing).

Toys, games and sports requisites.

Other.

Class 16—*Heat, light and power.*

Electric light and power—

Government.

Local authority.

Other.

Gasworks—

Other.

LEGISLATION

Industrial legislation is dealt with in Part 7, Labour. Other legislation is concerned with the location of factory premises and with the processes carried out therein.

Under the Local Government Act, 1934-1966 local government authorities may make by-laws restricting the erection of factory premises to certain sections of the area under their jurisdiction. The Manufacturing Industries Protection Act, 1937 provides for the proclamation of certain areas wherein proprietors and occupiers of factories are protected against civil action for noise and vibration problems. This Act, which takes precedence over zoning by-laws, currently applies to four relatively small zones. Regulations made under the Noxious Trade Act, 1943-1955 have defined certain processes as noxious trades for which a licence must be obtained. In addition an area between Wingfield and Dry Creek in the outer northern suburbs has been declared a noxious trade area with persons operating therein being protected from civil action.

Similarly the licensing of noisy trades may be required under a section of the Local Government Act. Protection against health hazards is provided under the Health Act, 1935-1966.

THE STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

Post-war industrialization has to a considerable extent evolved around three major industrial groups. The motor vehicle, the electrical goods and the household appliance industries, together with their peripheral suppliers of components and services, have accounted for much of the post-war expansion. These industries are located in, or near Adelaide. In fact the tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market has resulted in a heavy concentration of South Australian secondary industries in or near Adelaide.

In the table below some details of factory activity are given for the Metropolitan Area (as defined for Census purposes prior to 30th June 1966) and for the Remainder of the State. Included in the latter category are some large industrial plants close to Adelaide, particularly the oil refinery at Port Stanvac and the motor vehicle works at Elizabeth.

Factory Activity, Adelaide Metropolitan Area^(a) and Remainder of State

Year	Factories	Persons Employed	Value of Land and Buildings	Value of Plant and Machinery	Value of Output	Value of Production
	No.	No.	\$'000	\$'000	\$'000	\$'000
METROPOLITAN AREA						
1960-61	3,120	77,920	123,270	128,386	616,103	277,346
1961-62	3,437	75,529	133,468	132,568	595,321	269,034
1962-63	3,599	80,606	145,940	144,599	686,154	296,835
1963-64	3,662	82,896	157,838	149,112	756,790	326,123
1964-65	3,689	85,910	171,293	161,179	814,116	360,349
REMAINDER OF STATE						
1960-61	1,922	22,035	52,187	97,814	187,152	62,777
1961-62	2,082	23,565	63,127	120,438	208,274	78,794
1962-63	2,167	24,659	67,024	149,009	227,920	82,307
1963-64	2,164	27,917	72,790	181,168	304,996	101,233
1964-65	2,198	30,273	85,244	227,753	392,714	138,239

(a) As defined for Census purposes prior to 30th June 1966.

(b) Average over whole year; includes working proprietors.

Generally industrial plants outside the metropolitan area are orientated to sources of supply, exceptions being the production of agricultural machinery at Mannum and the presence of woollen mills at Lobethal and Mount Gambier. Wallaroo and Port Lincoln, being central to their markets, are the sites of chemical fertilizer production.

The two most important undertakings beyond the vicinity of Adelaide are the iron and steel complex at Whyalla and the lead smelters at Port Pirie. These undertakings together with the power station at Port Augusta are sited for important mineral sources. Other factories are located near sources of primary products and include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Upper Murray, the wineries and distilleries of the Barossa Valley and the Murray, and various dairy product factories and fish processing plants.

In the table below details of factories for 1964-65 are classified according to industrial class. The dominating position of class 4 which includes the industrial metals treatment, motor vehicles, electrical, and consumer durable industries referred to above, can be clearly seen.

Factories by Class of Industry, South Australia, 1964-65

Industrial Class	Factories	Persons Employed (a)	Value of Premises and Equipment	Salaries and Wages Paid (b)	Costs of Production	Value of Production
	No.	No.	\$'000	\$'000	\$'000	\$'000
1. Treatment of non-metalliferous mine and quarry products	194	2,382	23,241	6,331	21,270	17,952
2. Bricks, pottery, glass, etc.	78	2,264	12,078	5,877	8,710	11,575
3. Chemicals, dyes, explosives, paints, oils, grease	104	3,244	44,343	9,044	53,940	33,116
4. Industrial metals, machines, conveyances	2,889	68,516	316,051	172,738	385,433	273,902
5. Precious metals, jewellery, plate	171	562	1,878	961	1,140	1,950
6. Textile and textile goods (not dress) ..	58	2,685	8,485	5,219	12,951	9,698
7. Skins and leather (not clothing or footwear)	36	1,035	2,489	2,498	12,166	3,564
8. Clothing (except knitted)	555	5,471	10,048	7,747	9,675	12,162
9. Food, drink and tobacco	755	11,914	62,458	23,978	114,323	52,765
10. Sawmills, joinery, boxes, etc., wood turning and carving	436	5,791	19,080	11,917	31,145	22,023
11. Furniture of wood, bedding, etc.	201	2,226	5,049	4,015	8,818	7,173
12. Paper, stationery, printing, book-binding, etc.	194	5,178	33,869	12,102	21,493	23,561
13. Rubber	59	1,328	4,763	3,416	6,417	6,799
14. Musical instruments	11	34	154	53	26	86
15. Miscellaneous	115	1,621	4,877	3,031	6,249	6,701
Total classes 1-15	5,856	114,251	548,864	268,928	693,756	483,028
16. Heat, light and power	31	1,932	96,605	5,296	14,486	15,560
Total all classes	5,887	116,183	645,469	274,225	708,242	498,588

(a) Average employment for whole year; includes working proprietors.

(b) Excludes drawings by working proprietors.

The "Industrial metals, machines, conveyances" class accounted for 55% of total production and 59% of employment: the next highest class, viz "Food, drink and tobacco" represented 11% and 10% respectively.

The following table records the number of factories in each industrial class for recent years.

Number of Factories by Class of Industry, South Australia

Industrial Class	1960-61	1961-62	1962-63	1963-64	1964-65
1. Treatment of non-metalliferous mine and quarry products	182	185	182	192	194
2. Bricks, pottery, glass, etc.....	76	76	80	76	78
3. Chemicals, dyes, explosives, paints, oils, grease	89	95	97	100	104
4. Industrial metals, machines, conveyances	2,358	2,545	2,781	2,841	2,889
5. Precious metals, jewellery, plate ...	104	164	169	174	171
6. Textile and textile goods (not dress)	56	59	58	57	58
7. Skins and leather (not clothing or footwear)	39	41	40	38	36
8. Clothing (except knitted)	491	591	594	573	555
9. Food, drink and tobacco	723	756	744	737	755
10. Sawmills, joinery, boxes, etc., wood turning and carving	361	406	409	413	436
11. Furniture of wood, bedding, etc. ...	208	220	218	221	201
12. Paper, stationery, printing, book-binding, etc.	175	190	197	193	194
13. Rubber	65	62	57	59	59
14. Musical instruments	10	11	11	11	11
15. Miscellaneous	69	81	96	108	115
Total classes 1-15	5,006	5,482	5,733	5,793	5,856
16. Heat, light and power	36	37	33	33	31
Total all classes	5,042	5,519	5,766	5,826	5,887

Although there were 5,887 factories operating in 1964-65, only 166 or 3% had an average employment in excess of 100 persons while 4,423 factories, or 75% of the total employed 10 persons or less. In the following table factories are grouped according to the average number of persons employed during the period of operation. The top section of the table shows the number of factories in each size grouping, and the lower section the number of persons employed in the factories located in the groups. Where a manufacturer operates at more than one location each factory premises is recorded separately.

Number of Factories and Persons Employed by Size of Factory, South Australia

Year	Size of Factory (i.e. Average Employment)							Total
	Under 5	5-10	11-20	21-50	51-100	101-500	Over 500	
	NUMBER OF FACTORIES							
1960-61	2,543	1,194	587	419	159	118	22	5,042
1961-62	3,010	1,174	589	434	169	120	23	5,519
1962-63	3,165	1,228	621	429	171	127	25	5,766
1963-64	3,143	1,259	636	446	184	130	28	5,826
1964-65	3,205	1,218	650	462	186	138	28	5,887
	PERSONS EMPLOYED							
1960-61	5,684	8,252	8,654	13,206	11,217	23,084	30,465	100,562
1961-62	6,504	8,125	8,611	13,864	11,866	23,396	27,228	99,594
1962-63	6,810	8,531	9,149	13,739	11,819	24,949	30,765	105,762
1963-64	6,772	8,693	9,338	14,062	12,692	25,512	34,079	111,148
1964-65	6,810	8,411	9,557	14,658	13,024	27,344	36,971	116,775

In 1964-65 the 28 largest firms were responsible for 32% of total factory employment. By contrast the 3,205 factories employing less than 5 persons, while constituting 54% of total factories, accounted for only 6% of employment, including a considerable proportion of working proprietors.

Factories operating during 1964-65 are classified by size of establishment for each industrial class in the next table.

**Factories by Persons Employed, South Australia
1964-65**

Industrial Class	Average Employment							Total
	Under 5	5-10	11-20	21-50	51-100	101-500	Over 500	
1. Treatment of non-metalliferous mine and quarry products	101	42	27	13	6	5	—	194
2. Bricks, pottery, glass, etc.	23	17	11	14	10	3	—	78
3. Chemicals, dyes, explosives, paints, oils, grease	44	28	6	12	4	9	1	104
4. Industrial metals, machines, conveyances	1,654	605	284	183	79	63	21	2,889
5. Precious metals, jewellery, plate	140	21	6	4	—	—	—	171
6. Textile and textile goods (not dress)	19	16	6	7	5	4	1	58
7. Skins and leather (not clothing or footwear)	15	9	4	2	4	1	1	36
8. Clothing (except knitted)	351	94	46	46	10	8	—	555
9. Food, drink and tobacco	337	167	116	80	36	19	—	755
10. Sawmills, joinery, boxes etc., wood turning and carving	228	90	60	38	11	9	—	436
11. Furniture of wood, bedding, etc.	115	31	25	25	2	3	—	201
12. Paper, stationery, printing, book-binding, etc.	50	59	38	27	10	9	1	194
13. Rubber	39	10	4	3	1	1	1	59
14. Musical instruments	9	1	1	—	—	—	—	11
15. Miscellaneous	60	26	14	7	6	2	—	115
Total classes 1-15	3,185	1,216	648	461	184	136	26	5,856
16. Heat, light and power	20	2	2	1	2	2	2	31
Total all classes	3,205	1,218	650	462	186	138	28	5,887

In 1964-65 factories employing less than 5 persons included 979 motor repair workshops, 179 motor body workshops, 183 bakeries, 158 boot and shoe repairers and 173 joineries.

EMPLOYMENT IN FACTORIES

In 1931-32, at the height of the depression, average factory employment in South Australia was 23,830. By 1938-39 it had passed the previous peak of 41,075 reached in 1926-27 and stood at 43,371. There was a rapid increase in the factory work force in the early war years and a new peak of 72,751 was reached in 1942-43, after which it declined for the remaining three years of the war. Since the war the employment level has shown an increase in all but 3 years to reach the level of 116,183 recorded in 1964-65.

The factory work force in 1964-65 represented 11.1% of the total population compared with 10.0% in 1945-46 and 7.3% in 1938-39. Details of factory employment for each year since 1911 are given in the Statistical Summary on page 538.

A breakdown of the factory work force by sex and age is given below for four selected post-war years and for 1939. The most noticeable variation in composition is the considerable drop in the relative contribution of persons under 21 years to the total work force between 1939 and the early post-war years.

Factory Employees by Age and Sex, South Australia
(Excludes working proprietors)

At 30th June	Males			Females			Total Employees
	Under 21 Years	21 Years and Over	Total	Under 21 Years	21 Years and Over	Total	
NUMBER OF EMPLOYEES							
1939.....	7,146	25,672	32,818	4,140	3,657	7,797	40,615
1950.....	5,850	57,909	63,759	4,049	11,357	15,406	79,165
1955.....	6,338	65,532	71,870	3,951	11,573	15,524	87,394
1960.....	7,989	71,567	79,556	4,722	12,935	17,657	97,213
1965.....	10,671	82,621	93,292	6,183	15,065	21,248	114,540
PERCENTAGE OF TOTAL EMPLOYEES							
1939.....	17.6	63.2	80.8	10.2	9.0	19.2	100.0
1950.....	7.4	73.1	80.5	5.1	14.4	19.5	100.0
1955.....	7.2	75.0	82.2	4.5	13.3	17.8	100.0
1960.....	8.2	73.6	81.8	4.9	13.3	18.2	100.0
1965.....	9.3	72.2	81.5	5.4	13.1	18.5	100.0

Although the trend in total factory employment in the post-war period has been that of a steady increase, employment trends in individual industries have varied considerably. In the following table factory employment over the last 5 years is classified by industrial class. Class 4, which includes the motor vehicle, electrical goods and household appliance industries, has accounted for 76% of the post-war increase in factory employment. In the 6 years immediately after the war, employment in this class increased 23% and in the 6 years to 1964-65 has increased 32%. Employment in class 1, which includes the portland cement industry and the production of other materials consumed in the post-war building boom, increased 128% between 1946-47 and 1964-65; other industrial classes have recorded lesser rates of growth.

By contrast employment in class 7 and 8 has declined in the post-war era, and in class 6 it has been steady except for 3 years in the early 1950's when activity in cotton spinning and weaving was curtailed.

Factory Employment, South Australia
Average number of persons employed during the year

Industrial Class	1960-61	1961-62	1962-63	1963-64	1964-65
1. Treatment of non-metalliferous mine and quarry products	2,308	2,173	2,282	2,325	2,382
2. Bricks, pottery, glass, etc.	2,290	2,124	2,225	2,203	2,264
3. Chemicals, dyes, explosives, paints, oils, grease.	2,976	2,942	2,944	3,215	3,244
4. Industrial metals, machines, conveyances	56,447	55,245	60,470	64,479	68,516
5. Precious metals, jewellery, plate	464	536	539	571	562
6. Textile and textile goods (not dress)	2,530	2,520	2,533	2,522	2,685
7. Skins and leather (not clothing or footwear)	1,147	1,133	1,164	1,203	1,035
8. Clothing (except knitted)	5,087	5,023	5,098	5,312	5,471
9. Food, drink and tobacco	10,902	11,362	11,241	11,614	11,914
10. Sawmills, joinery, boxes, etc., wood turning and carving	5,094	5,256	5,311	5,457	5,791
11. Furniture of wood, bedding, etc.	2,186	2,069	2,191	2,332	2,226
12. Paper, stationery, printing, bookbinding, etc.	4,612	4,698	4,868	4,986	5,178
13. Rubber	1,228	1,074	1,148	1,248	1,328
14. Musical instruments	29	37	32	32	34
15. Miscellaneous	871	1,012	1,256	1,381	1,621
Total classes 1-15	98,171	97,204	103,302	108,880	114,251
16. Heat, light and power	1,784	1,890	1,963	1,933	1,932
Total all classes	99,955	99,094	105,265	110,813	116,183

Further details of persons employed in factories during 1964-65 are given in the following table. In that year females constituted 18.5% of the total work force, but industries traditionally associated with female employment had a much higher component, as was the case of Class 8 where females constituted 65.9% of the work force, and Classes 6 and 9 with 52.7% and 32.5% respectively.

Factory Employees by Nature of Employment, South Australia

Average number of persons employed during 1964-65

Industrial Class	Working Proprietors	Managerial and Clerical Staff	Technical Staff (a)	All Other	Total Employees		
					Males	Females	Persons
1. Treatment of non-metalliferous mine and quarry products	80	414	48	1,840	2,239	143	2,382
2. Bricks, pottery, glass, etc.	22	250	7	1,985	2,052	212	2,264
3. Chemicals, dyes, explosives, paints, oils, grease	33	594	200	2,417	2,744	500	3,244
4. Industrial metals, machines, conveyances	1,991	8,788	1,728	56,009	60,212	8,304	68,516
5. Precious metals, jewellery, plate ...	146	64	—	352	493	69	562
6. Textile and textile goods (not dress)	36	218	21	2,410	1,270	1,415	2,685
7. Skins and leather (not clothing or footwear)	29	141	12	853	895	140	1,035
8. Clothing (except knitted)	485	356	5	4,625	1,861	3,610	5,471
9. Food, drink and tobacco	494	1,845	163	9,412	8,046	3,868	11,914
10. Sawmills, joinery, boxes, etc., wood turning and carving	298	662	8	4,823	5,334	457	5,791
11. Furniture of wood, bedding, etc. ...	163	207	1	1,855	1,718	508	2,226
12. Paper, stationery, printing, book-binding, etc.	126	951	27	4,074	3,864	1,314	5,178
13. Rubber	6	247	22	1,053	1,096	232	1,328
14. Musical instruments	6	2	—	26	32	2	34
15. Miscellaneous	69	224	17	1,311	927	694	1,621
Total classes 1-15	3,984	14,963	2,259	93,045	92,783	21,468	114,251
16. Heat, light and power	3	94	22	1,813	1,907	25	1,932
Total all classes	3,987	15,057	2,281	94,858	94,690	21,493	116,183

(a) Chemists, draftsmen, and other laboratory and research staff.

A relatively greater number of working proprietors are naturally found in classes which embrace the smaller manufacturing unit. For example, of the 3,987 working proprietors shown for 1964-65, 1,347 operated motor repair and motor body workshops, while others were associated with engineering workshops, bakeries, joineries, cabinet-making, printing, tailoring, shoe repairing, upholstery, and the jewellery trade.

SALARIES, WAGES, AND OTHER COSTS

The following table shows aggregate and average wages and salaries paid over the last 10 years. Working proprietors and their drawings have been excluded.

In 1946-47, the average of wages and salaries per employee was \$597; however, this figure had doubled by 1951-52 when it stood at \$1,313, and by 1964-65 had

reached \$2,444, over 4 times the 1946-47 rate. A comparison of the male and female rates shows little variation over the period with the female rate being 53% of the male rate for 1964-65.

Factories: Salaries and Wages Paid, South Australia

Year	Salaries and Wages Paid			Average Per Employee		
	Males	Females	Persons	Males	Females	Persons
	\$'000	\$'000	\$'000	\$	\$	\$
1955-56	136,427	16,048	152,475	1,851	994	1,697
1956-57	139,289	16,348	155,637	1,907	1,015	1,746
1957-58	142,305	17,385	159,689	1,941	1,073	1,784
1958-59	148,536	17,754	166,290	1,985	1,087	1,824
1959-60	170,666	19,809	190,475	2,176	1,151	1,992
1960-61	177,245	20,720	197,965	2,250	1,184	2,057
1961-62	178,771	20,291	199,062	2,281	1,220	2,095
1962-63	197,821	22,246	220,067	2,377	1,240	2,175
1963-64	215,127	25,188	240,315	2,457	1,312	2,251
1964-65	245,566	28,659	274,225	2,689	1,372	2,444

Salaries and wages paid to the factory work force during 1964-65 are shown separately for each industrial class in the next table.

**Factories: Salaries and Wages Paid^(a), South Australia
1964-65**

Industrial Class	Salaries and Wages Paid			Average per Employee		
	Males	Females	Persons	Males	Females	Persons
	\$'000	\$'000	\$'000	\$	\$	\$
1. Treatment of non-metalliferous mine and quarry products	6,129	203	6,331	2,829	1,491	2,750
2. Bricks, pottery, glass, etc.	5,548	329	5,877	2,731	1,560	2,621
3. Chemicals, dyes, explosives, paints, oils, grease	8,318	726	9,044	3,061	1,470	2,817
4. Industrial metals, machines, conveyances	160,859	11,879	172,738	2,752	1,741	2,597
5. Precious metals, jewellery, plate	875	85	961	2,472	1,376	2,309
6. Textile and textile goods (not dress) ..	3,349	1,870	5,219	2,686	1,334	1,970
7. Skins and leather (not clothing or footwear)	2,338	160	2,498	2,687	1,180	2,483
8. Clothing (except knitted)	3,477	4,270	7,747	2,286	1,232	1,554
9. Food, drink and tobacco	18,935	5,043	23,978	2,470	1,343	2,100
10. Sawmills, joinery, boxes, etc., wood turning and carving	11,366	551	11,917	2,249	1,252	2,170
11. Furniture of wood, bedding, etc.	3,417	598	4,015	2,163	1,238	1,946
12. Paper, stationery, printing, book-binding, etc.	10,459	1,644	12,102	2,778	1,277	2,396
13. Rubber	3,064	352	3,416	2,808	1,526	2,584
14. Musical instruments	51	2	53	1,963	896	1,887
15. Miscellaneous	2,118	914	3,031	2,415	1,354	1,953
Total classes 1-15	240,302	28,627	268,928	2,688	1,373	2,439
16. Heat, light and power	5,264	33	5,296	2,765	1,304	2,746
Total all classes	245,565	28,659	274,225	2,689	1,372	2,444

(a) Excludes drawings by working proprietors.

Other major production costs for 1964-65 are listed in the following table.

**Factories: Cost of Materials, Fuel, Light, Etc., Used, South Australia
1964-65**

Industrial Class	Materials Used	Non-returnable Containers, Etc.	Tools Replaced, Repairs, Etc.	Power, Fuel, Light, Lubricating Oil and Water	Total
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	16,829	582	1,414	2,445	21,270
2. Bricks, pottery, glass, etc.	5,997	63	857	1,793	8,710
3. Chemicals, dyes, explosives, paints, oils, grease ..	44,464	3,782	1,664	4,030	53,940
4. Industrial metals, machines, conveyances	354,907	3,334	13,162	14,031	385,433
5. Precious metals, jewellery, plate	954	5	59	121	1,140
6. Textile and textile goods (not dress)	11,816	277	416	442	12,951
7. Skins and leather (not clothing or footwear)	11,425	44	429	268	12,166
8. Clothing (except knitted)	8,951	161	244	319	9,675
9. Food, drink and tobacco	93,143	15,938	2,178	3,063	114,323
10. Sawmills, joinery, boxes, etc., wood turning and carving	29,550	125	715	756	31,145
11. Furniture of wood, bedding, etc.	8,533	24	159	102	8,818
12. Paper, stationery, printing, bookbinding, etc.	19,260	215	638	1,380	21,493
13. Rubber	5,631	112	298	375	6,417
14. Musical instruments	24	1	1	1	26
15. Miscellaneous	5,748	128	161	212	6,249
Total classes 1-15	617,233	24,790	22,393	29,339	693,756
16. Heat, light and power	3,449	—	1,081	9,956	14,486
Total all classes	620,682	24,790	23,474	39,295	708,242

Although the following table shows a decline in the value of coal consumed for the years 1960-61 to 1962-63 the quantity of coal used increased, the decline resulted from the substitution of cheaper Leigh Creek coal for imported black coal. During the period 1960-61 to 1964-65 the value of fuel oils used increased by 68% and the value of electricity used increased by 45%.

Fuel^(a) and Power Used in Factories, South Australia

Fuel	1960-61	1961-62	1962-63	1963-64	1964-65
	\$'000				
Coal	10,327	9,559	9,374	9,428	9,543
Coke	5,018	5,206	4,890	4,570	4,895
Wood	750	718	728	747	648
Fuel oils (b)	5,518	6,281	6,617	7,788	9,246
Gas	520	524	595	650	703
Electricity	8,660	8,751	9,970	11,212	12,555

(a) Includes value of coal and oil used as materials.

(b) Includes tar fuel.

The contribution of the various specified costs of production to the total value of output is summarized in the following table.

Factories: Costs and Output, South Australia

Year	Salaries and Wages	Costs of Production		Value of Output
		Materials Used	Other (a)	
	\$'000			
1960-61	197,965	400,277	62,854	803,255
1961-62	199,062	390,670	65,096	803,595
1962-63	220,067	466,238	68,694	914,074
1963-64	240,315	558,884	75,547	1,061,786
1964-65	274,225	620,682	87,560	1,204,830

(a) Includes containers, tools replaced, repairs, power and fuel used, lubricants and water.

The difference between the specified costs and the total value of output includes all other costs and overhead expenses such as rent, interest, payroll and company taxation, and depreciation, as well as profits and drawings by working proprietors.

There is considerable variation in the importance of certain costs as between industrial classes. In the table below the various costs are expressed as a percentage of the value of output.

**Factories: Costs as Percentage of Output, South Australia
1964-65**

Industrial Class	Salaries and Wages	Costs of Production		Value of Output
		Materials Used	Other (a)	
	Per Cent			
1. Treatment of non-metalliferous mine and quarry products.....	16.1	42.9	11.3	100.0
2. Bricks, pottery, glass, etc.....	29.0	29.6	13.4	100.0
3. Chemicals, dyes, explosives, paints, oils, grease	10.4	51.1	10.9	100.0
4. Industrial metals, machines, conveyances....	26.2	56.3	4.6	100.0
5. Precious metals, jewellery, plate.....	31.1	30.9	6.0	100.0
6. Textile and textile goods (not dress).....	23.0	52.2	5.0	100.0
7. Skins and leather (not clothing or footwear)..	15.9	72.6	4.7	100.0
8. Clothing (except knitted).....	35.5	41.0	3.3	100.0
9. Food, drink and tobacco.....	14.4	55.8	12.7	100.0
10. Sawmills, joinery, boxes, etc., wood turning and carving.....	22.4	55.6	3.0	100.0
11. Furniture of wood, bedding, etc.....	25.1	53.4	1.8	100.0
12. Paper, stationery, printing, bookbinding, etc..	26.9	42.8	5.0	100.0
13. Rubber.....	25.9	42.6	5.9	100.0
14. Musical instruments.....	47.2	21.0	2.0	100.0
15. Miscellaneous.....	23.4	44.4	3.9	100.0
Total classes 1-15.....	22.9	52.5	6.5	100.0
16. Heat, light and power.....	17.6	11.5	36.7	100.0
Total all classes.....	22.7	51.4	7.3	100.0

a) Includes containers, tools replaced, repairs, power and fuel used, lubricants and water.

VALUE OF OUTPUT AND PRODUCTION

A common measure of factory activity is that of value of output, this being the value of goods manufactured, plus amounts received for repairs and for work done on commission.

In the years immediately following World War I the annual value of factory output was approximately \$40 million. After reaching a peak of \$74 million in 1926-27 output declined with a low point of \$38 million occurring in the depression year 1931-32. War time output showed some increase, but it was not until after World War II that the value of factory output began to rise rapidly. Early rises which involved a trebling of output between 1945-46 and 1951-52 were, however, largely attributable to a rising price structure. Steadier prices after 1952-53 suggest that a substantial part of the increase from this date represented an increase in physical output. The value of output exceeded \$600 million in 1955-56, \$800 million in 1960-61 and \$1,200 million in 1964-65.

A division by industrial classes of the value of factory output for the years 1960-61 to 1964-65 is given below.

Value of Factory Output, South Australia

Industrial Class	1960-61	1961-62	1962-63	1963-64	1964-65
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	25,454	27,479	30,298	35,735	39,222
2. Bricks, pottery, glass, etc.	15,824	14,759	17,258	18,620	20,285
3. Chemicals, dyes, explosives, paints, oils, grease	41,910	41,854	51,546	70,808	87,056
4. Industrial metals, machines, conveyances	420,101	395,187	483,490	570,409	659,335
5. Precious metals, jewellery, plate	1,914	2,312	2,350	2,648	3,090
6. Textile and textile goods (not dress)	17,286	18,685	17,709	19,812	22,649
7. Skins and leather (not clothing or footwear)	12,261	14,246	17,437	18,580	15,730
8. Clothing (except knitted)	18,803	18,415	18,825	20,617	21,837
9. Food, drink and tobacco	126,342	140,565	137,498	151,230	167,087
10. Sawmills, joinery, boxes, etc., wood turning and carving	37,984	43,082	42,744	46,027	53,168
11. Furniture of wood, bedding, etc.	13,135	13,121	14,124	15,957	15,991
12. Paper, stationery, printing, bookbinding, etc.	32,991	33,642	36,762	41,495	45,055
13. Rubber	9,985	9,108	10,461	11,969	13,215
14. Musical instruments	97	120	109	114	112
15. Miscellaneous	5,367	6,023	8,240	10,421	12,950
Total classes 1-15	779,456	778,598	888,851	1,034,440	1,176,783
16. Heat, light and power	23,799	24,997	25,223	27,346	30,047
Total all classes	803,255	803,595	914,074	1,061,786	1,206,830

Value of production, *i.e.* the value added to raw materials by factory production, is useful both as a guide to the growth of secondary industry and as a measure of the relative contribution of the various industrial classes to total production.

Factory production has increased markedly since World War II. However, when considering the statistics of value of production given in the next table, it should be borne in mind that prices and costs have risen substantially in the post-war period.

Value of Factory Production, South Australia 1925-26 to 1964-65

Period	Total Production	Production Per Employee	Production Per Head of Population
	\$'000	\$	\$
Annual Average			
1925-26 to 1929-30	25,344	674	44
1930-31 to 1934-35	16,308	594	28
1935-36 to 1939-40	26,338	622	44
1940-41 to 1944-45	50,210	776	82
1945-46 to 1949-50	76,564	1,058	116
1950-51 to 1954-55	180,598	2,132	238
1955-56 to 1959-60	273,508	2,998	308
1960-61 to 1964-65	398,608	3,878	398
Year			
1961-62	347,828	3,661	356
1962-63	379,142	3,748	381
1963-64	427,356	4,001	419
1964-65	498,588	4,444	476

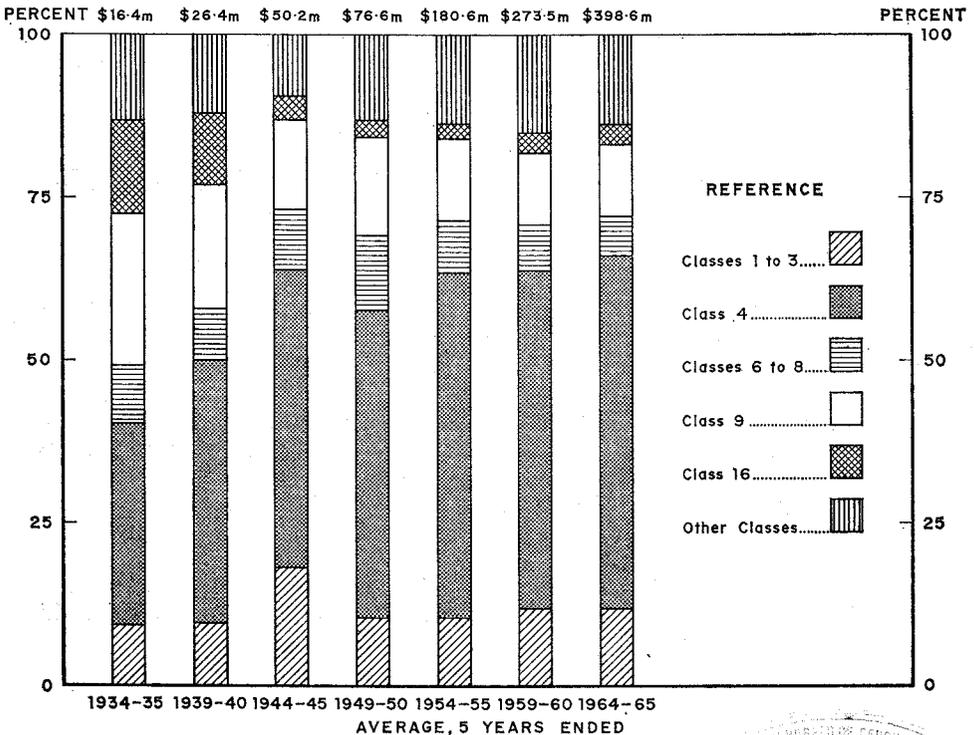
The contribution of each industrial class to total factory production in the last five years is shown below.

Value of Factory Production, South Australia

Industrial Class	1960-61	1961-62	1962-63	1963-64	1964-65
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	11,696	12,199	14,729	16,766	17,952
2. Bricks, pottery, glass, etc.	9,155	8,269	9,698	10,650	11,575
3. Chemicals, dyes, explosives, paints, oils, grease	17,984	17,965	20,694	26,420	33,116
4. Industrial metals, machines, conveyances	184,027	182,659	203,585	226,582	273,902
5. Precious metals, jewellery, plate	1,273	1,409	1,618	1,690	1,950
6. Textile and textile goods (not dress)	7,722	7,977	7,696	8,439	9,698
7. Skins and leather (not clothing or footwear)	2,839	3,044	3,441	3,595	3,564
8. Clothing (except knitted)	10,580	10,581	11,013	11,749	12,162
9. Food, drink and tobacco	36,161	42,173	41,401	46,860	52,765
10. Sawmills, joinery, boxes, etc., wood turning and carving	15,440	17,201	16,904	19,079	22,023
11. Furniture of wood, bedding, etc.	6,059	6,170	6,521	7,152	7,173
12. Paper, stationery, printing, bookbinding, etc.	17,265	17,733	19,311	21,709	23,561
13. Rubber	5,483	5,083	5,579	6,646	6,799
14. Musical instruments	74	93	89	90	86
15. Miscellaneous	2,740	3,270	4,103	5,423	6,701
Total classes 1-15	328,497	335,825	366,384	412,849	483,028
16. Heat, light and power	11,626	12,003	12,758	14,507	15,560
Total all classes	340,123	347,828	379,142	427,356	498,588

The relative importance of certain classes, and groups of classes, for earlier years is illustrated in the following bar chart.

NET VALUE OF FACTORY PRODUCTION
(PROPORTION OF MAJOR CLASSES TO TOTAL)



FACTORY PREMISES AND EQUIPMENT

In the following tables values are given for land and buildings, and plant and machinery used in manufacturing pursuits. Where the premises and equipment are the property of the occupier the values are the depreciated values or book values existing in respect of them. Where premises or equipment are rented the value has been estimated by capitalizing the annual rental for 15 years in the case of land and buildings, and 10 years for plant and machinery. The values below are accordingly not synonymous with total investment in industrial premises and equipment.

The value of productive factory premises at 30th June for the years 1961 to 1965 is given in the following table.

Factories: Value of Land and Buildings, South Australia
At 30th June

Industrial Class	1961	1962	1963	1964	1965
			\$'000		
1. Treatment of non-metalliferous mine and quarry products	4,860	6,525	6,986	7,118	8,635
2. Bricks, pottery, glass, etc.	2,911	3,539	3,927	4,437	5,350
3. Chemicals, dyes, explosives, paints, oils, grease. ...	7,921	8,459	9,640	9,909	9,794
4. Industrial metals, machines, conveyances	78,439	88,185	101,428	112,389	129,919
5. Precious metals, jewellery, plate	854	1,172	1,238	1,442	1,450
6. Textile and textile goods (not dress)	3,541	3,608	3,744	4,164	4,246
7. Skins and leather (not clothing or footwear)	1,354	1,384	1,440	1,524	1,390
8. Clothing (except knitted)	5,793	6,822	6,764	6,534	6,731
9. Food, drink and tobacco	25,270	29,360	30,677	33,229	35,633
10. Sawmills, joinery, boxes, etc., wood turning and carving	9,776	8,447	8,039	8,479	9,708
11. Furniture of wood, bedding, etc.	2,962	3,231	3,434	3,721	3,788
12. Paper, stationery, printing, bookbinding, etc.	9,576	11,094	11,736	13,066	13,832
13. Rubber	2,040	2,642	2,710	3,498	3,161
14. Musical instruments	129	140	113	104	109
15. Miscellaneous	1,310	1,522	1,979	2,433	3,032
Total classes 1-15	156,735	176,130	193,859	212,049	236,779
16. Heat, light and power	18,722	20,464	19,104	18,579	19,758
Total all classes	175,457	196,595	212,963	230,627	256,536

The estimated value of factory premises at 30th June 1947 was \$37.4 million of which \$9.6 million, or 26% was for premises in Class 4. By contrast, premises in Class 4 in 1964-65 represented 51% of total estimated value.

The value of machinery and plant employed in the above premises is given below. The value covers all machinery, implements, and tools, including vehicles and plant for the conveyance of raw materials. The total estimated value of plant and machinery employed at 30th June 1947 was \$36.8 million, a little less than 10% of the value at 30th June 1965—\$388.9 million.

Most of the plant and machinery is used in Class 4 (with 48% of the total value in 1965 compared with 29% in 1947) and Class 16 (20% in 1965 compared with 25% in 1947).

Factories: Value of Plant and Machinery, South Australia

At 30th June

Industrial Class	1961	1962	1963	1964	1965
	\$'000				
1. Treatment of non-metalliferous mine and quarry products	12,331	15,831	14,610	14,346	14,606
2. Bricks, pottery, glass, etc.	2,330	3,002	3,679	4,766	6,728
3. Chemicals, dyes, explosives, paints, oils, grease ...	16,818	17,619	36,623	35,572	34,549
4. Industrial metals, machines, conveyances	78,977	92,634	107,629	139,662	186,133
5. Precious metals, jewellery, plate	312	262	326	353	427
6. Textile and textile goods (not dress)	3,998	3,979	4,040	4,656	4,239
7. Skins and leather (not clothing or footwear)	832	790	858	982	1,099
8. Clothing (except knitted)	2,329	2,597	2,617	2,897	3,317
9. Food, drink and tobacco	21,564	22,972	24,381	25,375	26,825
10. Sawmills, joinery, boxes, etc., wood turning and carving	8,462	9,005	8,302	8,324	9,373
11. Furniture of wood, bedding, etc.	1,002	1,040	1,137	1,320	1,261
12. Paper, stationery, printing, bookbinding, etc.	12,361	13,690	16,718	17,948	20,037
13. Rubber	1,258	1,389	1,356	2,037	1,603
14. Musical instruments	26	25	27	41	45
15. Miscellaneous	817	1,144	1,419	1,413	1,844
Total classes 1-15	163,418	185,979	223,722	259,692	312,085
16. Heat, light and power	62,782	67,026	69,886	70,589	76,847
Total all classes	226,200	253,005	293,608	330,281	388,932

Some indication of the mechanization of each industrial class can be obtained by relating plant and machinery to persons employed.

In the following table an average of the values of plant and machinery employed at the beginning and the end of each year is divided by the average employment for that year.

Value of Plant and Machinery Per Person Employed, South Australia

Industrial Class	1960-61	1961-62	1962-63	1963-64	1964-65
	\$				
1. Treatment of non-metalliferous mine and quarry products	4,599	6,480	6,670	6,227	6,077
2. Bricks, pottery, glass, etc.	973	1,255	1,501	1,916	2,538
3. Chemicals, dyes, explosives, paints, oils, grease ...	5,497	5,852	9,212	11,228	10,742
4. Industrial metals, machines, conveyances	1,282	1,553	1,656	1,918	2,378
5. Precious metals, jewellery, plate	623	536	545	594	694
6. Textile and textile goods (not dress)	1,589	1,583	1,582	1,724	1,656
7. Skins and leather (not clothing or footwear)	829	716	708	765	1,005
8. Clothing (except knitted)	431	490	511	519	560
9. Food, drink and tobacco	1,930	1,960	2,106	2,142	2,191
10. Sawmills, joinery, boxes, etc., wood turning and carving	1,543	1,662	1,629	1,523	1,528
11. Furniture of wood, bedding, etc.	447	493	497	527	580
12. Paper, stationery, printing, bookbinding, etc.	2,215	2,773	3,123	3,476	3,668
13. Rubber	990	1,233	1,196	1,360	1,370
14. Musical instruments	690	703	813	1,063	1,265
15. Miscellaneous	884	968	1,021	1,025	1,005
Total classes 1-15	1,538	1,797	1,983	2,220	2,502
16. Heat, light and power	33,818	34,341	34,874	36,336	38,156
Total all classes	2,114	2,418	2,596	2,815	3,467

The considerable increase in Class 3 over the three years 1961-62 to 1963-64 is partly attributable to the new oil refining industry, which has an extremely high plant-employee ratio.

Details of additions to factory premises and equipment are recorded each year. These figures provide a guide to new investment in premises and equipment but also include the value of secondhand assets purchased by manufacturers. Where

PRODUCTION

a major construction programme is involved the total value of the asset is generally recorded when the premises are brought into production even though construction may have been spread over a number of years.

Additions to Factory Premises and Equipment, South Australia

Year	Industrial Metals, Machines, and Conveyances	Food, Drink and Tobacco	Paper, Stationery, Printing, Book-binding	Heat, Light and Power	Other Classes of Industry	Total
LAND AND BUILDINGS—\$'000						
1960-61	6,361	1,721	1,012	811	4,490	14,395
1961-62	6,868	1,497	753	1,052	1,951	12,121
1962-63	9,343	1,626	1,239	609	3,441	16,258
1963-64	13,947	1,972	1,681	128	3,601	21,329
1964-65	19,800	2,800	950	975	4,711	29,236
PLANT AND MACHINERY—\$'000						
1960-61	14,230	3,503	2,647	5,756	7,637	33,773
1961-62	23,152	4,010	2,557	6,186	9,549	45,454
1962-63	26,791	3,618	4,762	4,647	26,151	65,969
1963-64	48,906	4,403	2,797	4,199	9,090	69,395
1964-65	58,133	4,367	4,003	6,295	11,701	84,499

Statistics of motive power available in factories are given in the two following tables.

In the first table, plant installed in electricity generating stations has been separated from that installed in other factories. The figures for generating stations refer to the "rated capacity" of engines and generators installed, and for other factories to the "rated horsepower" of engines ordinarily in use and of engines in reserve or idle. Obsolete engines are excluded altogether.

Engines and Electric Motors in Factories, South Australia

Rated horsepower of engines

Year	Ordinarily in Use						Total (a)	In Reserve or Idle
	Steam	Internal Combustion			Driven by Electricity			
		Gas	Light Oil	Heavy Oil	Purchased	Own Generation		
IN ELECTRICITY GENERATING STATIONS								
1960-61	714,800	—	3,281	16,286	—	58,991	734,367	—
1961-62	806,100	—	4,130	14,512	—	66,060	824,742	—
1962-63	800,200	—	4,404	13,559	—	66,871	818,163	—
1963-64	877,900	—	5,998	11,833	—	n.a.	895,731	—
1964-65	944,900	—	7,609	9,853	—	74,725	962,362	—
IN OTHER FACTORIES								
1960-61	19,350	921	10,220	7,478	413,161	19,519	451,130	55,041
1961-62	15,415	890	8,670	4,653	442,137	20,728	471,765	56,995
1962-63	20,527	688	9,275	3,273	465,366	23,221	499,129	62,991
1963-64	19,346	393	10,113	1,487	529,262	21,672	560,601	63,452
1964-65	19,211	403	9,967	1,677	605,300	24,775	636,558	63,207

(a) Excludes motors driven by electricity of own generation, to avoid duplication.

n.a.—Not available.

Motive power in factories has naturally increased with post-war industrialization. The electricity generating industry has had to help meet these increased demands from secondary industry as well as accommodate the domestic requirements of a rapidly expanding population, and at the same time expand its services into previously unserved areas. In 1946-47 comparable figures to those shown above were 228,483 horsepower installed in generating stations and 205,132 horsepower, including that of engines in reserve or idle, in other factories.

The distribution of motive power in factories, other than electricity generating stations, between the various industrial classes is shown below.

Engines and Electric Motors^(a) in Factories Other than Electric Generating Stations, South Australia

Industrial Class	1960-61	1961-62	1962-63	1963-64	1964-65
	Horsepower				
1. Treatment of non-metalliferous mine and quarry products	35,645	40,593	42,488	47,574	49,383
2. Bricks, pottery, glass, etc.	12,407	13,069	13,487	15,164	18,435
3. Chemicals, dyes, explosives, paints, oils, grease	33,293	37,065	49,356	53,203	54,099
4. Industrial metals, machines, conveyances	215,196	225,812	234,533	281,545	339,856
5. Precious metals, jewellery, plate	1,055	1,153	2,381	1,277	1,353
6. Textile and textile goods (not dress)	9,462	9,655	9,810	9,916	10,047
7. Skins and leather (not clothing or footwear)	6,843	6,676	7,275	7,442	7,476
8. Clothing (except knitted)	4,312	4,595	4,709	4,805	4,897
9. Food, drink and tobacco	76,527	78,313	77,786	79,831	82,221
10. Sawmills, joinery, boxes, etc., wood turning and carving	59,459	57,702	62,873	63,863	68,520
11. Furniture of wood, bedding, etc.	7,309	7,311	7,461	7,800	6,911
12. Paper, stationery, printing, bookbinding, etc.	26,857	27,722	29,870	31,144	33,583
13. Rubber	7,602	7,905	8,836	10,033	11,201
14. Musical instruments	12	13	14	14	19
15. Miscellaneous					
16. Heat, light and power (a)	10,192	11,176	11,241	10,442	11,764
Total (excluding electricity generating stations)	506,171	528,760	562,120	624,053	699,765

(a) Includes engines and electric motors in reserve or idle, but excludes electric motors driven by electricity generated within the factory.

Further details of electricity generating stations are given on page 416.

SELECTED FACTORY PRODUCTS

The factory products listed in this section are not necessarily the principal products produced in this State. Where publication of details of an individual product would enable the output of a particular manufacturer to be determined, these figures are treated as confidential and are not separately available for publication. As a considerable number of products are produced in this State by industries containing one or two dominant firms, the list of publishable items is considerably restricted and the absence of a product from the list does not imply its non-production.

Values shown represent the selling value at the factory excluding delivery costs and charges, and excise duty where applicable.

Selected Factory Products, South Australia

Item	Unit	Quantity Produced			Value at Factory		
		1962-63	1963-64	1964-65	1962-63	1963-64	1964-65
Aerated and carbonated waters	'000 gal.	10,881	11,310	11,526	\$'000	\$'000	\$'000
Air conditioning (excluding room conditioners)	—	—	—	—	4,309	5,247	5,983
Bacon and ham	'000 lb.	6,717	7,386	7,807	2,130	1,938	3,108
Bags—	—	—	—	—	—	—	—
Hessian (excluding sugar)	doz.	294,980	303,512	295,681	487	536	582
Paper (excluding multiwall)	—	—	—	—	1,420	1,351	1,518
Blinds and awnings—	—	—	—	—	—	—	—
Metal venetian	—	—	—	—	579	674	699
Canvas	—	—	—	—	460	428	410
Other	—	—	—	—	624	753	709
Books, exercise, account, etc.	—	—	—	—	591	713	n.a.
Boxes and cartons, paperboard, etc.	—	—	—	—	4,565	5,386	5,800
Boxes and cases, wooden (including shocks)—	—	—	—	—	—	—	—
Fruit cases	'000	11,527	9,019	8,916	3,039	2,751	2,694
Other	—	—	—	—	2,390	2,642	2,646
Bread (in terms of 2 lb. loaves)	'000	74,199	76,459	77,130	9,188	9,469	9,955
Bricks—	—	—	—	—	—	—	—
Clay	'000	123,256	144,314	153,153	4,632	5,438	5,987
Cement, standard size	'000	9,114	8,682	n.a.	241	239	n.a.
Butter	ton	7,319	7,405	7,685	5,532	5,612	5,928
Cakes, pastry, pies, etc.	—	—	—	—	6,914	7,933	8,879
Cans and containers, metal	—	—	—	—	3,058	2,993	3,829
Cardigans, pullovers, etc.—Men's and boys'	doz.	11,245	11,669	11,760	515	562	668
Caravans	No.	753	898	909	1,047	1,097	1,375
Casks and barrels	No.	17,074	16,850	17,803	294	339	392
Cheese (green weight)	ton	15,164	15,284	17,338	6,975	7,541	9,105
Concrete, ready mixed	cub. yd.	542,097	659,374	815,554	5,078	6,372	7,388
Confectionery—	—	—	—	—	—	—	—
Chocolate and chocolate coated	'000 lb.	2,621	2,651	2,777	1,162	1,166	1,238
Other	'000 lb.	3,619	3,486	3,285	774	741	707
Cordials and syrups (excluding cordial extract)	'000 gal.	379	445	480	470	578	598
Cycles	No.	8,248	9,588	11,439	—	—	—
Electrical apparatus—Regulating, starting and controlling	—	—	—	—	861	921	2,033
Electrical fittings, household	—	—	—	—	1,974	n.a.	n.a.
Electric motors	No.	134,825	n.a.	n.a.	—	—	—
Electricity generated	mill. kWh.	2,335	2,547	2,863	—	—	—
Envelopes	—	—	—	—	607	624	661
Fertilizers	—	—	—	—	—	—	—
Superphosphate	ton	443,719	523,082	608,136	—	—	—
Mixed chemical	ton	76,386	104,244	94,839	2,919	3,919	3,736
Blood, bone, or offal	ton	3,508	3,835	4,589	194	208	206
Fibrous plaster sheets	'000 sq. yd.	1,124	1,158	1,147	722	779	755
Flock and other fillings	'000 lb.	4,385	4,891	n.a.	489	587	n.a.
Floorboards, Australian timber	'000 sup. ft.	17,248	18,822	n.a.	2,310	2,572	n.a.
Flour, white	short ton	170,003	170,935	157,520	—	—	—
Footwear, other than rubber	pair	1,600,512	1,938,709	2,008,288	6,079	7,279	7,587
Fruit—	—	—	—	—	—	—	—
Canned or bottled	'000 lb.	45,455	58,420	81,942	5,047	n.a.	n.a.
Crystallized and glace	'000 lb.	1,284	1,348	n.a.	455	476	n.a.
Furniture	—	—	—	—	—	—	—
Metal furniture and office equipment	—	—	—	—	4,006	4,756	5,368
Wooden (excluding wicker, etc.)	—	—	—	—	8,819	10,152	10,146
Gloves, work	doz. pair	81,224	82,137	96,533	642	641	744
Jams and fruit spreads	'000 lb.	6,887	n.a.	n.a.	905	n.a.	n.a.
Lacquers, nitro-cellulose	gallon	n.a.	77,037	102,010	n.a.	364	431
Macaroni, vermicelli, and spaghetti	cwt.	102,048	n.a.	n.a.	826	n.a.	n.a.
Machinery—	—	—	—	—	—	—	—
Metal working other than machine tools	—	—	—	—	2,215	3,310	n.a.
Conveyors and conveying systems	—	—	—	—	883	1,341	1,806
Cranes, hoists, winches, etc.	—	—	—	—	2,036	2,223	2,300
Weighing appliances	—	—	—	—	328	408	440
Mattresses—	—	—	—	—	—	—	—
Inner spring	No.	62,255	67,454	77,934	900	995	1,138
Woven wire, spring, etc.	No.	35,317	39,433	48,143	344	401	n.a.
Other (including rubber)	No.	19,734	19,869	21,220	206	228	250
Medicines, proprietary	—	—	—	—	n.a.	1,800	n.a.
Nails	ton	2,475	2,450	2,743	554	553	691
Paints (excluding plastic)—	—	—	—	—	—	—	—
Architectural and decorative—	—	—	—	—	—	—	—
Primers and undercoats	'000 gal.	158	162	164	533	562	565
Finishing coats	'000 gal.	400	424	403	1,914	1,998	1,885
Industrial—	—	—	—	—	—	—	—
Primers and undercoats	'000 gal.	n.a.	n.a.	300	n.a.	n.a.	836
Finishing coats	'000 gal.	384	428	539	1,617	1,802	2,171

n.a.—Not available.

Selected Factory Products, South Australia (continued)

Item	Unit	Quantity Produced			Value at Factory		
		1962-63	1963-64	1964-65	1962-63	1963-64	1964-65
					\$'000	\$'000	\$'000
Paints, plastic	'000 gal.	301	307	381	1,234	1,233	1,539
Pickles	'000 pints	2,010	1,590	1,327	446	330	301
Pipes, stoneware		—	—	—	1,557	n.a.	2,087
Pipes and tubes, ferrous (excluding sheet metal)	ton	47,738	54,449	76,354	18,842	21,548	27,079
Refrigeration equipment (excluding drinking water coolers)		—	—	—	4,656	5,750	4,342
Sauce, tomato	'000 pints	2,975	2,711	1,844	520	489	322
Soaps and detergents	cwt.	37,758	39,743	41,489	372	447	480
Springs (including laminated)		—	—	—	741	1,020	1,298
Steam, gas and water fittings		—	—	—	2,010	2,169	2,361
Steel, fabricated, structural	ton	37,949	46,053	48,186	9,128	11,016	12,477
Stock and poultry foods, cereal based	short ton	64,253	72,995	n.a.	3,960	4,461	n.a.
Tallow, inedible	'000 lb.	17,639	18,101	17,716	773	863	1,995
Thinners	gallon	463,774	539,550	521,774	571	644	646
Tiles, roofing	'000	14,407	16,854	n.a.	—	—	—
Timber—							
From local logs—							
Hardwood	'000 sup. ft.	4,434	5,363	5,429	—	—	—
Softwood	'000 sup. ft.	134,150	134,499	131,624	—	—	—
Dressed (excluding floorboards and weatherboards)	'000 sup. ft.	17,072	17,757	25,279	2,292	2,796	4,255
Trailers (excluding low loading)	No.	1,641	2,371	2,180	470	586	581
Trailers, semi (excluding low loading)	No.	106	186	171	335	695	624
Tyres, retreaded and recapped	No.	291,598	314,442	322,727	2,875	3,208	—
Vegetables, canned or bottled	'000 lb.	3,652	2,546	2,323	—	525	—
Water heating systems, electric	No.	8,684	11,052	12,867	687	866	1,041
Window frames, metal		—	—	—	n.a.	2,991	2,857
Wines and spirits—							
Beverage wine—							
Fortified	'000 gal.	5,569	7,305	7,523	5,574	7,486	—
Unfortified	'000 gal.	3,841	5,200	6,018	2,692	—	—
Distillation wine	'000 gal.	12,102	15,457	15,442	—	—	—
Spirits distilled—							
Grape spirit	pf. gal.	1,759,323	2,129,667	2,151,294	—	—	—
Brandy	pf. gal.	994,420	1,052,850	1,183,331	1,863	—	—
Wire, woven and wire mesh		—	—	—	757	n.a.	n.a.
Wool, scoured or carbonized	'000 lb.	19,150	18,991	16,471	—	—	—

n.a.—Not available.

GOVERNMENT FACTORIES

Approximately 8% of factory employment in 1964-65 was in government factories, *i.e.* in manufacturing plants or workshops operated by Commonwealth or State government departments or semi-governmental authorities. Included were electricity generating stations, railway and omnibus workshops, abattoirs, sawmills, and a number of workshops associated with telephone services, water supply, highways and building.

Government Factories, South Australia

Particulars	1962-63	1963-64	1964-65
Number of factories	94	97	96
Average number of employees	9,527	9,522	9,415
		\$'000	
Value of land and buildings	30,341	30,559	32,828
Value of plant and machinery	72,233	72,731	79,221
Salaries and wages paid	20,824	21,271	22,770
Materials, fuel and power used	23,192	23,370	28,626
Value of production	32,920	36,515	38,890

INDIVIDUAL INDUSTRIES

In this section details are given of major South Australian secondary industries. However, statistics relating to a number of important industries are not available for publication because of the need to maintain confidentiality of details for individual businesses. Where the activities of a factory encompass more than one industry and the operations of the factory are not statistically divisible all details of the establishment are accredited to the major activity. Statistics for an individual industry may therefore include limited outside activity and may exclude production which is ancillary to other industries.

In the following tables "Persons Employed" refers to average employment for the whole year, and "Motive Power" to the rated horsepower of engines ordinarily in use, but excluding motors driven by electricity generated within the plant. The drawings of working proprietors are excluded from "Salaries and Wages".

Cement Products

The post-war building boom resulted in an expansion of the building materials industries. Supported by two producers of portland cement are some 85 firms producing a variety of cement products. The output of the cement products industry is largely accounted for by ready mixed concrete, pre-stressed concrete, concrete pipes, modular masonry and cement roofing tiles.

Cement Products (Excluding Asbestos Cement), South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	78	1,019	4,782	5,769	2,189	5,347	10,080	4,733
1961-62	79	1,051	5,505	7,104	2,226	6,136	11,552	5,416
1962-63	78	1,100	6,109	6,741	2,699	7,258	13,744	6,486
1963-64	85	1,107	6,802	5,996	2,808	8,878	15,618	6,740
1964-65	84	1,127	6,463	6,289	3,118	10,243	17,221	6,978

In addition considerable quantities of asbestos cement sheeting and pipes are produced each year.

Bricks and Tiles

There are a considerable number of clay brick producers operating in South Australia. The majority of these brickworks are located near Adelaide and in the Adelaide hills, with larger country plants at Nuriootpa, Port Pirie and Whyalla.

One organization accounts for nearly all terracotta roofing tile production.

Brick and Tile Works, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	42	844	6,870	1,924	1,859	1,287	4,239	2,952
1961-62	41	756	7,713	2,740	1,742	1,389	4,217	2,829
1962-63	42	800	8,055	2,803	1,913	1,617	5,042	3,425
1963-64	40	815	9,582	4,057	2,023	1,993	5,957	3,964
1964-65	40	812	11,599	6,760	2,249	2,284	6,577	4,294

Industrial and Heavy Chemicals

Foremost in the production of industrial and heavy chemicals is a large soda ash plant at Osborne, associated with nearby saltfields at Dry Creek. This plant is the major producer in the Australian alkali industry.

Two organizations are involved in the production of industrial gases and a further plant produces sulphuric acid, largely for use in the fertilizer industry.

Industrial and Heavy Chemicals, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	12	896	6,267	12,368	2,100	3,681	10,215	6,534
1961-62	13	858	8,746	13,300	2,268	3,415	9,665	6,250
1962-63	16	829	7,954	12,928	2,274	3,648	9,873	6,225
1963-64	16	979	10,727	13,875	2,799	4,964	12,816	7,852
1964-65	16	991	10,577	14,169	3,119	4,876	15,589	10,713

Paints

A variety of paint and allied finishes are produced in plants operated by a number of major paint manufacturers. This industry has been subject to expansion both in output and technical progress with recent emphasis on industrial and plastic paints.

Paint and Varnish Factories, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	15	416	1,948	2,028	884	3,881	6,988	3,106
1961-62	18	398	1,869	2,071	892	3,962	7,142	3,180
1962-63	15	402	1,790	2,234	919	4,493	8,212	3,719
1963-64	16	460	2,396	2,282	1,103	4,782	8,822	4,040
1964-65	19	480	2,443	2,358	1,216	5,284	9,515	4,231

Mineral Oil

Prior to 1963 production in this field was comparatively small and confined largely to the processing of various bituminous products. However, in March 1963 a further milestone in industrial development was reached with the opening of an oil refinery at Port Stanvac, some 15 miles south of Adelaide. The Port Stanvac refinery provides a variety of petroleum products including refinery gas for conversion into domestic gas, and residual oil for use in electricity generation.

Chemical Fertilizers

In the chemical fertilizer industry there are major plants at Port Adelaide, Port Lincoln and Wallaroo. The most important product is superphosphate which represented approximately 70% of the total value of output in 1964-65, with various mixed fertilizers accounting for most of the balance.

Chemical Fertilizer Plants, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	9	814	10,607	7,372	1,833	9,650	13,353	3,703
1961-62	10	825	11,170	7,501	1,841	9,097	13,160	4,063
1962-63	11	781	13,969	7,064	1,857	10,394	14,930	4,536
1963-64	9	722	9,684	5,588	1,725	10,046	14,172	4,126
1964-65	9	779	10,040	4,682	2,097	11,872	16,564	4,692

Metal Extraction and Refining

Since the turn of the century most of the iron ore used in the Australian steel industry has come from the Middleback Ranges, inland from Whyalla. In 1941, with the installation of a blast furnace, Whyalla became the major source of Australia's foundry iron. This production ceased in 1965 when a steel mill was opened, with the hot metal being fed directly into the steel works.

Port Pirie is the site of one of the world's largest lead smelters, treating ore railed from Broken Hill. The plant also produces silver, gold, cadmium and copper by-products. A new plant is currently under construction for the recovery of zinc, and to a lesser extent lead from a huge slag dump.

Plant, Equipment, Machinery and Other Engineering

For a number of years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines and stoves. These items constitute a significant part of the total output shown in the table below. Also represented are manufacturers of industrial, construction, and earthmoving machinery, air conditioning equipment, metal furniture and office equipment, and a wide variety of fabricated steel products, together with a large number of general engineering workshops.

Plant, Equipment, Machinery and Other Engineering, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	442	13,372	47,778	32,889	27,657	47,405	90,024	42,619
1961-62	475	14,875	57,933	38,782	30,365	53,845	100,136	46,291
1962-63	489	15,516	57,772	43,371	33,344	59,744	110,868	51,124
1963-64	508	16,409	60,548	46,527	36,887	67,996	125,503	57,507
1964-65	523	17,778	63,545	50,697	43,615	73,735	140,816	67,081

Electrical Machinery, Cables and Apparatus

This classification includes two producers of cables and wires, the production of fluorescent and other light fittings, and of household electrical fittings.

Electrical Machinery, Cables and Apparatus, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	123	2,288	3,182	5,131	4,196	6,114	12,324	6,210
1961-62	131	2,063	2,406	4,239	4,139	6,477	12,924	6,447
1962-63	142	2,110	2,765	4,525	3,993	6,792	14,027	7,235
1963-64	149	2,610	3,457	4,233	4,928	9,534	18,388	8,855
1964-65	147	2,757	4,560	6,291	5,493	11,145	20,991	9,846

Not included in the above table is the output of a very large enterprise manufacturing mainly wireless and television apparatus but which also produces electrical cable and wires, and lighting equipment.

Railway Rollingstock

The principal workshop of the South Australian Railways is situated at Islington. Although concerned primarily with repairs and maintenance, a number of power rail cars and a variety of goods wagons and freight cars have been constructed at Islington in recent years. The South Australian Railways maintains 4 other metropolitan workshops and 7 country workshops, mainly for servicing, with the largest being at Peterborough.

Repairs and maintenance to Commonwealth Railways rollingstock operating from Port Pirie to Kalgoorlie and Alice Springs are carried out in workshops located at Port Augusta.

Railway Rollingstock, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	13	3,860	14,995	8,176	7,516	6,415	15,723	9,309
1961-62	13	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1962-63	13	3,797	15,245	8,756	8,070	5,843	15,880	10,037
1963-64	13	3,699	13,027	9,029	8,228	5,988	16,783	10,795
1964-65	12	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a.—Not available.

Motor Vehicles

The largest single industry in South Australia and a major contributor to the post-war industrial growth is the motor vehicle industry. However, because of the need to maintain confidentiality of information for individual producers, statistics relating to motor vehicle production cannot be published.

Immediately after World War II, General Motors-Holden's Pty Ltd prepared for the production of an Australian built car, and volume production of the "Holden" commenced in 1948. The success of this car has led to a number of major increases in productive capacity by the firm involving not only considerable expansion at the Woodville site but also the establishment of a new construction and assembly plant at Elizabeth. In addition, a recently completed plant at Tonsley Park has become the centre of manufacturing operations for Chrysler Australia Ltd.

These large motor vehicle plants in turn absorb the products of many establishments producing vehicle components.

Other manufacturers produce omnibus and commercial vehicle bodies, fork lift trucks, garage equipment, trailers, caravans, and a wide range of vehicle accessories.

Repairs to motor vehicles are carried out in the larger workshops operated by new vehicle distributors and in the many smaller workshops generally associated with service stations.

Motor Vehicle Repair Workshops, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	1,086	5,761	7,927	15,463	8,750	10,576	24,214	13,638
1961-62	1,162	6,141	8,534	17,863	9,548	11,913	27,089	15,176
1962-63	1,342	6,742	8,780	21,107	10,866	14,188	31,721	17,534
1963-64	1,355	7,158	9,045	20,856	12,058	15,403	35,128	19,725
1964-65	1,373	7,443	11,301	22,244	13,681	17,288	39,701	22,413

Ship and Boat Building

The largest shipyards in Australia are located at Whyalla. Since 1941 over 40 vessels have been constructed in these yards including the largest vessel yet built in Australia, the 55,000 ton bulk ore-carrier *Bogong*, which was launched in 1966. Tugs and larger fishing boats are built in shipyards at Port Adelaide while other establishments produce smaller commercial and pleasure craft and carry out slipway repair work.

In 1964-65, 31 establishments employing 1,695 persons were associated with ship and boat building or repairing. In that year the industry had a value of output of \$12,832,000 and a production value of \$6,183,000.

Agricultural Machinery and Implements

The production of agricultural machinery and implements is one of the State's oldest industries. The industry contains a number of comparatively large producers, 4 of whom accounted for over 80% of total output in 1964-65.

Agricultural Machinery and Implements, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	41	1,659	5,914	3,110	3,383	5,348	10,641	5,293
1961-62	57	1,764	6,577	3,490	3,482	5,401	12,041	6,639
1962-63	63	1,874	6,818	3,641	3,773	5,773	12,955	7,181
1963-64	65	2,008	6,917	4,076	4,291	6,137	14,090	7,953
1964-65	73	2,132	6,990	4,717	5,093	7,228	17,117	9,888

Sheet Metal Working

Details of factories whose main activities are sheet metal working, pressing and stamping are given in the following table.

Sheet Metal Working, Pressing and Stamping, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	114	3,562	11,530	7,555	6,893	17,866	27,748	9,883
1961-62	120	2,835	9,397	7,670	5,460	12,099	21,335	9,236
1962-63	130	3,080	9,758	9,339	6,119	13,127	23,696	10,569
1963-64	131	3,322	9,604	10,757	7,323	14,062	27,030	12,968
1964-65	129	3,560	10,524	9,855	8,364	18,833	33,928	15,094

Ferrous Pipes, Tubes, and Fittings

A number of large pipe and tube making firms are located in Adelaide. These firms accounted for 25% of the total Australian output of ferrous pipes, tubes, and fittings for 1964-65.

Ferrous Pipes, Tubes, and Fittings, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	11	2,332	19,421	7,642	5,639	10,597	21,408	10,810
1961-62	9	2,151	11,674	7,474	5,242	10,814	20,191	9,377
1962-63	8	2,209	12,034	7,156	5,675	12,442	22,092	9,651
1963-64	8	2,391	16,349	7,596	6,472	13,401	25,181	11,780
1964-65	8	2,668	20,597	7,883	7,888	17,275	31,831	14,556

Wireworking

There were 27 factories, employing 892 persons, associated with the wire working industry in 1964-65. Output in that year was valued at \$10,518,000 and production at \$4,006,000 compared with \$7,953,000 and \$3,504,000 respectively in 1960-61. Major production items are woven wire, welded wire fabric, processed reinforcing rods, springs, barbed wire, and nails.

Cotton and Woollen Mills

Cotton spinning and weaving is carried out in three mills located in the metropolitan area, with the most important products being sheeting, canvas and duck, and towelling.

The two largest of three operative woollen mills are located at the country centres of Lobethal and Mount Gambier. Activity is concentrated largely on the production of blankets and rugs and on worsted spinning.

Cotton and Woollen Mills, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	7	1,928	6,054	6,279	3,266	5,261	11,209	5,949
1961-62	9	1,908	5,988	6,146	3,502	5,819	12,012	6,194
1962-63	9	1,951	6,013	6,241	3,478	5,883	11,737	5,874
1963-64	7	1,922	6,579	7,265	3,855	6,986	13,544	6,558
1964-65	7	2,040	6,880	6,895	4,193	7,972	15,517	7,545

Food and Drink

Details of various food and drink industries which together accounted for 14% of the total value of factory output in 1964-65 are given in the following table.

**Food and Drink: Individual Industries, South Australia
1964-65**

Individual Industry	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
Flour milling	81	464	5,068	2,784	1,070	13,142	15,476	2,334
Bakeries	278	2,022	4,810	8,769	3,812	11,213	19,119	7,906
Jam, fruit and vegetable canning	12	856	2,505	3,261	1,793	7,131	11,177	4,046
Bacon curing	14	556	2,684	1,985	1,253	8,419	10,816	2,397
Butter	13	291	2,519	1,018	590	5,513	6,823	1,310
Cheese	30	416	3,371	2,386	1,038	7,087	9,201	2,114
Meat and fish preserving	24	342	1,095	1,197	576	5,465	6,792	1,327
Condiments, coffee and spices	18	443	1,528	2,695	791	5,100	6,578	1,478
Ice and refrigerating	61	457	10,805	5,240	986	999	2,300	1,300
Aerated waters, cordials, etc.	44	693	2,746	4,366	1,327	5,140	8,677	3,537
Distilleries and winemaking	74	1,461	12,142	8,406	3,033	14,010	23,119	9,109
Other food or drink industries	169	3,913	22,929	20,351	7,709	31,104	47,009	15,907
Total	755	11,914	72,202	62,458	23,978	114,323	167,087	52,765

Flour Milling and Bakeries

The post-war years have seen considerable consolidation in the flour milling industry. In 1946-47 there were 39 operative mills compared with 18 in 1964-65. Of these 18 mills, 3 are located at Port Adelaide, one at Mile End and one at Salisbury, the remainder being located in country areas. Employment in flour milling totalled 464 in 1964-65, with a value of output of \$15,476,000 and a value of production of \$2,334,000.

Details of establishments producing bread, cakes and pastries are shown in the following table.

Bakeries, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	287	1,755	3,794	6,611	2,737	9,027	14,874	5,847
1961-62	296	1,777	4,240	7,851	2,883	9,493	15,911	6,418
1962-63	288	1,795	4,214	8,201	3,056	9,473	16,322	6,849
1963-64	282	1,877	4,531	8,275	3,350	10,313	17,620	7,308
1964-65	278	2,022	4,810	8,769	3,812	11,213	19,119	7,906

Wineries and Distilleries

Another early industry and one involving traditional skills is that of wine-making. In 1964-65, South Australia accounted for 57% of the total value of output of Australian wineries and distilleries.

Principal production areas are the Barossa Valley, the Upper Murray irrigation areas and the districts south of Adelaide.

Wineries and Distilleries, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	73	1,322	14,047	6,567	2,471	10,548	14,753	4,205
1961-62	70	1,348	14,174	6,633	2,535	12,500	17,992	5,493
1962-63	68	1,337	11,089	7,385	2,596	10,194	15,161	4,966
1963-64	72	1,393	11,503	7,830	2,803	12,842	19,884	7,042
1964-65	74	1,461	12,142	8,406	3,033	14,010	23,119	9,109

Sawmilling

Well over half of Australia's plantation grown pines are in South Australia. Details of milling operations are given in the table below. Of the 89 mills recorded for 1964-65, 71 were in country districts with almost all the larger mills being located near the South East forests. The State Woods and Forests Department operates mills at Mount Gambier, Mount Burr and Nangwarry.

In addition to the milling of logs for flooring, cases, etc., facilities exist for kiln drying and timber preservation, with increasing quantities of fencing posts and poles being treated each year.

Sawmills, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	84	2,248	36,342	11,946	4,084	12,702	19,781	7,079
1961-62	82	2,304	32,885	10,080	4,176	15,004	23,094	8,091
1962-63	85	2,341	37,244	9,393	4,501	15,503	23,600	8,097
1963-64	91	2,485	37,796	9,863	4,872	16,553	26,402	9,849
1964-65	89	2,429	38,164	10,454	5,266	18,254	28,786	10,533

In South Australia there are some 280 joinery workshops. In 1964-65 these workshops employed 2,388 persons, with output being valued at \$15,672,000 and production at \$7,463,000. The motive power of electric motors employed has increased steadily over the last five years from 8,651 horsepower in 1960-61 to 11,790 horsepower in 1964-65.

Cabinet and Furniture Making

Details of cabinet and furniture making establishments are given in the following table. The 160 factories in 1964-65 varied in size from the many small establishments run solely by a working proprietor or employing one or two persons to three factories each employing over 100 persons.

Cabinet and Furniture Making, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	163	1,590	5,548	2,593	2,619	4,648	8,851	4,204
1961-62	172	1,584	5,711	3,013	2,619	4,770	9,276	4,505
1962-63	172	1,667	5,684	3,168	2,771	5,381	10,095	4,714
1963-64	178	1,794	5,995	3,614	3,127	6,233	11,549	5,316
1964-65	160	1,666	4,742	3,277	3,104	6,032	11,234	5,202

Newspapers and Periodicals

There are two large establishments producing newspapers in Adelaide. Newspaper printing offices are also located in some 33 country towns, a number of these producing newspapers for more than one locality. An historical summary of the press in South Australia is given on pages 188-189.

Newspapers and Periodicals, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	36	1,212	4,725	6,668	2,785	4,830	10,224	5,394
1961-62	36	1,182	4,845	6,883	2,933	4,378	9,702	5,324
1962-63	37	1,180	4,920	7,885	2,887	4,925	10,393	5,468
1963-64	39	1,249	5,274	8,748	3,235	5,370	11,787	6,416
1964-65	39	1,279	5,324	9,550	3,468	5,686	12,238	6,552

Printing and Bookbinding

Particulars of general printing establishments, other than those printing newspapers and periodicals, are given in the following table. Excluded are the extensive activities of the State Government Printing Office.

The activities of one establishment include the printing and binding of a wide range of books for Australian and oversea publishers.

General Printing and Bookbinding, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61	102	1,626	2,559	4,737	3,009	3,655	8,947	5,292
1961-62	114	1,677	2,793	5,755	3,167	3,632	9,022	5,391
1962-63	120	1,775	2,938	5,528	3,403	4,104	9,987	5,883
1963-64	115	1,732	3,588	6,887	3,495	4,153	10,405	6,253
1964-65	115	1,729	3,663	6,853	3,697	4,343	10,760	6,417

A further 18 factories in 1964-65 were involved in the production of cardboard containers and paper bags. Containers and bags to the value of \$8,044,000 were produced, with the value of production being \$3,081,000. Employment in these establishments totalled 687.

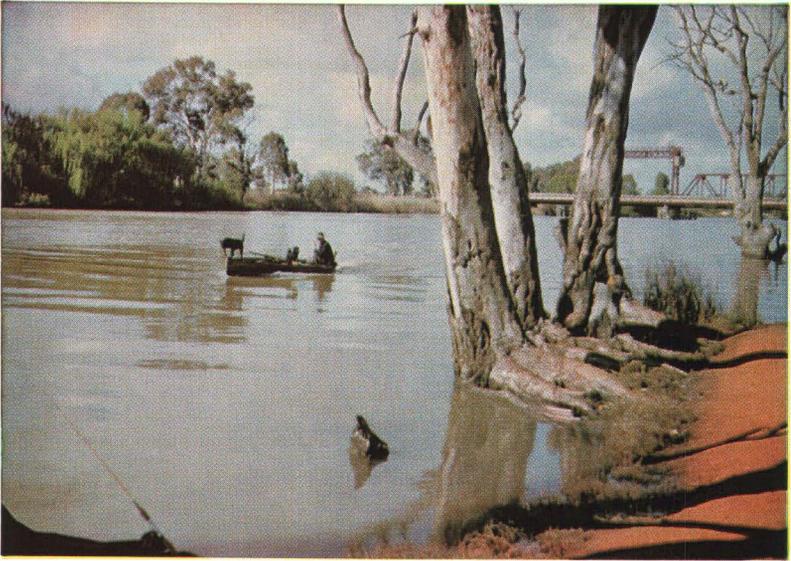
Electricity Generation

The Electricity Trust of South Australia is responsible for the generation of most of the State's electricity requirements. A resumé of the activities of the Electricity Trust is given in Part 8.6.

Government Electricity Generating Stations, South Australia

Year	Factories	Persons Employed	Motive Power	Value of Premises and Equipment	Salaries and Wages Paid	Materials, Fuel and Power Used	Value of Output	Value of Production
	No.	No.	H.P.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	12	1,365	771,769	76,598	3,360	8,568	18,624	10,056
1962-63	10	1,441	765,060	78,155	3,698	8,082	18,482	10,401
1963-64	10	1,436	841,778	77,515	3,968	8,527	20,211	11,684
1964-65	9	1,492	908,983	84,426	4,080	n.a.	n.a.	n.a.

n.a.—Not available.

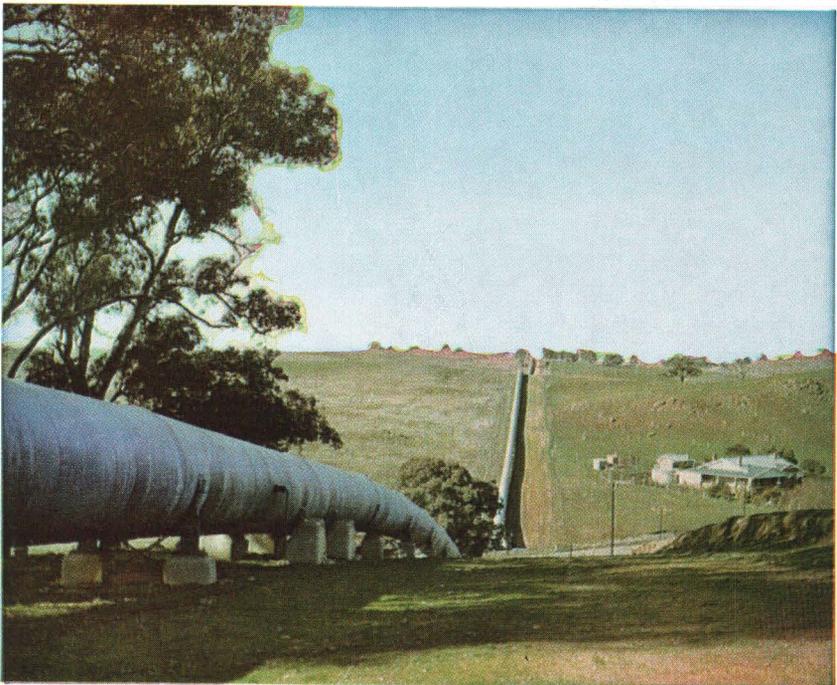


S.A. Govt Tourist Bureau

The River Murray guarantees South Australia's water supply

Water from the River Murray is fed to Adelaide's reservoirs through the Mannum pipe-line

S.A. Govt Tourist Bureau



The Thomas Playford
Power Station, Port Augusta



Small quantities of electricity are generated by local authorities or private firms for domestic consumption in certain country areas, and a number of private firms operate power stations for their own needs.

9.4. VALUE OF PRODUCTION

Factory production accounted for 61% of the total net value of production (excluding building and construction) in South Australia during 1965-66 while pastoral and agricultural production accounted for 14% and 12% respectively.

Details for the last five years of these and other classes of production are given in the tables below. In the first, primary production is expressed in terms of gross value, this being the value placed on recorded production at the wholesale prices realized in principal markets.

Gross Value of Primary Production, South Australia

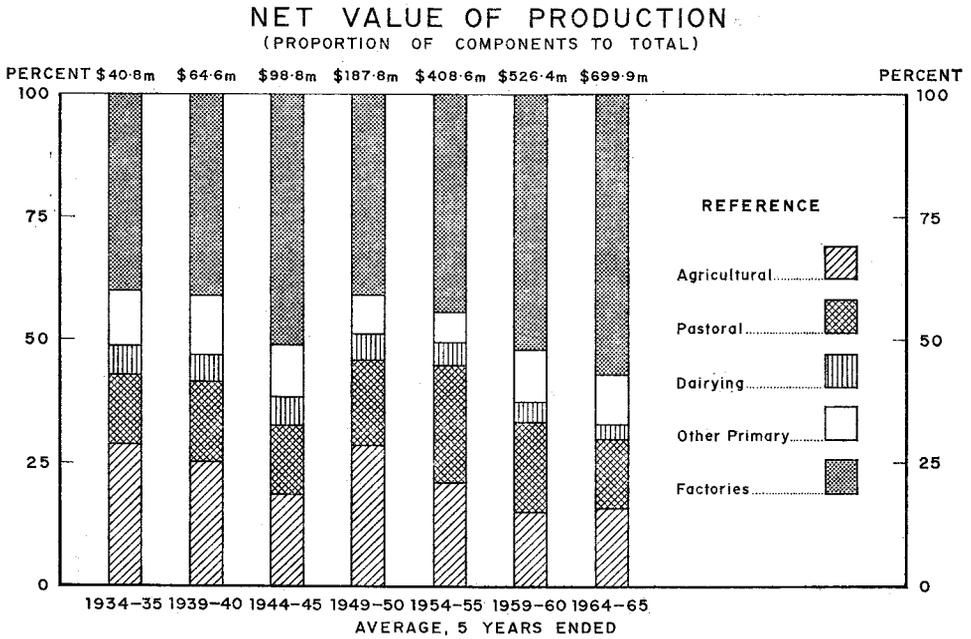
Class of Production	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Agricultural	124,022	128,417	165,634	178,132	44,504
Pastoral	111,850	127,386	150,466	135,916	152,224
Dairying	29,848	31,968	34,267	37,533	139,333
Other rural	7,731	7,272	8,435	8,926	9,932
Mining and quarrying	60,566	56,967	66,024	71,662	72,765
Forestry	7,526	8,170	8,219	8,846	8,736
Other	3,975	3,986	4,730	6,119	6,989
Total primary	345,518	364,167	437,775	447,134	434,483

In the next table primary production is expressed in terms of net value and incorporated with comparable figures for factory production. The net value of primary production is the gross value less marketing costs and costs of materials used in the process of production. The factory figures are for value added in the process of manufacture, *i.e.*, the value of output less value of materials and fuels used.

Net Value of Production, South Australia

Class of Production	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Agricultural	90,933	93,357	125,180	134,239	106,308
Pastoral	91,256	103,991	125,979	110,054	123,757
Dairying	19,826	19,741	21,195	25,005	25,165
Other rural	2,469	1,739	2,366	2,052	2,578
Mining and quarrying	52,623	49,603	57,836	62,727	62,727
Forestry	7,467	8,116	8,168	8,801	8,700
Other	3,444	3,457	4,111	5,371	6,124
Total primary	268,018	280,004	344,835	348,249	335,359
Factory	347,828	379,142	427,356	498,588	527,477
Total	615,847	659,146	772,191	846,837	862,836

Movements in the relative contributions of individual classes to total production since 1929-30 can be readily seen in the following bar chart.



Earlier information on the gross value of primary production, since 1908-09 is given in the Statistical Summary on page 546 while details of net value of production since 1925-26 are on page 547.

PART 10

COMMERCE

10.1. INTERNAL TRADE

RETAIL TRADE

Various aspects of retail trading in South Australia are subject to control under State legislation. Examples are hours of trading in the metropolitan and specified country areas, which are controlled under the Early Closing Act, 1926-1960, administered by the Department of Labour and Industry; prices for a variable range of goods which are controlled under the Prices Act, 1948-1966, administered by the South Australian Prices Department; and minimum wages payable and some other conditions of employment which are prescribed in awards and determinations of the State Industrial Court and industrial boards. Some classes of employees are covered by Commonwealth awards.

Statistics of retail sales and other information concerning the structure and pattern of retail trading have been obtained from Censuses of Retail Establishments conducted throughout Australia in respect of the years ended 30th June 1948, 1949, 1953, 1957, and 1962. In addition, quarterly estimates of the value of retail sales have been calculated from September quarter 1950 by means of sample surveys.

Censuses of Retail Establishments

In general terms, the Censuses cover the retail trading activities of establishments which normally sell goods by retail to the general public from fixed premises such as shops, rooms, kiosks, and yards. Retail activities of wholesalers and manufacturers who sell regularly by retail to the general public are included. Sales by itinerant vendors and sales from casual stalls and booths are excluded. Establishments with total retail sales of less than \$1,000 in census years are not included.

The design of the censuses is such that particulars of retail sales relate principally to sales, to the final consumer, of new and secondhand goods generally used for household and personal purposes. For this reason sales of building materials, farm and industrial machinery and equipment, earth-moving equipment, etc., have been excluded. For the same reason, and also because of difficulties in obtaining reliable and complete reporting, sales of builders' hardware and supplies, business machines and equipment, grain, feed, fertilizers and agricultural supplies, and tractors were excluded from the 1961-62 Census. Retail sales of motor vehicles, parts, etc., are included whether for industrial, commercial, farm or private use.

At each census every establishment was classified according to type of business. For most businesses the classification was based on the commodity or commodity group in which predominant sales were recorded. Details of number of establishments, value of retail sales and value of stocks for the various types of business at the last two censuses are as follows:

Retail Establishments, Sales and Stocks by Type of Business, South Australia
Censuses 1956-57 and 1961-62

Type of Business	Establishments		Retail Sales		Retail Stocks at 30th June	
	1956-57	1961-62	1956-57	1961-62	1957	1962
	No.	No.	\$'000	\$'000	\$'000	\$'000
Food stores—						
Grocers	2,088	2,011	76,580	97,664	10,882	11,982
Butchers	915	1,034	29,134	33,622	348	370
Fruiterers	620	613	12,630	14,342	328	334
Bakers	404	392	11,076	12,678	348	388
Confectioners and milk bars	770	1,059	16,112	25,322	838	1,248
Cafes	104	117	930	984	84	74
Fishmongers and poulterers	125	177	1,960	2,740	46	54
Other food stores	206	252	4,478	6,294	172	260
Hotels, tobacconists, etc.—						
Hotels, wine saloons, etc.	641	650	41,686	49,598	1,672	2,194
Tobacconists	106	70	2,648	1,622	256	184
Tobacconists and hairdressers ..	281	319	2,242	1,618	218	176
Department stores, clothiers, drapers, etc.—						
Department stores	9	12	48,924	69,048	8,858	10,490
Clothiers and drapers	1,060	988	45,974	45,484	11,072	10,982
Footwear stores	187	209	6,454	7,678	2,096	2,588
Hardware, electrical goods, furniture stores, etc.—						
Domestic hardware stores	305	274	4,218	5,276	1,266	1,310
Electrical goods, and musical instrument stores	344	402	13,242	24,418	2,740	4,848
Furniture and floor coverings stores ..	194	184	15,896	14,946	3,578	3,650
Other goods stores—						
Chemists	403	466	10,634	18,326	1,924	3,056
Newsagents and booksellers	208	237	5,584	7,026	968	1,302
Sports goods stores	43	64	1,244	1,614	354	454
Watchmakers and jewellers	149	138	3,222	2,954	1,552	1,442
Cycle stores	67	51	922	852	292	340
Florists and nurserymen	93	85	864	1,036	50	50
Other types of business	264	290	4,808	5,132	1,028	1,480
Motor vehicle dealers, garages, etc.—						
New motor vehicle dealers, garages and service stations	1,232	1,405	97,030	110,846	10,354	11,422
Used motor vehicle dealers	157	154	24,146	25,826	2,640	3,260
Motor parts and tyre dealers	85	159	4,374	7,762	730	1,468
Total	11,060	11,812	487,012	594,708	64,694	75,406

The next table shows, for the last two censuses, the number of establishments selling goods in each of 30 broad commodity groups and the total value, and value per head of population, of sales in those commodity groups. Adjustments have been made for changes in the scope of the censuses. The number

of establishments shown for each commodity group is the number which recorded any sales in that group.

Some retailers selling small quantities of particular commodities may not have shown those sales separately in their returns; it is unlikely that this has caused significant understatement of the sale of any commodity but the numbers of establishments should be taken as giving only a general indication of the pattern of retail outlets for the various commodity groups. Because many retailers recorded sales in more than one commodity group the numbers of establishments shown against the groups do not add to the total of individual establishments.

Retail Establishments and Sales by Commodity Groups, South Australia
Censuses 1956-57 and 1961-62

Commodity Group	Establishments		Retail Sales of Goods			
	1956-57	1961-62	Total		Per Head of Population	
			1956-57	1961-62	1956-57	1961-62
	No.	No.	\$'000	\$'000	\$	\$
Foodstuffs—						
Groceries	3,168	3,480	55,296	71,012	63.80	72.40
Butchers' meat	1,006	1,439	29,064	35,198	33.80	36.60
Fresh fruit and vegetables	1,721	2,050	12,812	14,868	14.80	15.00
Bread, cakes and pastry	2,188	2,696	13,294	16,308	15.40	16.60
Confectionery, icecream, softdrinks	3,554	4,172	16,198	20,976	18.80	21.40
Other types of food	1,945	2,491	8,486	12,810	10.00	13.20
Beer, tobacco, etc.—						
Beer, wine and spirits	747	740	39,772	47,280	46.20	48.20
Tobacco and cigarettes	5,003	6,046	17,386	21,558	20.20	22.20
Clothing, drapery, etc.—						
Clothing—						
Men's and boys'	1,115	1,125	21,366	24,182	24.60	24.80
Women's, girls' and infants'	1,231	1,206	36,434	39,674	41.80	40.60
Drapery, piecegoods, blankets, etc.	928	1,028	13,214	16,792	15.80	17.20
Footwear—						
Men's and boys'	835	831	4,148	5,048	4.80	5.20
Women's, girls' and infants'	761	783	6,968	8,940	8.00	9.20
Hardware (a), electrical goods, etc.—						
Domestic hardware	1,478	1,587	11,006	12,298	12.80	12.60
Radios and radiograms	594	487	3,902	3,352	4.60	3.40
Television and accessories (b)	400	400	7,658	7,658	7.80	7.80
Musical instruments, records, etc.	266	236	1,990	2,032	2.40	2.00
Domestic refrigerators	539	428	5,288	6,360	6.20	6.40
Other electrical goods	943	945	7,532	11,016	8.80	11.20
Furniture and floor coverings—						
Furniture	421	407	12,612	13,900	14.60	14.20
Floor coverings	351	360	6,200	6,724	7.20	6.80
Other goods—						
Chemists' goods (c)	1,334	1,832	13,052	22,614	15.20	23.00
Newspapers, books and stationery	1,543	1,805	8,680	10,642	10.00	10.80
Sporting requisites, travelgoods	571	656	2,442	3,146	2.80	3.20
Jewellery, watches, clocks, etc.	616	668	4,720	4,904	5.40	5.00
Other goods	888	1,064	10,406	12,272	12.40	12.60
Total (excluding motor vehicles, etc.) .	(e)	(e)	362,268	451,564	420.40	461.60
Motor vehicles, etc. (d)—						
Motor vehicles (incl. motor cycles)—						
New	305	470	50,518	53,538	58.60	54.60
Used	600	611	36,642	41,436	42.60	42.40
Motor parts, accessories, etc.	1,291	1,531	15,448	17,732	18.00	18.40
Petrol, oil, etc.	1,488	1,715	22,136	30,438	25.60	31.00
Total motor vehicles	(e)	(e)	124,744	143,144	144.80	146.40
Grand Total	11,060	11,812	487,012	594,708	565.20	608.00

(a) Excludes basic building materials and builders' hardware and supplies such as tools of trade, paint, etc.

(b) Negligible in 1956-57.

(c) Includes toiletries, cosmetics, and dispensing.

(d) Excludes tractors, farm machinery and implements, earth-moving equipment, etc.

(e) Not appropriate; some establishments make sales in more than one commodity group.

In 1956-57, the value of retail sales per head of population in South Australia was almost the same as the overall Australian average of \$566, but in 1961-62 the figure for this State (\$608) had fallen well below the corresponding Australian figure of \$654. However, subsequent estimates from the Survey of Retail Establishments indicate that by 1964-65 sales per head of population in South Australia had recovered to about the Australian level.

In the next table a variation in classification of new motor vehicle sales has affected comparability of the figures. In 1956-57, each sale on commission was attributed to the principal rather than to the agent but in 1961-62 each sale of a new motor vehicle was attributed to the establishment, whether of a principal or an agent, which made the sale to the final consumer. In practice, the 1956-57 procedure probably tended to bias new motor vehicle sales towards the metropolitan area, where principals are mainly located.

Retail Establishments, Sales and Stocks, Statistical Divisions

Censuses 1956-57 and 1961-62

Statistical Division	Establishments		Retail Sales		Retail Stocks at 30th June	
	1956-57	1961-62	1956-57	1961-62	1957	1962
	No.	No.	\$'000	\$'000	\$'000	\$'000
Metropolitan(a)—						
Municipality of						
Adelaide	1,491	1,490	177,522	195,896	27,050	29,378
Other metropolitan.	5,150	5,485	151,600	203,794	15,072	19,430
Total metropolitan	6,641	6,975	329,122	399,690	42,122	48,808
Central	1,552	1,757	45,764	61,958	5,776	7,296
Lower North	792	769	26,804	28,282	4,558	4,656
Upper North (b)	376	378	14,872	16,350	1,854	2,258
South Eastern	581	690	27,444	32,798	4,040	4,706
Western	501	568	19,414	26,662	2,866	3,650
Murray Mallee	617	675	23,592	28,968	3,478	4,032
Total State	11,060	11,812	487,012	594,708	64,694	75,406

(a) As defined for Census purposes prior to 30th June, 1966.

(b) Including "Remainder of State".

Surveys of Retail Establishments

During periods between censuses, estimates of the value of retail sales are calculated from returns received from a sample of retail establishments covering businesses which account for approximately 45% of all retail sales in Australia.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups in each of the years 1961-62 to 1965-66.

Figures on the following basis are available from 1952-53. Since then sales of motor vehicles have shown occasional marked fluctuations and sales in the electrical goods group increased following the introduction of television in 1959. These fluctuations have had some effect on the ratio of sales in other groups to total retail sales. However some trends are discernible in these ratios: these include the relative stability of the food group, increases in motor vehicles and in chemists' goods, and decreases in clothing, drapery and footwear.

Value of Retail Sales: Commodity Groups, South Australia

Commodity Group	Value of Retail Sales of Goods				
	1961-62 (a)	1962-63	1963-64	1964-65	1965-66
	\$ million				
Groceries	71.0	74.8	79.7	86.7	93.2
Butchers' meat	35.2	38.2	42.4	45.2	48.5
Other food	65.0	66.8	72.8	79.7	83.7
Total food and groceries	171.2	179.8	194.9	211.6	225.4
Beer, wine and spirits	47.4	49.8	53.4	57.2	62.5
Clothing, drapery, etc.	80.6	87.0	95.7	103.4	103.8
Footwear	14.0	14.2	16.1	16.0	16.5
Hardware, china, etc.	12.2	13.0	12.8	14.4	15.5
Electrical goods	30.4	33.8	38.5	42.1	40.8
Furniture and floor coverings ...	20.6	22.4	25.3	29.0	30.6
Chemists' goods (b)	22.6	24.4	26.0	28.5	30.9
Other goods (c)	52.6	54.2	60.7	66.5	71.1
Total excluding motor vehicles, etc.	451.6	478.6	522.5	568.8	597.8
Motor vehicles, parts, petrol, etc..	143.2	179.8	210.1	234.0	216.8
Total	594.8	658.4	732.6	802.8	814.6

NOTE :—Builders' hardware and supplies, basic building materials, farm and business machines, earth moving equipment, and grain, feed and fertilizers are excluded.

(a) Census figures.

(b) Includes toiletries, cosmetics, and dispensing.

(c) Includes tobacco, cigarettes, jewellery, sporting goods, etc.

WHOLESALE TRADE

Some indication of the volume of wholesale trade in South Australia is given by statistics collected under Commonwealth Sales Tax Acts. However, the statistics do not relate to all wholesale trade and do not necessarily cover a constant portion of such trade because vendors trading in exempt goods only are not required to furnish returns.

Wholesale Sales Recorded Under Sales Tax Acts, South Australia

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000					
Gross taxable sales—						
At a tax rate of—						
2½%	—	31,173	37,673	41,374	44,260	42,037
8½%	34,666	3,699	—	—	—	—
12½%	80,394	88,508	108,289	104,846	111,726	113,805
16½%	23,623	12,852	—	—	—	—
22½%	—	13,202	42,753	52,023	9,580	—
25%	14,721	13,086	14,008	14,993	64,804	65,272
30%	26,577	15,496	—	—	—	—
40%	5,772	—	—	—	—	—
Exempt sales	415,474	401,331	435,520	487,098	563,822	570,170
Total sales ..	601,226	579,346	638,243	700,334	794,142	791,284

10.2. OVERSEA TRADE

LEGISLATION AFFECTING OVERSEA TRADE

The power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament by the Commonwealth of Australia Constitution Act, Section 51 (i). Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1st January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution.

The Commonwealth legislation affecting oversea trade includes the Customs Act, the Customs Tariff, the Customs Tariff (Dumping and Subsidies) Act, and the Trading with the Enemy Act. The Customs Act is the administrative Act under which the Department of Customs and Excise operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time.

The Customs Tariff

The first Commonwealth Customs Tariff was introduced by Resolution on 8th October 1901 from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended.

On 1st July 1965 the Australian tariff was re-issued in Brussels Nomenclature form. The new form of the tariff is claimed to have the following advantages—

- (a) it provides a permanent framework for future amendments and expansion of the tariff, and
- (b) the nomenclature has been adopted by a large number of countries, providing a uniform method of classifying commodities in international trade.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from certain countries of the British Commonwealth of Nations. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

Australia has two classes of tariff—the Preferential Tariff and the General Tariff.

The Preferential Tariff rates of duty apply to goods the produce or manufacture of the United Kingdom, provided that such goods comply with the laws and statutory regulations in force at the time affecting the grant of preference, and that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia.

The Preferential Tariff also applies to the Republic of Ireland and, with the exception of a relatively small number of commodities which carry special rates of duty, to Canada, New Zealand (except Cook Islands) and the Territory of Papua and New Guinea. In relation to certain goods, the Preferential Tariff also applies to specified countries of the British Commonwealth of Nations and most of the British non-self-governing colonies, protectorates and trust territories.

The General Tariff applies to goods other than those to which the Preferential Tariff applies.

Primage Duties

In addition to the duties imposed by the Customs Tariff, *ad valorem* primage duties at rates of 5% or 10% are charged on some goods according to the type of goods and origin thereof. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island and the Territory of Papua and New Guinea are also exempt from primage duty.

Anti-dumping Legislation

The *Customs Tariff (Dumping and Subsidies) Act* 1961-1965 provides protection for Australian industry against various forms of unfair trading. Under this Act a dumping duty may be imposed on goods that are sold to Australia at an export price which is less than the normal value of the goods or a countervailing duty on subsidized goods, where the dumping or subsidization causes or threatens material injury to an Australian industry.

Special duties may be collected also if dumped or subsidized goods are imported to the detriment of the trade of a third country in the Australian market.

Import Controls

A system of import licensing introduced in 1939, as a war-time measure, provided that goods could not be imported into Australia unless a licence had been issued or they had been specifically exempted from control.

The controls were progressively relaxed during the post war years but were subsequently re-imposed in 1952 as a result of a serious deterioration in Australia's external financial position. These controls were imposed on imports from all sources except Papua, New Guinea and Norfolk Island.

The object of import licensing was to limit the value of imports to an annual rate determined by the government in order that payments for imports would not involve an excessive drawing on Australia's international reserves.

The import licensing controls have since been removed with the exception of some goods retained under control for reasons associated with the protection of certain Australian industries.

The Customs (Prohibited Imports) Regulations, list those commodities whose importation is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) by the *Quarantine Act* 1908-1966 and the *Therapeutic Goods Act* 1966.

Export Controls

Under Section 112 of the Customs Act the exportation of goods from Australia, may be (a) prohibited absolutely, (b) prohibited to a specified place, or (c) prohibited unless prescribed conditions or restrictions are complied with.

The *Banking Act* 1959-1966 contains provision to ensure that the full proceeds of goods exported from Australia are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia.

ADVISORY AUTHORITIES ON OVERSEA TRADE

Tariff Board

The *Tariff Board Act* 1921-1966 provides for the appointment of a Tariff Board consisting of eight members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their original appointment. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister for Trade and Industry is required to refer to the Board for inquiry and report the following matters—the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade.

In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report—the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the tariff.

The Minister for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters—the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961-1965*.

Special Advisory Authority

The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within 30 days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.

ENCOURAGEMENT OF OVERSEA TRADE

Trade Commissioner Service

The *Trade Commissioners Act 1933-1936* provides for the appointment of one or more Trade Commissioners and Assistant Trade Commissioners of the Commonwealth in such places as the Governor-General determines.

In 1957 Australia's official commercial representation was extended by the introduction of a system of Trade Correspondents. These correspondents, who are appointed in countries where there is no Trade Commission, are engaged on a part-time basis and operate under the general direction of the Trade Commissioner in whose area they are located.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry and is responsible for overseas commercial intelligence. Particular facilities offered to Australian exporters and export organizations include: market surveys, advice on selling and advertising methods, arranging introductions with buyers and agents, providing reports on the standing of overseas firms, assisting business visitors and organizing trade missions, trade displays and other publicity and promotion media.

In some countries, Trade Commissioners participate in inter-governmental negotiations on economic and commercial matters. A Trade Commissioner may also be called upon to act as the Australian Government representative in those countries where there is no Australian diplomatic or consular mission.

Export Payments Insurance

The *Export Payments Insurance Corporation Act 1956-1966* established the Corporation with the objective of protecting Australian exporters against risks of loss arising from non-payment of their overseas accounts.

The main risks of loss against which the Corporation insures are the "commercial" risks of the insolvency or protracted default of the buyer, and "political" risks, such as war or cancellation of a valid import licence.

More recently, in 1965, the scope of the Corporation was widened to include the ability to insure Australian investments in overseas countries against, broadly, three types of "political risks"—expropriation, inability to transfer currencies, and damage as the result of war or insurrection.

Export Incentives

The Commonwealth Government provides taxation concessions as financial incentives to export. A special income tax allowance for export market development expenditure is designed to encourage firms to incur promotion expenditure in advance of export sales and to assist exporters and potential exporters to expand sales in the existing markets and to enter new overseas markets. Rebates of pay-roll tax are also granted to employers whose export sales of goods or property rights have increased above their average annual level in a base period.

TRADE AGREEMENTS

Australia has entered into a number of trade agreements with various countries to obtain, in general, preferential rates of duty for a range of Australian commodities in those countries and in turn has contracted to extend preferential treatment to a range of commodities entering Australia from those countries.

In terms of the annual value of trade, the principal agreements are with the United Kingdom, Canada, New Zealand, Japan, and the Federal Republic of Germany.

The General Agreement on Tariffs and Trade (G.A.T.T.), of which Australia is an original member, is an international trade agreement which has been in operation since 1st January 1948.

The objectives of the G.A.T.T. include the expansion of world trade and the raising of living standards throughout the world. The essential features of the G.A.T.T. are the schedules of tariff concessions which its members have agreed to apply consequent to tariff negotiations with each other, the application of most-favoured-nation treatment among its members, the avoidance of trade discrimination, and a code of agreed commercial policy rules for fair international trading.

Five series of tariff negotiations have been conducted, as a result of which Australia has obtained tariff concessions on almost all the principal products of which it is an actual or potential exporter to the individual countries concerned. A sixth series of tariff negotiations, the Kennedy Round, based on a plan for linear tariff cuts on all classes of products, including agricultural and primary products with a minimum of exceptions, and on a reduction of non-tariff barriers to trade, began in May 1964 and concluded in May 1967. Agreement was reached on a higher minimum world price for wheat and on the gradual reduction in tariff duties on many other commodities.

METHOD OF RECORDING IMPORTS AND EXPORTS

Oversea trade statistics are compiled from documents obtained under the *Customs Act 1901-1966*.

Statistics for South Australia apply to the imports into and exports from Australia which are recorded at South Australian ports. Imports do not provide a record of the oversea goods used or consumed in South Australia, as some of the goods pass subsequently to other Australian States and some goods imported through other States pass into South Australia. Similarly, exports include products of other States shipped oversea from South Australian ports, but exclude products of South Australia shipped oversea from ports in other States.

Commodities which have entered or have been cleared from South Australia by sea, air or parcels post are included.

On 1st July 1965, concurrent with the introduction of the Australian Brussels-type Tariff, the new Australian Import Commodity Classification, based on the United Nations' Standard International Trade Classification (S.I.T.C.) Revised, was introduced. Details of oversea imports which follow have been compiled in terms of this new classification, but oversea exports are in terms of the classification introduced on 1st July 1945. The new Australian Export Commodity Classification, also based on S.I.T.C., Revised, came into operation on 1st July 1966.

Recorded values of imports are "transaction value (f.o.b.)" or "domestic value (f.o.b.)", whichever is the higher. These values are f.o.b. port of shipment Australian currency.

The definitions of f.o.b. values adopted for exports generally are—

- (a) For goods sold to oversea buyers before export—the Australian f.o.b. port of shipment equivalent of the price at which the goods were sold.
- (b) For goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were dispatched for sale (as regards wool, the f.o.b. port of shipment equivalent of the current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received).

Inclusions and Exclusions

Export tabulations do not include the value of stores loaded on aircraft and ships. Ships' stores include stores used to operate ships and aircraft (e.g. aircraft fuel, bunker oil, food and drink for passengers and crew) and ships' fittings installed on overseas-owned ships in Australian ports.

Outside packages (containers, crates) are included as a separate item in the tabulation of imports. For exports, however, the value recorded for each item includes the value of the outside package.

Particulars of direct transit trade through Australia are not recorded.

Countries

"Country of origin" appearing in import tables should be taken to mean the country of production. "Country of consignment" appearing in export tables means the country to which goods were consigned so far as this can be determined at the time of export. Where the country of consignment is not determined at the time of export, goods are shown as exported "For Orders".

OVERSEA TRADE OF SOUTH AUSTRALIA

IMPORTS

The total value of direct oversea imports into South Australia has risen considerably in the last five years, and exceeded \$200 million for the first time in 1964-65.

In this period machinery and transport equipment varied from 36.5% of total imports in 1961-62 to 45.8% in 1965-66, while mineral fuels and lubricants increased from 5.8% of total imports in 1961-62 to 12.4% in 1965-66, the increase being influenced mainly by imports of crude oil, first imported in 1962-63 following the completion of the Port Stanvac oil refinery.

Direct Oversea Imports to South Australia: Principal Commodities

Commodity	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Food and live animals	3,436	3,514	3,822	4,474	4,650
Beverages and tobacco	465	455	591	656	683
Crude materials, inedible—					
Crude rubber	393	725	740	971	1,264
Wood, timber and cork	3,867	4,867	6,448	7,337	6,047
Textile fibres and waste	3,305	3,155	4,475	4,463	2,177
Crude fertilizers, crude minerals	2,066	2,074	2,473	4,010	4,102
Other	1,208	1,590	1,779	1,941	1,893
Mineral fuels, lubricants	5,949	11,115	20,882	21,574	24,570
Animal and vegetable oils and fats	934	1,083	685	661	690
Chemicals—					
Chemical elements and com-					
pounds	934	1,964	1,550	1,633	2,187
Plastics and artificial resins ...	1,141	1,370	2,157	2,630	2,200
Other	2,830	3,133	3,367	4,827	3,851
Manufactured goods—					
Paper and paperboard					
manufactures	2,900	4,034	4,159	5,062	4,720
Yarn, fabrics and made-up					
articles	11,339	9,979	10,588	11,656	12,950
Non-metallic mineral manu-					
factures	3,787	5,214	5,706	6,402	4,384
Iron and steel	3,258	5,146	6,631	11,845	7,461
Other	6,974	7,687	7,437	10,191	7,792
Machinery and transport equip-					
ment—					
Machinery, other than electric ..	17,120	19,344	26,566	29,543	44,898
Electrical machinery and					
appliances	7,720	11,014	9,781	11,087	16,095
Transport equipment	12,901	29,480	44,523	46,595	29,699
Miscellaneous manufactured articles	6,808	7,743	8,115	9,156	8,545
Commodities and transactions not					
classified to kind	4,051	5,140	7,177	8,142	7,298
Total	103,386	139,826	179,651	204,856	198,156

During the last five years the United States of America has replaced the United Kingdom as the principal source of imports. In 1953-54 the United Kingdom supplied over half of the direct imports to South Australia, but subsequently there has been a steady decline to 23.3% in 1965-66. In the years immediately prior to 1960-61, imports from the United States of America represented about 10 to 12% of total imports. In 1963-64 and 1964-65 the proportion had increased to about 30% but fell slightly to 27.2% in 1965-66.

Direct Oversea Imports to South Australia: Principal Countries

Country of Origin	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
United Kingdom	32,801	44,352	44,296	48,596	46,215
Nauru	795	885	1,035	1,208	909
Canada	6,173	9,463	9,715	11,185	11,484
India	3,429	3,374	3,218	4,734	4,130
Malaysia	1,424	1,579	2,107	3,340	1,892
New Zealand	1,191	1,756	2,169	2,380	2,323
Pakistan	3,808	2,134	2,673	1,556	3,172
Saudi Arabia	617	5,377	16,985	18,012	21,777
Belgium-Luxembourg	934	973	1,100	1,515	1,172
France	1,598	4,648	3,325	1,693	2,167
Germany, Federal Republic of ..	5,043	5,752	7,259	8,817	9,747
Indonesia	2,527	1,502	1,050	1,820	650
Iran	1,606	1,406	1,217	1,514	1,275
Italy	1,067	1,731	1,557	2,028	2,064
Japan	3,367	5,685	8,440	16,399	13,544
Netherlands	2,559	3,445	3,294	4,524	4,663
Sweden	2,871	2,098	2,990	2,649	3,259
Switzerland	1,022	841	1,003	972	1,473
United States of America	22,455	31,937	54,810	59,655	53,997
Other	8,099	10,888	11,408	12,259	12,243
Total	103,386	139,826	179,651	204,856	198,156

The following table shows by commodity groups the imports from principal countries during the year 1965-66.

Direct Oversea Imports to South Australia from Principal Countries
Commodity Groups, 1965-66

Commodity Group	Canada	Japan	Saudi Arabia	United Kingdom	U.S.A.	Other	Total
	\$'000						
Food and live animals—							
Fish and fish preparations	161	305	—	589	11	602	1,668
Coffee, tea, cocoa, spices	1	18	—	17	7	1,477	1,520
Other	21	8	—	202	226	1,005	1,462
Beverages and tobacco	1	—	—	363	112	207	683
Crude materials, inedible—							
Crude rubber	94	—	—	89	366	715	1,264
Wood, timber and cork	3,062	9	—	2	1,332	1,642	6,047
Textile fibres and waste	19	343	—	5	810	1,000	2,177
Crude fertilizers and crude minerals ..	704	61	—	53	1,241	2,043	4,102
Other	4	2	1	41	252	1,593	1,893
Mineral fuels, lubricants	2	—	21,776	83	268	2,441	24,570
Animal and vegetable oils and fats	6	—	—	76	62	546	690
Chemicals—							
Chemical elements and compounds ..	69	182	—	533	409	994	2,187
Plastic materials and artificial resins ..	80	273	—	776	377	694	2,200
Other	51	33	—	1,474	1,324	969	3,851
Manufactured goods—							
Rubber manufactures	25	311	—	782	453	324	1,895
Paper, paperboard and manufactures ..	1,264	166	—	386	283	2,621	4,720
Textile yarn, fabrics, made up articles ..	350	1,465	—	1,964	371	8,800	12,950
Non-metallic mineral manufactures ..	4	761	—	1,984	340	1,295	4,384
Iron and steel	899	2,731	—	1,609	580	1,642	7,461
Non-ferrous metals	328	6	—	345	61	225	965
Other	310	529	—	1,516	839	1,738	4,932
Machinery and transport equipment—							
Machinery, other than electric	1,175	1,984	—	13,651	21,260	6,828	44,898
Electric machinery and appliances ..	227	1,167	—	5,382	2,699	6,620	16,095
Transport equipment	2,283	2,085	—	7,745	16,720	866	29,699
Miscellaneous manufactured articles ..	116	824	—	4,219	1,274	2,112	8,545
Commodities and transactions not classified to kind	228	281	—	2,329	2,320	2,140	7,298
Total	11,484	13,544	21,777	46,215	53,997	51,139	198,156

EXPORTS

The value of direct oversea exports from South Australia reached a record level of \$322.2 million in 1963-64, but fell to \$302.2 million in 1964-65 and \$296.3 million in 1965-66. Exports of wheat have been considerably reduced, falling from \$70.7 million in 1963-64 to \$48.1 million in 1964-65 and \$41.9 million in 1965-66. The value of pig-lead exported in 1965-66 was a little less than that exported in 1964-65 although the quantity increased slightly, while the value of concentrates and ores exported increased by 4.4%.

In 1965-66 wool accounted for 31.9% of the total value of exports, wheat 14.1%, pig-lead 13.3% and concentrates and ores 11.3%.

Direct Oversea Exports from South Australia: Principal Commodities

Commodity	1961-62	1962-63	1963-64	1964-65	1965-66
QUANTITIES					
Cheese..... '000 lb.	15,706	11,876	21,194	18,612	17,581
Flour..... ton	82,777	89,971	90,216	92,762	64,255
Wheat..... '000 bush.	30,146	18,509	48,658	33,782	29,128
Barley..... '000 bush.	24,768	6,875	13,454	12,894	6,202
Wine..... '000 gal.	1,568	1,516	1,437	1,882	1,803
Wool—					
Greasy..... '000 lb.	158,008	151,999	163,298	164,358	172,439
Other..... '000 lb.	14,326	15,526	14,624	11,652	12,727
Pig-lead..... '000 cwt.	3,918	3,372	3,364	2,959	3,130
VALUES (\$'000)					
Cheese.....	2,514	2,052	3,620	3,700	3,395
Flour.....	4,982	5,516	5,634	5,150	4,008
Fruit—					
Dried—					
Raisins.....	1,888	2,004	3,144	3,040	4,054
Other.....	1,680	1,760	1,974	1,970	2,371
Preserved and pulped.....	2,566	1,774	3,406	3,520	5,374
Other.....	1,740	1,646	2,204	2,192	1,297
Wheat.....	42,838	27,086	70,704	48,106	41,855
Barley.....	23,422	6,968	13,828	15,246	7,050
Meat.....	3,330	6,350	4,860	5,048	6,406
Wine.....	2,528	2,502	2,478	3,212	3,095
Hides and skins.....	6,274	8,070	9,696	8,314	9,122
Wool—					
Greasy.....	72,904	72,482	95,036	83,410	84,932
Other.....	10,202	10,916	12,362	9,124	9,555
Concentrates and ores.....	16,238	21,570	23,984	31,986	33,393
Metals and metal manufactures—					
Pig-lead.....	28,554	22,090	30,410	41,064	39,439
Other.....	11,240	10,368	26,516	22,708	24,713
All other.....	11,076	9,790	12,304	14,452	16,217
Total.....	243,976	212,944	322,160	302,242	296,276

The following table shows the value of exports to principal countries during each of the years 1961-62 to 1965-66. In 1965-66, 22.8% of exports were to the United Kingdom, 18.4% to Japan, 10.4% to the United States of America while exports to U.S.S.R. fell from 7.4% in 1964-65 to 1.6% in 1965-66.

Direct Oversea Exports from South Australia: Principal Countries

Country of Consignment	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
United Kingdom	62,500	54,210	84,460	78,014	67,594
Canada	3,464	3,775	4,029	4,585	4,617
India	5,570	4,207	6,597	6,368	4,565
New Zealand	10,013	9,570	15,332	15,293	17,450
South Arabia (Aden)	1,791	1,550	2,214	2,631	3,378
Belgium-Luxembourg	5,891	6,426	10,565	14,513	11,533
China, Republic of—Mainland ..	12,879	2,074	9,879	6,670	6,321
France	12,206	12,735	16,622	12,140	15,032
Germany, Federal Republic of ..	13,995	6,023	8,914	8,217	10,592
Iran	1,129	1,281	1,053	6,024	2,985
Italy	10,946	8,595	9,957	6,250	8,650
Japan	35,818	34,464	55,799	52,033	54,462
Kuwait	428	1,418	1,506	2,099	2,343
Lebanon	3,881	3,215	5,914	779	78
Mexico	669	1,196	2,675	3,364	2,313
Netherlands	5,862	2,309	4,929	3,320	3,741
Norway	2,298	4,286	6,077	4,071	81
Saudi Arabia	601	901	1,477	2,037	1,536
South Africa	1,248	2,175	2,650	3,355	5,795
United States of America	20,708	18,213	19,004	22,633	30,716
U.S.S.R.	3,608	4,394	17,441	22,505	4,675
For orders	2,031	3,414	4,944	1,392	733
Other	26,440	26,514	30,121	23,949	37,086
Total	243,976	212,945	322,159	302,242	296,276

Exports to principal countries during the year 1965-66 classified by commodity groups are shown below.

Direct Oversea Exports from South Australia to Principal Countries
Commodity Groups, 1965-66^(p)

Commodity Group	United Kingdom	New Zealand	France	Japan	U.S.A.	U.S.S.R.	Other	Total
	\$'000							
Foodstuffs of animal origin—								
Meats, poultry and game ..	155	..	..	..	2,043	..	126	2,324
Dairy products, eggs, honey	2,486	..	..	700	1	..	705	3,893
Other (including fish)	149	..	286	..	2,515	..	312	3,262
Foodstuffs of vegetable origin—								
Cereals, bakery products, vegetables	11,709	2,073	..	1,151	..	2,867	36,205	54,005
Fruit (including pulp, and juices)	4,499	1,851	268	63	208	..	6,256	13,146
Other	145	4	..	3	113	..	284	549
Spirituous liquors	1,869	204	..	17	12	..	1,502	3,604
Animal substances—								
Fibres (including wool) ...	10,674	56	8,064	34,319	9,024	1,808	30,542	94,487
Hides and skins	160	..	6,023	463	6	..	2,470	9,122
Oils, fats and waxes	74	298	..	60	21	..	1,130	1,582
Rocks and minerals	12,909	671	..	12,844	3,304	..	5,979	35,707
Metals and metal manufactures—								
Basic shapes—								
Pig lead	18,590	1,004	..	2,690	11,672	..	5,483	39,439
Other	182	1,365	..	1,381	96	..	6,248	9,272
Vehicles and parts	30	7,591	1	11	30	..	4,089	11,752
Other manufactures	468	261	..	9	265	..	339	1,342
Machinery and electrical appliances	105	854	6	20	35	..	1,161	2,182
Bullion and specie .....	..	165	..	..	..	..	..	165
All other	3,390	1,054	384	729	1,370	..	3,517	10,444
Total	67,594	17,450	15,032	54,462	30,716	4,675	106,349	296,276

.. Nil or less than \$500.

(p) preliminary.

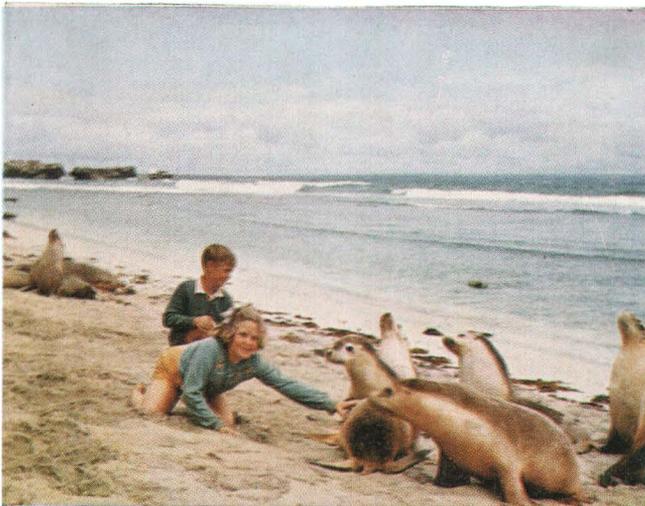


S.A. Govt Tourist Bureau
The calm waters of Gulf St Vincent

TOURIST
ATTRACTIONS



S.A. Govt Tourist Bureau
The annual Christmas Pageant



Hair seals at Seal Bay,
Kangaroo Island
S.A. Govt Tourist Bureau

Loading refined lead for export
at Port Pirie



Exports of Wool

In 1960-61 Japan replaced the United Kingdom as the principal market for wool exported from South Australia, and in 1965-66 over 35% of wool exported was to Japan. There was a sharp fall in wool exports to U.S.S.R. and to Mainland China in 1965-66.

Direct Oversea Exports of Wool from South Australia

Country of Consignment	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
United Kingdom	16,996	15,144	19,014	15,504	10,671
Belgium-Luxembourg	5,122	4,299	5,824	5,489	4,010
China, Republic of—Mainland ..	2,544	872	3,448	1,425	281
France	7,294	6,660	8,902	6,125	8,064
Germany, Federal Republic of ..	3,282	3,492	4,864	4,700	5,436
Italy	6,102	4,956	5,880	3,512	4,999
Japan	21,106	21,928	35,014	25,404	34,319
Poland	2,440	2,270	1,818	1,827	2,512
U.S.A.	2,378	5,662	4,514	6,357	9,024
U.S.S.R.	3,576	4,378	3,508	8,181	1,808
Other	12,266	13,738	14,612	14,011	13,362
Total	83,106	83,398	107,398	92,535	94,486

Exports of Wheat

The total amount of wheat exported from South Australia fluctuates considerably from year to year, depending on the success of the harvest. The value of wheat exported was at a record level in 1963-64, and although the 1964-65 value was about 32% lower, this was still the second highest ever recorded. In 1965-66 exports fell again to a value of \$41.8 million.

The principal countries of consignment also show marked variations over time; a feature of exports has been the large quantities of wheat shipped to U.S.S.R. in the years 1963-64 and 1964-65.

Direct Oversea Exports of Wheat from South Australia

Country of Consignment	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
United Kingdom	10,438	7,160	22,430	8,716	9,910
New Zealand	3,894	2,694	—	740	2,071
China, Republic of—Mainland ..	4,688	1,162	6,378	4,904	5,922
Germany, Federal Republic of ..	3,740	1,402	2,638	—	337
Iran	870	1,046	468	5,736	2,561
Iraq	28	—	2,462	1,028	68
Lebanon	3,780	3,178	5,904	752	—
Norway	2,218	5,996	5,804	3,904	—
South Africa	1	—	—	3	3,317
South Arabia	1,407	1,009	1,732	2,097	2,801
U.S.S.R.	—	6	12,716	14,324	2,867
Other	11,774	5,433	68,972	5,902	12,001
Total	42,838	27,086	70,704	48,106	41,856

TRADE AT PRINCIPAL PORTS

The following table shows the value of imports and exports at the principal ports during each of the years 1961-62 to 1965-66.

Over 90% of imports are unloaded at Port Adelaide but the proportion of exports loaded there is much lower and in recent years has been of the order of 60%. Exports from Port Pirie principally comprise pig-lead and concentrates and ores (the produce of Broken Hill) and wheat. Shipments of wheat and to a lesser extent barley constitute the major part of exports from Port Lincoln, Wallaroo, Ardrossan and Thevenard, while the principal commodity exported from Port Augusta is copper concentrate from the Northern Territory.

Value of Oversea Trade: Principal Ports, South Australia

Port	1961-62	1962-63	1963-64	1964-65	1965-66
IMPORTS (\$'000)					
Port Adelaide (a)	96,650	135,153	171,373	197,968	185,441
Port Augusta	4	5	2	6	1
Port Lincoln	1,371	684	1,231	1,284	1,361
Port Pirie	1,399	474	1,306	316	52
Wallaroo	996	593	776	1,038	1,146
Whyalla	2,967	2,917	4,963	4,244	10,155
Total	103,386	139,826	179,651	204,856	198,156
EXPORTS (\$'000)					
Port Adelaide (a)	142,939	137,382	193,406	172,398	177,404
Ardrossan	6,545	4,805	10,283	9,686	7,094
Port Augusta	4,035	4,337	4,503	5,742	4,693
Edithburgh	324	379	372	182	101
Port Lincoln	17,380	8,941	24,965	16,628	16,720
Port Pirie	44,937	41,152	64,364	77,908	77,641
Thevenard	3,871	4,204	7,129	7,540	4,566
Wallaroo	19,911	9,865	16,390	10,842	5,546
Whyalla	4,033	1,881	747	1,316	2,511
Total	243,975	212,945	322,159	302,242	296,276

(a) Includes Port Stanvac.

Some details of shipping arrivals at the various South Australian ports are given on page 463.

CUSTOMS AND EXCISE DUTY

Excise duty is levied on specific goods of Australian manufacture, principally for the purpose of raising revenue. Although these excise goods do not form a part of overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods.

The following table gives details of the value of customs duty and excise duty collected in South Australia during each of the years 1961-62 to 1965-66.

Customs and Excise: Net Revenue, South Australia

Statistical Class and Excise Division	1961-62	1962-63	1963-64	1964-65	1965-66
<i>Customs</i>	\$'000				
Foodstuffs of animal origin	72	80	94	106	(a)
Foodstuffs of vegetable origin, non-alcoholic beverages	188	192	204	150	(a)
Spirituous and alcoholic liquors	814	688	828	1,030	816
Tobacco, cigars and cigarettes	520	678	838	994	1,127
Textiles	648	760	792	898	1,190
Apparel	150	196	216	256	(a)
Oils, fats and waxes	3,438	3,716	2,270	2,390	(a)
Metals and metal manufactures—					
Motor vehicles	790	2,644	2,180	2,104	(a)
Other	390	830	902	1,422	(a)
Dynamo electrical machinery, electrical appliances	544	900	872	880	(a)
Machines and machinery, not dynamo electrical	980	1,458	1,532	1,798	(a)
Rubber and rubber manufactures	74	144	162	328	(a)
Wood and wicker	446	532	870	1,236	1,110
Earthenware, cement, china	404	478	426	516	496
Pulp, paper, and board	130	176	170	138	258
Paper manufactures and stationery	56	62	78	96	
Sporting material, toys, jewellery	256	294	326	390	(a)
Chemicals, medicinal and pharmaceutical products	138	162	176	210	266
Other goods	574	844	834	1,136	9,421
Primage and sundry duties	182	236	262	320	318
Total customs duties	10,794	15,070	14,032	16,398	15,002
<i>Excise</i>					
Spirits	2,052	2,180	2,306	2,700	3,316
Tobacco, cigars, cigarettes	10,764	10,196	9,240	11,828	14,110
Petrol	9,334	9,904	12,500	14,176	19,061
Other excise duty	19,408	20,418	21,322	21,660	25,808
Total excise duties	41,558	42,698	45,368	50,364	62,295
Total customs and excise duties	52,352	57,764	59,400	66,762	77,297

(a) Owing to a change of classification it has not been possible to extract for some classes comparable figures for 1965-66 and these have been included in "other goods" of which the major components are—
Petroleum products, \$1,301,000; Base metals, \$965,000; Machinery, \$3,141,000; and Vehicles, \$1,924,000.

10.3. PRICES

MEASUREMENTS OF PRICE MOVEMENTS

The prices of a wide range of commodities and services are collected at regular intervals by the Commonwealth Statistician for the purpose of compiling retail price indexes. These indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate cost of specified quantities and qualities of a selected list of items.

As these indexes are used to measure changes and not aggregates it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average cost for that year to 100 (or some other convenient number) and to adjust other years on a proportionate basis.

The process of deciding the relative importance of the various items which compose an index is known as the "weighting" of the index. In the case of a retail price index the weighting is normally based on the relative importance of the selected items in household expenditure. The list of items must be a selected list as it would be impossible to determine at regular intervals the cost of all items entering household expenditure. The list is accordingly limited to items which are relatively significant in total expenditure and for which price variations can be ascertained with reasonable accuracy.

Over time it becomes necessary to substitute new grades, qualities or types of articles for those formerly used as indicators of price movements in an effort to keep the index representative of current conditions. These substitutions can normally be achieved without injury to the index. From time to time major changes in the overall pattern of household expenditure are noted, and in the past these have prompted the abandonment of an existing index in favour of a different index, the composition and weighting of which was more representative of expenditure at that time.

Previous Retail Price Indexes

The earliest retail price index was the "A" Series Index. First compiled in 1912, it covered food, groceries, and house rents. The "A" Series Index was used for wage adjustment purposes by the Commonwealth Court of Conciliation and Arbitration from 1913 until 1933 when it was replaced by the "C" Series Index.

The "C" Series Index was first compiled in 1921 and involved a much wider coverage than the "A" Series Index. Included were food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, and smoking, as well as other miscellaneous items.

In 1925 a separate index was prepared from the food, groceries and rent components of the "C" Series Index. Known as the "B" Series Index, it replaced the "A" Series Index for general statistical purposes.

A further index, the "D" Series, was used by the Commonwealth Court of Conciliation and Arbitration during 1933-34. It was derived by combining the "A" and "C" Series Indexes.

Between 1934 and 1953 the Commonwealth basic wage was automatically adjusted each quarter for price variations. Early adjustments were made in accordance with movements in the "C" Series Index, but from 1937 special "Court" Indexes were issued by the Industrial Registrar, these in fact being arithmetical conversions of the "C" Series Index.

By the end of World War II the "C" Series Index had been in use for 25 years and its weighting was considerably out of date, even though it had been slightly revised in 1936. Wartime controls, including rationing, had caused

recurrent changes in consumption, and the pattern of household expenditure which emerged with the abolition of control in 1948 pointed to the need for complete revision of the weighting of the "C" Series Index. However, not only had household expenditure changed over the war years, but it was proving increasingly volatile in the early post war period. This suggested the need for an index with a greater adaptability to change than the "C" Series Index with its relatively fixed weights. For example, as the post war trends for home ownership and private motoring developed it became desirable to give increased weight to these items.

The immediate problem of the inappropriateness of the "C" Series weighting was countered by the introduction of the Interim Index in 1954. A transitional measure based on the "C" Series model, it embraced a wider range of commodities and services than did the "C" Series Index. Compilation of the "C" Series Index, however, continued until 1960 and details of its movement between 1901 and 1959 are given in the Statistical Summary on page 540.

The more fundamental problem of taking into account successive major changes in the pattern of expenditure and modes of living was left to the Consumer Price Index, which succeeded the Interim Index in 1960.

Consumer Price Index

The Consumer Price Index is a quarterly measure of variations in the retail prices of certain goods and services which make up a high proportion of the expenditure of wage earner households. Rather than a single index, it consists of a chain of linked indexes each representing a significant variation in composition and/or weighting. The weighting patterns adopted relate to an estimated aggregate expenditure for all wage earner households, and not to some estimated expenditure of a single household. In this way it is possible to give representation to certain major expenditures which relate to some households and not to others.

The Consumer Price Index was compiled for the first time in 1960, and retrospective calculations have been made dating back to 1948. This involved the linking of five indexes, with significant changes in composition or weighting introduced at the June Quarter 1952, June Quarter 1956, March Quarter 1960 and December Quarter 1963. The principal changes involved were—

- (a) the introduction of private motoring (1952), of television (1960), and of furniture (1963),
- (b) alterations in the proportions of houses under various modes of occupancy (1952, 1956, and 1963), and
- (c) changes in the weights of fuel and fares (1952, 1956, and 1963) and of private motoring (1956 and 1963).

For most items, however, the weights used have not varied over the period of the index, and these are based on the estimated pattern of consumption for the years 1952-53 to 1956-57.

The wide range of commodities and services in the Consumer Price Index are arranged in five major groups, with index numbers compiled for each of these groups as well as a total for all items. Index numbers for Adelaide for these individual groups and for "all groups" are recorded below.

Consumer Price Index, Adelaide*Base Year 1952-53 = 100*

Year	Food	Clothing and Drapery	Housing	Household Supplies and Equipment	Miscellaneous	All Groups
1949-50	60.7	66.8	71.6	72.0	69.5	66.2
1950-51	70.1	76.6	75.9	79.2	77.6	74.7
1951-52	90.9	93.6	85.0	92.8	92.0	91.4
1952-53	100.0	100.0	100.0	100.0	100.0	100.0
1953-54	103.5	101.4	109.9	100.6	99.1	102.3
1954-55	106.1	101.7	113.0	100.4	99.1	103.5
1955-56	110.9	101.6	120.8	100.1	104.1	106.9
1956-57	114.7	101.7	129.2	103.2	111.6	111.1
1957-58	111.8	104.4	133.9	104.0	114.2	111.9
1958-59	117.5	105.4	137.1	105.0	114.6	114.5
1959-60	123.1	106.8	140.0	106.0	118.8	118.0
1960-61	132.2	109.5	148.7	106.1	121.4	122.9
1961-62	127.6	111.2	153.5	106.7	121.9	122.5
1962-63	126.0	111.7	154.9	106.2	121.6	122.1
1963-64	129.1	112.8	158.5	104.4	122.3	123.5
1964-65	136.6	114.4	164.6	104.9	129.6	128.6
1965-66	141.2	115.5	171.1	106.7	136.4	132.7

The "all groups" index for Adelaide is shown below with that for each of the other State capital cities. It is emphasized that these numbers show trends in the index within each individual city, but they do *not* measure differences in price levels between cities.

Consumer Price Index, Adelaide and Other State Capital Cities*Base Year 1952-53 = 100*

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Six Capital Cities
1952-53 ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1960-61 ..	122.1	125.9	125.4	122.9	121.2	127.5	123.8
1961-62 ..	122.6	126.3	127.3	122.5	121.6	128.1	124.3
1962-63 ..	123.2	126.2	127.7	122.1	122.2	128.0	124.5
1963-64 ..	124.5	127.1	129.0	123.5	123.8	129.4	125.7
1964-65 ..	128.8	132.2	133.9	128.6	127.6	133.6	130.4
1965-66 ..	133.1	137.1	140.4	132.7	132.5	138.3	135.2

RETAIL PRICES OF FOOD

The average retail prices in Adelaide of certain food items are given in the following table.

Average Retail Prices of Selected Food Items, Adelaide

Item	Unit	1962	1963	1964	1965	1966
		Cents				
Groceries—						
Bread (a)	2 lb.	14.6	14.7	14.7	15.0	16.0
Self-raising flour	2 lb.	16.2	15.8	15.0	14.6	15.3
Tea	$\frac{1}{2}$ lb.	32.0	31.5	31.2	31.0	31.3
Sugar	1 lb.	9.1	9.1	9.1	9.1	9.2
Rice	1 lb.	11.0	11.0	12.7	12.7	12.8
Jam, plum	$1\frac{1}{2}$ lb.	27.5	26.9	27.0	27.4	29.1
Peaches, canned	29oz.	29.0	26.3	25.7	26.5	27.6
Potatoes	7 lb.	31.0	20.7	40.6	57.5	33.7
Onions, brown	1 lb.	7.1	6.7	8.0	8.4	10.3
Dairy products—						
Butter, factory	1 lb.	47.3	46.7	47.8	48.5	48.9
Cheese, processed	$\frac{1}{2}$ lb.	(b)	(b)	22.8	22.6	23.4
Eggs, large	doz.	46.4	54.6	55.6	59.6	65.5
Bacon, rashers	$\frac{1}{2}$ lb.	30.5	32.9	36.8	39.7	41.5
Milk—fresh, bottled (a)	quart	16.7	16.7	16.9	17.5	18.0
Meat—						
Beef—						
Sirloin	1 lb.	41.3	(c)42.5	(c)47.0	(c)52.5	(c)56.7
Rump steak	1 lb.	64.7	67.0	70.9	79.4	86.1
Sausages	1 lb.	19.8	20.4	21.1	22.9	24.7
Corned silverside	1 lb.	42.9	44.8	47.9	53.3	57.7
Lamb—						
Leg	1 lb.	37.4	38.7	40.4	43.7	43.1
Forequarter	1 lb.	22.2	23.0	24.9	27.4	26.5
Loin chops	1 lb.	42.3	44.4	46.3	51.4	51.7
Mutton—						
Leg	1 lb.	23.9	25.4	27.8	29.2	30.9
Forequarter	1 lb.	12.5	13.7	15.8	17.2	18.7
Loin chops	1 lb.	23.4	24.6	27.3	28.9	30.6
Pork—						
Leg	1 lb.	43.7	52.8	59.2	56.7	57.3
Chops	1 lb.	43.6	53.1	59.5	57.5	57.8

(a) Delivered.

(b) Not collected.

(c) Without bone.

Prices of agricultural products are shown in the table on page 348, and separate details for wheat, barley, wool, and livestock are given under the appropriate headings in Part 9.1.

PRICE CONTROL

Following the outbreak of World War II, the Commonwealth Government, acting under the authority of the National Security Act, established price control in Australia. A Commonwealth Prices Commissioner was appointed and given extensive powers in the control of prices. The National Security Act expired at the end of 1946 but temporary legislation provided for the continuation of price regulation until the end of 1948.

During 1948 the Commonwealth Government held a referendum seeking authority for permanent control over prices and rents. However, the proposal was rejected and the States agreed to assume responsibility for price control. In South Australia the necessary machinery was created by the Prices Act of 1948. Provision was made for the retention of existing Commonwealth price regulation orders until altered in accordance with the Act.

The State Prices Department determines prices for a wide range of controlled goods and services and investigates complaints concerning excessive prices for goods and charges for services whether subject to price control or not. Special investigations are carried out on behalf of the Government and also in respect of complaints arising from hire-purchase transactions.

An amendment to the Prices Act in 1966 provided for the continuation of price control until 31st December 1967.

RENT CONTROL

Extensive rent control was introduced in South Australia at the beginning of World War II, with the passing by the State Government of the Increase in Rent (War Restrictions) Act which pegged rents at the level prevailing at 1st September 1939. In 1942 this Act was replaced by the Landlord and Tenant (Control of Rents) Act. Although providing the same benchmark, this Act allowed the South Australian Housing Trust to determine a variation in rent, either upon application by the landlord or tenant, or in certain cases on its own initiative. An appeal against a Housing Trust determination could be made to a Local Court. From the beginning of 1943 to the end of 1962, 60,180 applications for rent determinations were dealt with by the Housing Trust.

Following an inquiry held in 1951 on the future of rent control, proportionate loadings were introduced to allow for increases in property costs since 1939. The gradual relaxation of rent control was achieved through periodic extensions of these loadings and through the exclusion of long-term leases from the provisions of the Act.

At the end of 1962 the Landlord and Tenant (Control of Rents) Act was replaced by the Excessive Rents Act, which currently provides that the tenant of any premises, except where a lease for a term in excess of three years exists, may apply to a Local Court to determine whether the rent is excessive.

The Housing Improvement Act, 1940-1961 provides for some control of the rents of certain substandard houses occupied by tenants. Under this Act the Housing Trust is empowered to control the rents of these houses which are not improved after the Trust has notified its intention to declare them substandard.

PART 11

TRANSPORT AND COMMUNICATION

11.1. TRANSPORT

A network of sea, rail, road, and air services has been established between South Australia and the other States of Australia. Transport between the eastern States and Western Australia, and to a lesser extent Northern Territory, is made *via* South Australian services.

Distances between Adelaide and other Australian capital cities, and Darwin, are shown below:

Distances Between Adelaide and Other Capital Cities

Method of Travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
				Miles			
Road	753	890	464	1,518	1,704	—	1,984
Rail	1,006	1,079	483	1,692	1,622	—	—
Sea (a)	—	973	514	1,471	(b)1,343	756	(c)3,133
Air	614	743	407	1,222	1,377	799	1,719

(a) Distance in nautical miles. (b) Fremantle. (c) Via Fremantle.

The location of the population within the State, as described in Part 5.1, created the demand for transport services to the major centres, and rural settlement throughout most of the State was assisted by the early development of rail services and the construction of arterial roads. The extension or improvement of transport services in and near the metropolitan area has followed the rapid housing development in the post-war period.

RAILWAYS

In part 8.4., railways in South Australia were discussed under the headings of ownership and control, and standardization of railway gauges. It was mentioned that both the State and Commonwealth Governments operate railways in this State and that there are two privately-owned railways, from Iron Knob and Iron Baron to Whyalla, and from Coffin Bay to Port Lincoln. This section deals with the operation of the South Australian Railways as one means of transport within and to and from the State. In the Year Book of the Commonwealth of Australia, the operations of the Commonwealth Railways in South Australia are included in figures for all Commonwealth Railways in Australia. No details are available on the operations of the private railways.

SOUTH AUSTRALIAN RAILWAYS

Funds employed in the South Australian Railways at 30th June 1966 totalled \$147,786,000, including \$5,030,000 representing capital losses incurred prior to 1927 on which the Railways are not responsible for debt charges. Operations for 1965-66 resulted in a deficit of \$9,011,000 and after taking into account contributions from Consolidated Revenue totalling \$8,000,000 towards increases in working costs and interest not covered by rises in freight rates and fares, there was a deficit of \$1,011,000. The following summary shows details of Funds Employed, Working Expenses, and Revenue for the past five years.

South Australian Railways: Funds Employed, Working Expenses and Revenue

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Funds employed	121,768	125,364	130,404	138,962	147,786
Working expenses	31,342	31,122	31,064	31,897	32,581
Revenue	27,984	27,826	29,672	29,960	29,137
Deficit on operating ...	3,358	3,296	1,392	1,937	3,444
Debt charges	4,664	4,926	4,958	5,191	5,567
Total deficit for year ...	8,022	8,222	6,350	7,128	9,011
Less contributions from Consolidated Revenue	8,200	7,800	8,000	8,000	8,000
Net surplus (+) or deficit (-) ..	+178	-422	+1,650	+872	-1,011

Sources of Revenue

The main sources of revenue of the South Australian Railways are from the carriage of freight (general merchandise, minerals, primary products and live-stock) and passengers carried on suburban and country lines. The last general increase in freight rates and in country passenger fares occurred in August 1960. Suburban passenger fares were increased in October 1966 and some interstate fares were increased in March 1967.

The railways by-law rate structure was determined by the need to develop the country and this led to the philosophy of charging what the traffic would bear. Charges were higher for expensive commodities than for cheap ones, even though the cost was the same in each case. This type of rate helped to subsidize those people who lived in sparsely populated areas which were serviced by developmental railways. In the past, losses from these services were recouped by charging higher rates on those lines which carried the greater volume of freight. With the increased competition from road transport in recent years, on some lines it has been necessary to introduce special freight rates to meet that competition.

Sources of revenue and the amounts received for the years 1961-62 to 1965-66 are shown in the table below.

South Australian Railways: Sources of Revenue

Source	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Country passengers	1,688	1,708	1,678	1,685	1,679
Suburban passengers	1,566	1,584	1,638	1,716	1,786
Parcels, mails, etc.	928	930	984	988	940
General merchandise and miscellaneous freight	11,308	10,866	11,892	12,444	11,960
Wool	482	476	488	369	245
Wheat	2,506	2,000	3,262	2,654	2,289
Livestock	1,216	1,360	1,038	954	851
Minerals	6,344	6,900	6,616	6,819	7,007
Rents and miscellaneous	1,128	1,166	1,238	1,467	1,418
Refreshment services and book-stalls	818	836	838	864	961
Total	27,984	27,826	29,672	29,960	29,137

The decline in total revenue during 1965-66 resulted mainly from a reduction in the tonnage of freight carried, particularly cereal and livestock freight. This reflects both the adverse seasonal conditions and the amendments to the Road and Railway Transport Act which virtually removed control over the transport of goods and livestock. Revenue from road motor services amounted to \$190,800 in 1965-66 and is included in revenue from passengers, parcels, mails, etc., and miscellaneous freight.

Further details of passenger traffic and freight traffic which resulted in the revenue shown in the previous table, are set out below.

South Australian Railways: Passenger Journeys and Passenger Train Mileages 1961-62 to 1965-66

Year	No. of Passengers Carried		Passenger Train Mileage		Average Miles Each Passenger Carried		Average Earnings per Passenger Mile	
	Country	Suburban	Country	Suburban	Country	Suburban	Country	Suburban
	'000	'000	'000	'000	No.	No.	cents	cents
1961-62	965	14,211	2,043	1,962	104.24	8.08	1.68	1.36
1962-63	944	13,978	2,014	1,941	105.69	8.24	1.71	1.41
1963-64	895	14,332	1,954	1,967	108.20	8.38	1.73	1.36
1964-65	870	14,326	1,944	1,951	111.32	8.32	1.74	1.44
1965-66	840	14,671	1,923	1,950	113.53	8.36	1.76	1.46

Note.—“Country” journeys here includes all interstate journeys.

The number of passengers carried in 1942-43 was nearly 31 million persons, a substantial increase on the 17.6 million in 1939-40. Following a decline in the immediate post-war period, the number in 1949-50 settled at about the pre-war level, but since 1959-60 has declined to between fifteen and sixteen million. This post-war pattern of decline mainly reflects trends in suburban passenger traffic. Country passenger traffic has declined steadily since 1944-45.

Interstate passenger and freight services are operated in conjunction with interstate railways including Commonwealth Railways—the Victorian Railways to Melbourne, Commonwealth and Western Australian Railways to Perth, and the Commonwealth Railways to Alice Springs. Passenger services offer sleeping accommodation and first and second class travel. The number of passengers carried on South Australian Railways on these services is included under “country” in the above table.

South Australian Railways: Freight Carried

Freight	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66
	'000 Tons						
Wool	45	46	45	44	45	36	29
Wheat	390	631	762	583	966	781	668
Barley	329	476	541	216	290	312	228
Livestock	243	215	179	181	152	142	119
Minerals	1,269	1,290	1,195	1,389	1,431	1,403	1,330
General merchandise	1,783	1,879	1,916	2,117	2,329	2,458	2,449
Number of tons carried	4,059	4,537	4,638	4,530	5,213	5,132	4,823
	'000						
Goods and livestock train mileage	2,664	2,784	2,733	2,771	2,745	2,687	2,619
	Cents						
Average earnings per ton-mile .	3.32	3.40	3.36	3.18	3.09	3.04	2.98

Working Expenses

The cost of operating the South Australian Railways during 1965-66 was \$32,581,000 plus debt charges which amounted to \$5,567,000. The working expenses include the cost of administration, maintenance of permanent way, rolling stock maintenance and operation costs, salaries and wages of station staff, guards, and conductors, and other costs. A comparison of working expenses for the last five years is given in the following table.

South Australian Railways: Working Expenses

Expenses	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Administration—					
Salaries, wages, expenses, etc.	836	846	870	924	996
Pay roll tax	442	438	444	467	483
Superannuation Act—Pensions	1,018	1,062	1,084	1,114	1,122
Way and works—					
Maintenance and superintendence of permanent way, etc.	6,388	6,324	6,324	6,621	6,881
Rollingstock—					
General superintendence	212	204	210	224	224
Maintenance of rollingstock	6,324	6,186	5,880	5,771	5,865
Motive power, lubrication, etc.	5,420	5,242	5,002	4,916	4,877
Transportation and traffic—					
General superintendence, station staff, guards, etc.	7,726	7,774	8,136	8,685	8,880
Miscellaneous—					
Refreshment services, road motors, etc.	1,030	1,032	1,060	1,117	1,205
Stores—					
Salaries, wages, expenses	526	543	572	607	580
Depreciation (a)	1,420	1,480	1,482	1,451	1,468
Total	31,342	31,122	31,064	31,897	32,581

(a) Additional depreciation is included in 'Maintenance of rollingstock' and other accounts to cover depreciation of workshop machinery. The amount for 1965-66 was \$114,000.

The monthly average number of staff employed in operations and maintenance during 1965-66 was 8,102 persons (excluding those employed for special work).

Debt Charges

These charges to the South Australian Railways have increased over the five-year period 1961-62 to 1965-66 because of additional loan funds made available for capital purposes and further advances provided under Railways Standardization and Railway Equipment Agreements. Net funds provided from loan moneys were \$124,541,000 as at 30th June 1966 as against \$112,448,000 at 30th June 1962.

The amount for which the State was liable for interest and repayment under the Railways Standardization Agreement as at 30th June 1966 was \$6,897,000, an increase from \$3,034,000 at 30th June 1962. The total expenditure on standardization to 30th June 1966 was \$24,890,000, of which \$22,989,000 was provided by the Commonwealth (30% repayable by the State), and \$1,901,000 was contributed from the Consolidated Revenue of the State. Outstanding liability of the State to the Commonwealth under the Railway Equipment Agreement at 30th June 1966 amounted to \$790,000.

Debt charges for 1965-66 were:	\$
Interest on Loan Funds provided for capital purposes (other than stores) including exchange on overseas debt	5,184,133
Interest on Loan Funds invested in Stores	126,065
Interest under Railways Standardization and Railway Equipment Agreements	257,128
	5,567,326

Train Mileage and Track Open

The average amount of track open for traffic during the year 1965-66 was 2,484 miles. The Kapinnie-Mount Hope (9 miles) and the Wandana-Kowulka (47 miles) lines were closed and the Ceduna-Kevin (37 miles) line was opened during the year. Train miles run during 1965-66 totalled 6,491,600. Capital cost on lines open and completed at 30th June 1966 was \$149,718,026.

The following table shows revenue and working expenses per train mile.

South Australian Railways: Revenue and Working Expenses

Year	Revenue	Working Expenses	Percentage of Working Expenses to Revenue	Train Mileage	Revenue per Train Mile	Working Expenses per Train Mile
	\$'000	\$'000	%	'000 Miles	\$	\$
1961-62	27,984	31,342	112	6,737	4.15	4.65
1962-63	27,826	31,122	112	6,727	4.13	4.62
1963-64	29,672	31,064	105	6,666	4.45	4.66
1964-65	29,960	31,897	106	6,582	4.55	4.85
1965-66	29,137	32,581	112	6,492	4.49	5.02

Train mileage was 6,793,000 in 1942-43 but fell to about 6 million in 1946-47 and 1948-49. By 1952-53 train mileage had risen to 7.2 million but in recent years it has declined slowly to its present level. Both revenue and working expenses per train mile have increased in recent years with working expenses per train mile showing the more rapid increase.

Locomotives and Rollingstock

The development of traction in the South Australian Railways followed the pattern of development in other railway systems until early in the 1920's when more powerful steam locomotives, and goods wagons of greater capacity were introduced. The first main line diesel electric locomotive commenced operating in September 1951, and these, connected as twin units, haul loads of 1,000 tons over the Adelaide hills.

Concurrently with the introduction of diesel electric locomotives there has been considerable development in the field of railcars equipped with diesel engines arranged for multiple unit operation. When a comparison was made of the relative economics to be expected from the conversion of the suburban system to electric or diesel traction, it was determined that the multiple unit diesel trains offered greater economic advantages. The first multiple unit diesel train was brought into service in October 1955. Multiple unit diesel railcars have also been introduced into the country passenger services.

The extent of the change from steam to diesel electric locomotives and from petrol to diesel railcars since 1950 is revealed in the following table.

South Australian Railways: Locomotives and Rollingstock

At 30th June in selected years

Particulars	1950	1955	1960	1965	1966
	Number				
Locomotives—					
Steam	333	365	225	151	144
Diesel electric—					
Main line	} 2	} 12	30	41	44
Shunting and transfer ...			12	21	27
General purpose			—	35	38
Total	335	377	267	248	253
Rail cars—Power—					
Diesel	—	—	118	134	134
Petrol (a)	51	53	4	—	—
Rail cars—Non-power—					
Control equipped	—	—	7	7	7
Rail cars—Trailer	29	28	52	58	58
Coaches	515	485	353	243	240
Interstate coaches	47	54	61	71	73
Goods and livestock wagons	8,126	8,895	8,000	7,962	7,905
Service wagons and vans	465	478	467	526	512

(a) Petrol engines replaced by diesel engines.

The tonnage of various fuels consumed in locomotives and railcars during the years ended June 1950, 1955, 1960, 1965 and 1966 was as follows:

These are some of the powers and obligations of the Board under the present Act.

Operations of the Board

Licences issued by the Board must specify the route or routes over which the licensee is permitted to operate vehicles and the amount payable for the licence. The Board may also specify the maximum number of vehicles that he is allowed to operate and maximum rates to be charged for the carriage of passengers or goods. These licences have a five year currency period and both passenger and freight licences expire on a common date, viz 31st March 1968.

The Board may also issue special permits either of twelve month currency or for short periods.

At 30th June 1966 current licences totalled 133, comprising 46 passenger licences (27 regular route) and 87 goods and livestock licences. Special annual permits included 103 charter coach, 266 hire car and 148 miscellaneous passenger permits whilst special permits for short periods issued during the year covered 3,353 passenger vehicles.

Under Section 28(a) of the Act, the Board registers persons and firms who book passengers or receive freight on behalf of a licensee. At 30th June 1966 there were 60 registered agents.

Interstate Transport

During the period prior to November 1954 the Board issued permits for interstate journeys, but after the Privy Council decision in that month interstate carriers enjoyed complete freedom of movement between the States. Early in 1957 an amendment to the Road and Railway Transport Act became operative and required owners of commercial vehicles (with a tare weight of 2½ tons or over) not registered in South Australia to contribute towards the maintenance of roads. The legislation was challenged in the High Court and in September 1957 was declared invalid.

The Road Maintenance (Contribution) Act, 1963 imposes a charge per ton mile on commercial goods vehicles of more than 8 tons load capacity using roads in South Australia.

ROYAL COMMISSION

In May 1966 a Royal Commission on State transport services was appointed "to enquire into and report upon and make recommendations as to—

- (1) All aspects of the transportation in South Australia of passengers and goods by railway, by road, by sea and by air. In particular—
 - (a) whether it is desirable in the public interest to control by law the transportation of passengers and goods by road, by railway, by sea and by air and if so in what respects and to what extent;
 - (b) whether in the absence of control of transportation of goods, regular, adequate and economical transport services will be available to country towns and districts.
- (2) The differences existing in the cost of commodities as between the metropolitan area and country towns and districts, and in particular as to what proportion of such differences in country towns and districts is represented by the cost of freight, and to make recommendations as to what action, if any, should be taken to subject such differences to control, either under the provisions of the Prices Act, 1948-65, or by some other form of legislation."

At June 1967 the Commission had not presented its report.

TRAMWAY AND OMNIBUS SERVICES**MUNICIPAL TRAMWAYS TRUST**

The Municipal Tramways Trust was incorporated by Act of Parliament in 1906. The Trust's activities are now regulated by the Municipal Tramways Trust Act, 1935-1965.

Exclusive powers are given to the Trust to:

- (1) operate tram systems propelled by electric energy within a radius of 10 miles from the G.P.O.
- (2) carry passengers by motor omnibus for hire or reward on any route wholly or partially within the prescribed area as defined by the Act.
- (3) grant to any person a licence to carry passengers by motor omnibus for hire or reward on any route in (2) above.

In 1965 the prescribed area was extended to include the municipalities of Elizabeth and Salisbury and parts of the district councils of Munno Para and Tea Tree Gully. Private bus operators within the prescribed area must be licensed by the Trust and the licence may stipulate such terms as duration of licence, routes, time tables and fares.

Control is vested in a Board of five members all of whom are appointed by the Governor. Under the Act the State Treasurer is empowered to make grants to the Trust to enable it to meet the expenses incurred in the exercise of its functions.

Historical Survey

The first tramway in South Australia, from Adelaide to Kensington, was opened on 10th June 1878. This first tram service was horse drawn.

Horse drawn tramways were developed by the Adelaide & Suburban Tramway Company Ltd. and six other companies with services eventually extending over routes totalling 51 miles. With the incorporation of the Municipal Tramways Trust in 1906 to provide electric traction for tramways, the operations of the former companies were taken over. The Kensington line was the first to be converted and was opened on 10th March 1909. Supplementary to the main electric tramways system motor bus services were introduced on 25th March 1925 and electric trolley buses on 5th September 1937.

During World War II and the early post-war period renewal of rollingstock and tracks fell below requirements. In the years following, rising costs and loss of patronage associated with greater use of private cars contributed to the Trust suffering increasing financial losses. Amending legislation passed in 1952 gave the State Government a measure of financial control over the Trust's operations.

In 1953 the Board conducted a comprehensive review of the Trust's finances and affairs. Its conclusions were that if operating losses were to be reduced, considerable expenditure would be necessary to modernize capital equipment as a large part of the assets of the Trust had already reached the end of its economic life.

A ten-year plan was drawn up to provide for the efficient rehabilitation and progressive development of the Trust. This plan incorporated the following main features:

- (1) Replacement of tram cars with diesel buses.
- (2) Erection of new parking and servicing depots.
- (3) Modernization of the workshops.
- (4) Erection of new workshops.
- (5) Abandonment of electricity generation in favour of taking power from the Electricity Trust of South Australia.
- (6) Examination of all services and planning for the future needs of the metropolitan area.
- (7) Adoption of more efficient operating methods.

Because of the amount of expenditure contemplated and the nature of the transport problems involved, the Trust sought the assistance and views of a firm of consulting engineers in the United States of America. The report of these consultants largely confirmed the Trust's proposals.

The plan, with slight modification, was subsequently completed more rapidly, and at less cost, than envisaged at first. New workshops were not built and the Glenelg tram service, which runs mainly on enclosed land rather than on public roadways, was retained.

All other tramcar routes were converted to diesel bus operation between 1953 and 1958. The future method of operation for the Glenelg services will depend upon circumstances existing at the end of the economic life of the present system. Electric trolley buses were replaced by diesel buses in July 1963.

The task of taking up tram tracks and restoring roadways on abandoned tram tracks was finally completed during 1960-61. In broad terms the gross cost associated with this work was \$1,500,000 less the value of materials salvaged \$700,000, leaving a net cost of \$800,000.

Income and Expenditure

A table showing net funds employed, income and working expenses etc. for the last five years is given in Part 12.4. Public Finance—Semi-Government Authorities. Net funds employed at 30th June 1953 amounted to \$4,736,000, rose to \$8,534,000 by June 1958 and had fallen to \$5,549,000 by June 1966.

Income earned by the Trust exceeded working expenses each year until 1949-50, when income was \$2,934,000 and working expenses were \$3,184,000. The first grant of \$1,400,000 to the Trust was made by the State Treasurer in 1952-53; the amounts for the last ten years are shown in the following table.

Municipal Tramways Trust: Income and Expenditure

Year	Traffic Receipts	Sundry Receipts	Government Grants	Working Expenses	Interest on Loans	Net Deficiency
	\$'000					
1956-57	4,422	156	1,020	5,480	502	384
1957-58	4,822	166	980	5,790	570	392
1958-59	4,854	202	880	5,666	616	346
1959-60	5,528	112	188	5,568	602	342
1960-61	5,404	112	60	5,354	576	354
1961-62	5,290	140	60	5,212	556	278
1962-63	5,296	140	26	5,166	534	238
1963-64	5,320	154	60	5,194	516	176
1964-65	5,743	156	20	5,487	518	86
1965-66	5,880	170	20	5,806	505	241

At 30th June 1966 loan indebtedness amounted to \$10,218,000; these loans are secured by debentures issued to the Treasurer of South Australia.

Route Miles, Mileage Run and Passengers Carried

Route mileage of electric tramways in 1921 measured 66 miles, increasing to 80 miles by 1944. The removal of track mentioned earlier is evident from the table below.

Total route mileage was increased with the introduction of motor buses in 1925 and trolley buses in September 1937. With the change to diesel operation, route mileage of motor buses showed a marked increase. Trolley bus routes are now operated by diesel buses. Total route mileage was 108 miles in 1938, showed a slight increase of 10 miles by 1944, and remained unchanged until the 1950's.

Traffic miles run totalled approximately 8 million miles in 1936-37 but had increased to 10 million miles by 1944-45. Mileage has varied between 10 and 12 million miles since that year.

Municipal Tramways Trust: Route Miles and Traffic Mileage

Year	Route Miles at End of Year				Mileage Run During Year			
	Electric Trams	Motor Omnibuses	Trolley Buses	Total	Electric Trams	Motor Omnibuses	Trolley Buses	Total
	'000				'000			
1954-55 ..	69	38	23	130	4,948	2,592	2,698	10,238
1955-56 ..	60	54	23	137	4,543	3,517	2,682	10,742
1956-57 ..	44	71	23	138	3,700	4,602	2,632	10,934
1957-58 ..	37	82	23	142	2,472	6,779	2,213	11,464
1958-59 ..	7	102	23	132	844	9,947	1,293	12,084
1959-60 ..	7	107	23	137	617	9,782	1,555	11,954
1960-61 ..	7	108	23	138	543	10,315	707	11,565
1961-62 ..	7	112	23	142	510	9,486	1,352	11,348
1962-63 ..	7	115	23	145	497	10,234	704	11,435
1963-64 ..	7	141	—	148	498	10,956	23	11,477
1964-65 ..	7	141	—	148	495	10,972	—	11,467
1965-66 ..	7	142	—	149	486	10,849	—	11,335

In 1908-09 there were about 31 million passengers carried by the Trust. This number increased to 68.5 million by 1927-28, fell during the 1930's, but increased to 95 million by 1944-45. The number of passengers carried has declined steadily since 1947-48, e.g. 78 million in 1949-50, 69 million in 1954-55, 61 million in 1959-60 and 53 million in 1965-66.

Municipal Tramways Trust: Passengers and Fares

Year	Passengers Carried	Traffic Revenue	Traffic Mileage	Average Fare	Traffic Revenue per Traffic Mile
	'000	\$'000	'000	Cents	Cents
1961-62 ..	57,950	5,290	11,348	8.96	46.60
1962-63 ..	58,039	5,296	11,435	8.95	46.31
1963-64 ..	58,571	5,320	11,477	8.92	46.38
1964-65 ..	56,434	5,743	11,467	10.00	51.44
1965-66 ..	53,112	5,880	11,335	10.89	53.37

Working Expenses

Working expenses of the Trust were \$1,244,000 in 1940-41 and had nearly doubled by 1946-47 when expenses were \$2,402,000. In 1965-66, working expenses reached a record level of \$5,806,000. Details for the last five years are given below.

Municipal Tramways Trust: Working Expenses

Working Expense	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Traffic operations	2,776	2,778	2,834	3,016	3,241
Maintenance	866	819	774	811	884
Power for traffic	116	88	40	37	37
Fuel and oil for traffic.....	240	262	284	259	254
Highways contribution.....	90	90	92	92	91
Depreciation	534	536	574	581	559
Other expenses	590	594	596	691	740
Total	5,212	5,166	5,194	5,487	5,806
			Cents		
Working expenses per traffic mile	45.94	45.17	45.26	47.85	51.22

Savings have been effected in expenditure on maintenance and power, fuel and oil since the introduction of the ten year plan. Expenditure on rollingstock maintenance in 1955-56 was \$1,032,000 as against \$806,000 in 1965-66 and permanent way maintenance cost \$243,000 in 1955-56 as against \$22,000 in 1965-66. Combined figures for power, fuel and oil costs in 1955-56 were \$661,000 compared with \$291,000 in 1965-66.

The average number of persons employed by the Trust during 1965-66 was 1,465 persons (119 salaried and 1,346 wages staff). Salaries and wages paid amounted to \$4,158,000.

Rollingstock

The change from electric traction to diesel operation is reflected in the following table showing details of rollingstock at the closing date of selected years.

Municipal Tramways Trust: Rollingstock and Seating Capacity

As at 30th June (a)

Particulars	1945	1950	1955	1960	1965	1966
Rollingstock—						
Electric trams ...	304	279	178	30	30	28
Motor omnibuses	65	81	140	364	353	350
Trolley buses ...	52	61	91	56	—	—
Total vehicles	421	421	409	450	383	378
Seating capacity—						
Electric trams ...	15,370	14,280	10,147	1,908	1,908	1,792
Motor omnibuses	2,341	3,998	5,268	14,428	14,112	14,001
Trolley buses ...	2,712	2,984	4,184	2,006	—	—
Total seating	20,423	21,262	19,599	18,342	16,020	15,793

(a) 31st January in 1945 and 1950.

Accident Casualties

The following accidents occurred during the last two years:

	1964-65		1965-66	
	Killed	Injured	Killed	Injured
Passengers	—	149	—	192
Employees	—	96	—	97
Others	—	30	1	19
Total persons	—	275	1	308

PRIVATE MOTOR OMNIBUS SERVICES

Metropolitan Services

The Municipal Tramways Trust grants licences to private bus operators to carry passengers within the prescribed area. During 1965-66 this area was extended to include the Cities of Elizabeth and Salisbury and parts of the District Councils of Munno Para and Tea Tree Gully. Consequently, details relating to earlier years of mileage run, passengers carried, and traffic receipts shown in the following table are not comparable with 1965-66.

Private Motor Omnibuses, Metropolitan Services

Year	Route Mileage	Mileage Run	Passengers Carried	Rolling Stock	Traffic Receipts (Gross)
	Miles	'000 Miles	'000	No.	\$'000
1961-62 ..	138.88	3,473	10,394	125	1,008
1962-63 ..	144.95	3,584	10,762	128	1,054
1963-64 ..	143.14	3,563	10,926	124	1,068
1964-65 ..	145.09	3,600	10,511	132	1,166
1965-66(a).	244.55	5,147	13,693	217	1,645

(a) Details not comparable with previous years due to extension of prescribed area. See text above.

On the 31st January 1941 route mileage was 46.40 miles and passengers carried during the previous twelve months totalled 2.3 million persons. For January 1951 the corresponding figures were 115.71 route miles and 10.7 million passengers carried.

Interstate and Country Services

Regular interstate bus services operate to the eastern States and special tours are available to all States at different times of the year.

Motor coach services are operated from Adelaide to about 290 destinations within the State *via* 20 different routes. In addition, there are co-ordinated rail and bus services on 3 additional routes.

TAXI-CABS

The Metropolitan Taxi-Cab Act, 1956 provided for the control of taxi-cabs in the prescribed area of Adelaide, and for incidental purposes, and set up the Metropolitan Taxi-Cab Board to administer the Act. The present Act is The Metropolitan Taxi-Cab Act, 1956-1963.

The granting of licences or permits to operate taxi-cabs within the metropolitan area was within the power of each of the metropolitan councils until the Board assumed control on 1st April 1958. It also took over the allotment of vehicles to stands and the charging of permit fees. The Board decided on one general taxi licence but portion of the Municipalities of Adelaide, Port Adelaide, and Glenelg, were to be restricted areas. Taxis operating in the Adelaide restricted area were issued with distinctive plates, and those in the Port Adelaide and Glenelg areas with numbers distinct from the unrestricted areas.

The metropolitan area, under the 1956 Act, included that part of the State which is within ten miles of the G.P.O. Adelaide, and that part of the municipality of Port Adelaide outside that area. The metropolitan area was extended to include the District Council of Stirling in March 1959, the District Council of Tea Tree Gully in October 1963, and the District Council of Salisbury and Elizabeth in June 1964. (The latter council is now the separate municipalities of the City of Elizabeth and the City of Salisbury.)

Regulations under the Act provide for the examination of taxi-cabs: the road-worthiness of all taxi-cabs is examined by the Police Department each year and the Board's inspectors check and test all meters.

Licences issued at 30th June 1965 included taxi-cabs, white plates (*i.e.* restricted) 250, green plates 548, hire cars 34 and funeral cars 10. Drivers' licences current totalled 2,688.

In April 1967 new regulations relating to open hailing of taxis in the metropolitan area were approved. Unrestricted taxis are now permitted to ply for hire by hailing in the restricted areas of Adelaide, Glenelg, Port Adelaide, Salisbury and Elizabeth. The only restrictions in the new regulations are that they apply between the hours of 6.30 a.m. and 11.15 p.m. and that a green plate taxi cannot occupy a stand in the restricted area unless the stand is empty.

MOTOR VEHICLES

Control of Road Traffic

Legislation covering the registration of motor vehicles, licensing of drivers, third party insurance, and general rules to be observed by road users (including pedestrians) in South Australia, was contained in the Road Traffic Act, 1934-1958. In December 1959 legislation on registration, licensing, and third party insurance, was passed under the Motor Vehicles Act, 1959 and similar provisions were repealed from the Road Traffic Act. The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1966 and the Motor Vehicles Act, 1959-1966.

The Road Traffic Act, 1961-1966 provides for the administration of the Act; contains provisions for the duties of drivers and pedestrians, equipment, size and weight of vehicles and safety; and supplementary provisions. The Act is administered by the Road Traffic Board of South Australia.

Registration of Motor Vehicles

Under the Act 'motor vehicle' means (a) a vehicle, tractor, or mobile machine driven or propelled or ordinarily capable of being driven or propelled by a steam engine, internal combustion engine, electricity or any other power not being human or animal, or (b) a trailer; but does not include a vehicle run upon a railway or tramway.

The Registrar of Motor Vehicles controls registration and 'a person shall not drive a motor vehicle on a road unless that vehicle has been registered under this Act and the registration thereof is for the time being in force'.

The Act provides for certain exemptions from registration *e.g.* vehicles with traders' plates, vehicles carrying persons or firefighting equipment to prevent or control a fire, vehicles taking part in processions, etc. A tractor may be driven without registration on roads within twenty-five miles of a farm occupied by the owner of the tractor, when taking delivery after purchase, to and from a workshop for repairs, to draw farm implements, etc.

Permits to use vehicles, without registration, between farm blocks may be granted by the Registrar. A 14-day permit to drive a motor vehicle pending registration may be issued, under certain circumstances, by a member of the police force stationed at a police station more than twenty-five miles from the G.P.O. Adelaide. The Act provides for other exemptions and permits.

Unless an application for registration is accompanied by a certificate of third party insurance, to cover the period of registration plus 14 days, the Registrar will not register the vehicle. Registration is for a period of six or twelve months at the option of the applicant and according to the fee paid.

Registration fees vary according to the power-weight of a motor vehicle. This is calculated by adding the weight of the vehicle in hundredweights to its rated horsepower. The registration fee for a trailer is based on its unladen weight. Registration fees are higher for motor vehicles fitted with solid rubber or metal tyres.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other fire fighting organizations, ambulances for the use of which no charge is made, council vehicles used solely or mainly

for the collection and transport of household rubbish, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles, and to vehicles used wholly or mainly in outer areas. Reduced rates are also available to incapacitated ex-servicemen. Vehicles used solely for interstate trade can be registered for \$2 for a period of twelve months.

The Act provides for registered vehicles to carry number plates and for a registration label to be affixed to each registered vehicle. It also provides for the issue of general traders' plates and limited traders' plates. In January 1967 the first number plates in the new alpha-numero series were issued.

Motor Vehicles on Register

The following table shows motor vehicles on the register at 31st December 1962 to 1966. These figures exclude defence services vehicles.

Motor Vehicles on Register, South Australia

As at 31st December

Type of Vehicle	1962	1963	1964	1965	1966 ^(a)
Cars and station wagons	241,637	259,904	279,685	295,936	313,758
Motor cycles and scooters	15,207	13,967	12,595	11,274	12,328
Buses	1,617	1,692	1,782	1,855	1,951
Trucks, utilities, etc.	74,273	75,027	76,690	75,961	85,532
Total on register	332,734	350,590	370,752	385,026	413,569
Population per vehicle ..	3.00	2.91	2.82	2.81	2.66
Road tractors	3,925	3,956	3,964	4,279	4,755
Trailers ^(b)	56,748	63,372	69,621	74,760	78,265
Traders' plates	2,358	2,474	2,630	2,898	2,827

(a) Due to adjustments to the register in May 1966, prior figures are not strictly comparable.

(b) Including caravans.

New Motor Vehicle Registrations

New motor vehicle registrations during the calendar years 1962 to 1966 are shown in the following table.

New Motor Vehicles Registrations^(a), South Australia

Type of Vehicle	1962	1963	1964	1965	1966
Cars	19,621	23,603	26,328	27,567	23,762
Station wagons	5,201	6,982	7,960	6,601	4,982
Motor cycles and scooters	1,010	921	1,006	1,090	1,097
Buses	119	183	184	155	155
Trucks	1,696	2,228	2,651	2,411	1,946
Utilities	2,437	2,903	3,087	3,213	2,882
Other (including panel vans)	941	978	1,181	1,187	1,128
Total	31,025	37,798	42,397	42,224	35,952

(a) Excludes defence services vehicles.

New motor vehicle registrations are classified by horsepower (R.A.C.) in the following table.

**New Motor Vehicle Registrations^(a), Classified by Horsepower (R.A.C.)
South Australia**

Type of Vehicle and Horsepower	1962	1963	1964	1965	1966
Cars—					
Under 10	1,219	1,950	1,869	897	178
10-14	3,971	3,825	5,608	6,535	4,886
15-19	1,501	2,613	3,065	4,320	4,475
20-24	7,805	5,740	696	529	611
25-29	4,451	7,575	8,866	8,321	7,000
30 and over	674	1,898	6,223	6,965	6,612
Not stated	—	2	1	—	—
Total	19,621	23,603	26,328	27,567	23,762
Station Wagons—					
Under 20	560	789	686	484	214
20-29	4,615	5,640	4,215	3,258	2,560
30 and over	26	552	3,059	2,859	2,208
Not stated	—	1	—	—	—
Total	5,201	6,982	7,960	6,601	4,982
Utilities—					
Under 20	195	232	311	378	265
20-29	2,152	2,541	2,074	2,067	2,008
30 and over	90	130	702	768	609
Total	2,437	2,903	3,087	3,213	2,882
Trucks—					
Under 20	13	91	105	138	167
20-29	577	767	784	641	491
30-39	727	915	1,277	1,115	966
40-49	283	342	357	391	243
50 and over	96	113	128	126	79
Total	1,696	2,228	2,651	2,411	1,946

(a) Excludes defence services vehicles.

Drivers' Licences

Under the relevant section of the Motor Vehicles Act two classes of drivers' licences are issued:

Class A: to drive motor vehicles of any kind.

Class B: to drive motor vehicles of any kind which do not exceed three tons.

The Act provides that an applicant must apply for a permit to learn to drive a motor vehicle and will be issued with a learner's permit once he has passed a written examination on the rules of the road. The permit is for a period not exceeding three months during which time he is expected to undergo a practical test conducted by a police officer appointed for the purpose. If he passes the test he will be issued with a certificate stating the type and make of vehicle used and that he was capable of driving this class of motor vehicle. He may then apply to the Registrar for the appropriate licence, *i.e.* a class A or B licence.

Provision is also made for the testing of drivers suspected of being incompetent or suffering from a disease or disability which may impair their ability to drive, and for the suspension of their licences should they fail to pass.

The fee for a class A or B licence is \$2 and for a learner's permit \$1. Licences and permits are not issued to persons under 16 years of age.

In 1961, motor driving instructors' licences were introduced and made compulsory where instruction was given for reward. The licence fee is \$20 for a period of 3 years.

Drivers' licences current at the 31st December 1966 totalled 464,778. The number in force first exceeded 100,000 in 1931, totalled 215,157 by 1951, 315,044 by 1957, and had risen to 447,985 at December 1965.

Revenue from Registrations and Licences

Revenue from registration fees and driver's licence fees totalled \$11,898,280 in 1966 compared with \$11,361,922 in 1965. These fees are paid into Consolidated Revenue Account but after deductions have been made for sinking fund and interest on loans raised for roads and bridges, and the administration expenses of the Highways and Local Government and Motor Vehicles Departments, the balance is paid into the Highways Fund.

Third Party Insurance

Part IV of the Motor Vehicles Act, 1959-1966 provides that 'a person shall not drive a motor vehicle on a road unless a policy of insurance complying with this Part is in force in relation to that vehicle'. This does not apply to farmers' tractors when exempted from registration or tractors used for roads and firebreaks.

The policy of insurance must be issued by an approved insurer and must 'insure the owner of the motor vehicle mentioned in the policy and any other person who at any other time drives that vehicle, whether with or without the consent of the owner, in respect of all liability for negligence which may be incurred by that owner or other person in respect of the death of, or bodily injury to, any person caused by or arising out of the use of the vehicle in any part of the Commonwealth'.

An 'approved insurer' means a person or body of persons approved by the Treasurer. It is not obligatory to insure any vehicle owned by the Crown and used solely in the public business of the State, or to insure vehicles owned by The Municipal Tramways Trust.

The Act sets out the liabilities of insurers and these include the liability to pay for emergency treatment and hospital treatment to a person injured (including fatally injured) by or arising out of the use of an insured motor vehicle.

Where the driver of a motor vehicle has caused death or bodily injury in the use of that vehicle and the identity of the vehicle cannot be ascertained, then a person who could have obtained a judgment against the driver may give notice to the Treasurer and recover by action against a 'nominal defendant' named by the Treasurer. Payment by the 'nominal defendant' will be paid out of money contributed by an association of insurers to a scheme under section 119 or by the Treasurer, if no such scheme is in operation.

The Treasurer will appoint a 'nominal defendant' where a claim is made by a person in respect of death or a bodily injury caused by negligence in the use of an uninsured motor vehicle on a road. Payments made by the 'nominal defendant' are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

The Act provides that an injured person may claim against his or her spouse, where the spouse is an insured person and has caused that person bodily injury by negligence in the use of a motor vehicle.

The Act sets out the right of an insurer against the unauthorized user of a vehicle, the power of an insurer to deal with claims against the insured, and the duty of the insured not to litigate or negotiate a claim without the consent of the insurer.

Upon the recommendation of the Treasurer, the Governor may appoint a committee to inquire into and report what maximum rates of premiums are fair and reasonable for third party insurance.

Premiums from February 1967 for private and business cars in the metropolitan area are \$27.50 per annum and in the country \$25.00, for taxis \$140 and \$50, and for goods-carrying vehicles, \$29.50 and \$21.00 respectively. Other premiums include \$5.50 for primary producers' trucks.

During 1965-66, third party insurance premiums received amounted to \$7,867,000 and claims paid were \$6,975,000.

Vehicle Usage

In November 1963 a postal sample survey of motor vehicle usage was conducted throughout Australia. The timing of the collection and the specification of the form were such that details can be taken as representative of usage in the calendar year 1963. A summary of results obtained for South Australia is set out below.

It should be borne in mind that since results are obtained from a sample they are not precise and should be considered as approximations only. In addition, total fuel consumption calculated from the survey appears low in comparison with other available information. The deficiency appears to be of the order of 15% to 20%; a possible explanation is a tendency, particularly among car owners, to overstate average mileage per gallon.

Motor Vehicle Usage ^(a), South Australia, 1963

Type of Vehicle	Average Annual Mileage per Vehicle	Average Fuel Consumption ^(b)	Business Mileage as a Proportion of Total Mileage
	Miles	M.P.G.	%
Cars and station wagons	8,180	25.5	25.0
Utilities and panel vans	8,370	20.3	75.1
Trucks, with carrying capacity of—			
Less than two tons	5,400	13.2	97.3
Two tons but less than three tons	4,860	11.7	98.3
Three tons but less than five tons	5,860	10.3	99.1
Five tons and over—rigid	10,400	8.7	99.4
Five tons and over—articulated	29,550	6.7	100.0

(a) Excludes defence services vehicles.

(b) May be overstated—see note above.

For cars and station wagons in South Australia (excluding dealer-owned vehicles) the average annual mileage was 7,760 for those registered at a metropolitan address and 9,330 for those registered at a non-metropolitan address. Corresponding figures for the whole of Australia were 8,770 and 8,760 respectively.

Census of Motor Vehicles

A census of motor vehicles on the register at 31st December 1962 was completed in Australia during 1963 from particulars of motor vehicle registrations. An earlier census was conducted at 31st December 1955.

The following table shows the number of vehicles of each type in South Australia at 31st December 1955 and 1962. In addition, in 1962 there were 4,463 tractors, heavy equipment, and industrial vehicles, and 57,525 trailers on the register; corresponding details are not available for 1955.

Types of Motor Vehicles^(a), South Australia, 1955 and 1962

Type of Vehicle	1955		1962	
	Number	Proportion to Total Vehicles	Number	Proportion to Total Vehicles
		%		%
Motor cars—				
Sedans.....	127,582	52.20	211,387	62.53
Convertibles and open cars....	21,432	8.77	7,773	2.30
Taxis, hire cars.....	(b)	(b)	650	0.19
Ambulances, hearses.....	(b)	(b)	192	0.06
Other.....	148	0.06	8	0.00
Total motor cars.....	149,162	61.03	220,010	65.08
Station wagons.....	1,344	0.55	18,895	5.59
Utilities.....	33,837	13.84	38,539	11.40
Panel vans.....	5,256	2.15	9,678	2.86
Trucks—				
Table top, platform.....	24,561	10.05	23,571	6.97
Van-type.....	480	0.20	686	0.20
Tipper.....	3,150	1.29	4,917	1.46
Articulated, semi-trailer.....	1,340	0.55	2,205	0.65
Horse float, other trucks.....	134	0.05	305	0.09
Total trucks.....	29,665	12.14	31,684	9.37
Other truck-type—				
Tankers.....	} 462	0.19	351	0.10
Concrete agitators.....			82	0.02
Tow trucks.....			62	0.02
Fire-fighting units, etc.....			487	0.15
Total other truck-type.....	462	0.19	982	0.29
Omnibuses.....	973	0.40	1,580	0.47
Motor cycles—				
Solo, motor scooters.....	} 23,704	9.70	15,205	4.49
Side car.....			1,008	0.30
Auto cycle.....			481	0.14
Other.....			23	0.01
Total motor cycles.....	23,704	9.70	16,717	4.94
Total motor vehicles..	244,403	100.00	338,085	100.00

(a) Defence services vehicles excluded.

(b) Included with sedans or other.

Further tables on the 1962 Census containing classifications of vehicles by year or model, horsepower, etc. are given in the bulletin 'Census of Motor Vehicles, 31st December 1962, Bulletin No. 4—South Australia' published by the Commonwealth Statistician.

Road Traffic Accidents

Details of road traffic accidents recorded by the Police Department, involving casualty or property damage exceeding \$50 are shown below for the years 1960-61 to 1965-66.

Road Traffic Accidents, South Australia

Year	Total Accidents Recorded	Accidents Involving Casualties	Persons Killed	Persons Injured	Rate per 10,000 Vehicles on Register (a)			Rate per 100,000 of Mean Population		
					Total Accidents Recorded	Persons Killed	Persons Injured	Total Accidents Recorded	Persons Killed	Persons Injured
1960-61	19,779	6,117	203	7,665	661	7	256	2,066	21	801
1961-62	19,095	6,184	179	7,913	600	6	248	1,955	18	810
1962-63	21,597	6,343	201	8,216	651	6	248	2,169	20	825
1963-64	22,912	6,284	236	8,300	656	7	238	2,246	23	813
1964-65	27,038	7,563	232	9,777	733	6	265	2,579	22	932
1965-66	26,151	6,758	266	8,980	675	7	232	2,426	25	833

(a) 'Motor vehicles on register' here refers to the average of monthly figures, and excludes defence services vehicles, road tractors and trailers. Because of more accurate methods of recording number on register from mid-December 1960, figures prior to 1961-62 are not strictly comparable.

The next table shows road traffic accident casualties for the last six years. During 1965-66, of the total number of persons killed, 35% were drivers of motor vehicles, 35% passengers and 25% pedestrians, whilst of the total number of persons injured 40% were drivers of motor vehicles, 35% passengers and 10% pedestrians.

Road Traffic Accidents: Casualties, South Australia

Year	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers	Pedestrians	Other and Not Stated	Total
PERSONS KILLED							
1960-61 ..	65	15	17	54	52	—	203
1961-62 ..	79	9	11	43	36	1	179
1962-63 ..	61	10	13	50	66	1	201
1963-64 ..	81	19	15	63	58	—	236
1964-65 ..	73	9	17	62	70	1	232
1965-66 ..	94	7	19	79	67	—	266
PERSONS INJURED							
1960-61 ..	2,325	1,184	852	2,418	882	4	7,665
1961-62 ..	2,474	1,073	890	2,657	813	6	7,913
1962-63 ..	2,796	897	840	2,836	845	2	8,216
1963-64 ..	3,204	686	655	3,106	642	7	8,300
1964-65 ..	3,683	813	729	3,559	987	6	9,777
1965-66 ..	3,617	639	640	3,158	926	—	8,980

SHIPPING

Control of Shipping

The Commonwealth Parliament is empowered under the Commonwealth Constitution to make laws in respect of trade and commerce with other countries and among the States.

Navigation and shipping are regulated under the Commonwealth *Navigation Act* 1912-1966 and the provisions of the Act apply to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and whose port of destination are within the Commonwealth. Other shipping Acts under the trade and commerce power of the Commonwealth are the *Sea-Carriage of Goods Act* 1924-1961, the *Seamen's Compensation Act* 1911-1960, the *Seamen's War Pensions and Allowances Act* 1940-1966, the *Australian Coastal Shipping Commission Act* 1966, the *Australian Coastal Shipping Agreement Act* 1956, and the *Stevedoring Industry Act* 1956-1966.

Shipping in South Australia was controlled by the Marine Board and Navigation Act of 1881 and subsequent amendments, and the Harbors Act, 1913. The first provisions of the Commonwealth *Navigation Act* 1912 were brought into operation in 1921. At present, shipping in South Australia is controlled by the Commonwealth Act and, where this does not apply, by the Harbors Act, 1936-1966 and the Marine Act, 1936-1962. Both of these State Acts are administered by the Department of Marine and Harbors.

Registration of Shipping

Registration of shipping in Australia is in accordance with the Merchant Shipping Act 1894 of the Imperial Parliament, under sections which apply to the United Kingdom and all British dominions. Registration is not compulsory for vessels of under 15 tons burden which are engaged in river or coastal trade or for larger vessels if not engaged in trade. Yachts and small trading vessels may be registered at the request of the owners as registration facilitates the sale or mortgage of these vessels.

The table below shows the number of vessels on the South Australian Register at 31st December 1966. The size of a vessel may be expressed as gross tonnage, net tonnage, deadweight tonnage, or in 'terms of displacement'. Gross tonnage (the total volume of the enclosed space) and net tonnage (the volume of the enclosed space that can be used for cargo or passengers) are both expressed in tons of 100 cubic feet and are used in the table.

Vessels on South Australian Register

As at 31st December 1966

Net Tonnage	Steam and Motor			Sailing (including Fitted with Auxiliary Power)			Barges, Hulks, Dredges, etc., not Self-Propelled		
	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage
		'000 Tons	'000 Tons		'000 Tons	'000 Tons		'000 Tons	'000 Tons
Under 50	31	2,414	410	54	1,236	915	—	—	—
50-99	14	1,566	953	8	966	701	1	101	93
100-199	—	—	—	1	229	132	1	179	179
200-499	1	730	469	—	—	—	—	—	—
500-999	2	4,237	1,543	—	—	—	1	674	624
1,000-2,999	2	6,515	3,137	—	—	—	—	—	—
3,000 and over	3	21,961	13,253	—	—	—	—	—	—
Total ...	53	37,423	19,765	63	2,431	1,748	3	954	896

Arrivals at South Australian Ports

Shipping arrivals at all ports in South Australia, including vessels moving only between ports in this State, for the years 1956-57 to 1965-66 are shown in the following table whilst a further table shows arrivals for the year 1965-66. In both tables each column headed intrastate, interstate, and overseas, contains details of vessels engaged on that division of trade at the time of the voyage.

Shipping Arrivals at South Australian Ports

Year	Intrastate		Interstate		Overseas		Total	
	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage
	'000 Tons		'000 Tons		'000 Tons		'000 Tons	
1956-57	4,199	1,057	1,143	3,289	1,022	4,641	6,364	8,987
1957-58	4,205	1,020	1,145	3,216	1,033	4,817	6,383	9,053
1958-59	4,122	943	1,153	3,077	1,147	5,284	6,422	9,304
1959-60	3,788	989	1,123	3,055	1,143	5,233	6,054	9,277
1960-61	3,803	695	1,119	3,075	1,343	6,140	6,265	9,910
1961-62	3,228	775	1,098	3,039	1,464	6,609	5,790	10,423
1962-63	2,949	899	1,096	3,184	1,421	6,638	5,466	10,721
1963-64	2,920	1,227	1,206	3,574	1,629	8,326	5,755	13,127
1964-65	3,020	1,301	1,160	3,565	1,555	8,259	5,735	13,124
1965-66	2,717	1,065	1,172	3,700	1,387	7,563	5,276	12,328

In 1956-57 intrastate shipping accounted for almost 66% of all arrivals whereas in 1965-66 this figure had fallen to 51%. This fall in intrastate shipping was partly offset by an increase in arrivals from overseas. Although there was a fall in the total number of arrivals over the period, total net tonnage increased—the average size of ships arriving increased from 1,400 net tons in 1956-57 to 2,300 net tons in 1965-66.

Shipping Arrivals at South Australian Ports, 1965-66

Name of Port	Intrastate		Interstate		Overseas		Total	
	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage
	'000 Tons		'000 Tons		'000 Tons		'000 Tons	
American River....	175	17	—	—	—	—	175	17
Ardrossan	44	10	77	158	17	89	138	257
Ballast Head	1	(b)	25	40	—	—	26	40
Edithburgh	84	5	—	—	15	29	99	34
Farquhar Jetty (Klein Point)....	286	154	—	—	—	—	286	154
Kingscote	188	94	—	—	—	—	188	94
Port Adelaide (a) ..	1,039	303	347	827	960	4,572	2,346	5,701
Port Augusta	—	—	14	35	6	16	20	51
Port Lincoln	217	129	44	91	68	314	329	535
Port Pirie	202	92	76	236	135	588	413	916
Port Stanvac	26	149	33	193	54	1,451	113	1,793
Rapid Bay	26	60	64	223	—	—	90	283
Stenhouse Bay	43	8	57	74	19	27	119	109
Thevenard	1	(b)	9	15	41	130	51	145
Walleroo	—	—	14	14	34	163	48	177
Whyalla	29	10	412	1,793	38	184	479	1,988
All other outports ..	356	34	—	—	—	—	356	34
Total arrivals ..	2,717	1,065	1,172	3,700	1,387	7,563	5,276	12,328

(a) Inner and Outer Harbor.

(b) Less than 500 tons.

Arrivals from Overseas and Interstate

The table in this section and later shipping tables refer to vessels moving overseas direct or *via* other States, and to other vessels moving interstate. Vessels are entered at the first port of call in South Australia and cleared from the port of final departure from South Australia.

In the following table vessels entered are shown as arrivals; the number of vessels and net tonnage are given for the four years ended 1965-66.

Shipping Arrivals in South Australia from Oversea and Interstate

Arriving from—	Vessels				Net Tonnage			
	1962-63	1963-64	1964-65	1965-66	1962-63	1963-64	1964-65	1965-66
	Number				'000 Tons			
<i>Oversea—</i>								
British Commonwealth—								
United Kingdom	96	113	104	97	700	763	669	646
India, Pakistan and								
Ceylon	42	26	24	24	170	110	92	107
Canada	60	56	45	57	260	249	200	268
New Zealand	74	77	57	70	205	228	145	196
Nauru and Ocean Island	16	16	18	10	85	82	94	57
Other	150	151	124	130	627	608	482	484
<i>Foreign countries—</i>								
Germany, Federal								
Republic	51	44	38	43	226	206	186	198
Other European	63	74	96	61	312	376	517	353
Japan	103	162	105	105	442	738	466	501
Indonesia	6	18	20	6	27	99	120	27
United States of America	83	99	117	119	382	449	507	554
Other	69	103	140	124	439	1,181	1,625	1,746
Total oversea	813	939	888	846	3,875	5,089	5,103	5,136
<i>Interstate</i>	1,132	1,228	1,222	1,163	4,011	4,397	4,595	4,381
Total	1,945	2,167	2,110	2,009	7,886	9,486	9,697	9,517

The number of vessels arriving from oversea in 1965-66 was less than in the previous year, but the net tonnage was slightly higher whereas both the number and net tonnage of vessels arriving from interstate were less than in 1964-65.

Nationality of Arrivals

The country of registration of vessels arriving in South Australia during the years 1962-63 to 1965-66 is shown in the table below.

Nationality of Vessels Entered South Australia

Country of Registration	Vessels				Net Tonnage			
	1962-63	1963-64	1964-65	1965-66	1962-63	1963-64	1964-65	1965-66
	Number				'000 Tons			
<i>British Commonwealth—</i>								
Australia	809	916	871	870	2,307	2,666	2,841	2,834
United Kingdom	479	520	468	425	2,821	3,407	3,121	2,803
New Zealand	62	55	55	59	120	104	96	108
Other	46	52	60	55	153	174	195	212
Total	1,396	1,543	1,454	1,409	5,401	6,351	6,253	5,956
<i>Foreign—</i>								
Denmark	46	50	48	29	234	201	222	109
Netherlands	88	94	94	95	343	384	399	404
Germany, Federal								
Republic	50	57	76	63	189	259	475	286
Greece	11	32	28	27	49	184	145	158
Italy	24	24	31	32	182	239	332	350
Japan	65	66	73	80	289	299	315	415
Norway	107	116	93	79	489	563	515	469
Sweden	88	93	95	83	321	339	364	335
United States of America	15	18	18	14	73	88	78	63
Other	55	74	99	98	315	579	599	973
Total	549	624	656	600	2,484	3,135	3,444	3,561
Grand total ...	1,945	2,167	2,110	2,009	7,885	9,486	7,969	9,517

In 1965-66 70% of vessels entered were registered in British Commonwealth countries whereas in 1949-50 this percentage was as high as 86% and in 1954-55 83%. Since 1949-50 a marked increase has occurred in vessels entered which were registered in Australia, and also the Netherlands, Japan, and Sweden. The total number of arrivals registered in the United Kingdom has fallen slightly in this period, while the proportion has dropped from 47% to 21%.

Arrivals, and Departures, with Cargo and in Ballast

Shipping arrivals and departures with cargo and in ballast are shown in the table below for the year 1965-66. Most of the vessels arriving in South Australia in ballast were from interstate direct and a large number of these were ore-carrying vessels arriving at Whyalla. Vessels arriving in ballast from overseas direct to outports in this State were mainly grain carriers.

Vessels Entered and Cleared: With Cargo and in Ballast, South Australia 1965-66

Country of Registration	Vessels Entered				Vessels Cleared			
	With Cargo		In Ballast		With Cargo		In Ballast	
	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage	Number	Net Tonnage
	'000 Tons		'000 Tons		'000 Tons		'000 Tons	
<i>British Commonwealth—</i>								
Australia	424	1,170	446	1,664	844	2,658	39	229
United Kingdom	380	2,570	45	233	383	2,587	39	198
New Zealand	31	55	28	53	64	124	—	—
Other	50	191	5	20	50	192	1	4
Total	885	3,987	524	1,969	1,341	5,560	79	430
<i>Foreign—</i>								
Denmark	21	95	8	14	28	104	—	—
Netherlands	89	371	6	32	97	411	1	3
Germany, Federal Republic	57	270	6	17	63	291	—	—
Greece	13	74	14	84	21	129	3	15
Italy	17	218	15	131	20	249	11	93
Japan	74	398	6	17	69	367	12	51
Norway	70	408	9	61	63	367	14	85
Sweden	74	308	9	27	75	283	5	45
United States of America	11	53	3	10	13	63	—	—
Other	57	787	41	186	73	848	26	135
Total	483	2,983	117	578	522	3,112	72	427
Grand total ...	1,368	6,970	641	2,547	1,863	8,672	151	857

Distances to Oversea Ports

Distances in nautical miles from Port Adelaide to principal overseas ports are shown in the following table. Particulars of distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 441.

Distances from Port Adelaide to Principal Oversea Ports

Port Adelaide to—	Nautical Miles	Port Adelaide to—	Nautical Miles
<i>New Zealand—</i>		<i>Africa—</i>	
Auckland	2,035	Capetown	6,107
Wellington	1,880	Port Said	7,500
<i>Europe—</i>		<i>North America—</i>	
Liverpool	10,677	Baltimore	10,253
London	10,712	Montreal	11,468
Marseilles	9,011	New York	10,323
Naples	8,607	Panama	8,307
<i>Asia and East Indies—</i>		San Francisco	7,357
Colombo	4,364	Vancouver	7,741
Djakarta	3,047	<i>South America—</i>	
Hong Kong	4,789	Buenos Aires	7,775
Singapore	3,504	Rio de Janeiro	8,579
Yokohama	5,352	Valparaiso	6,780

CIVIL AVIATION

Control of Civil Aviation

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act 1920-1966* and to regulations made under the Act. The South Australian Air Navigation Act, 1937 provided for 'the application of Commonwealth Air Navigation Regulations to, and in relation to, air navigation within the State of South Australia'.

The regulations under the Commonwealth Act were drawn up to give effect to the 1944 Chicago convention on Civil Aviation. Regulations based on the resolutions of the Paris convention in 1919 were no longer adequate in the years after World War II because of the immense wartime development of aerial transport. The present regulations, administered by the Commonwealth Department of Civil Aviation, cover the registration of aircraft and the issue of certificates of airworthiness; the licensing of aircraft services, aircraft operating crews, aerodromes, and flying training schools; and the rules of the air. The department is responsible for the operation of Air Traffic Control and has assumed responsibility for co-ordination of Search and Rescue operations.

Under the *Australian National Airlines Act 1945* the Australian National Airlines Commission was established and empowered to operate Commonwealth-owned air services. The Commission trades under the name Trans-Australia Airlines.

The *Civil Aviation Agreement Act 1952* ratified an agreement, between the Commonwealth and Australian National Airways Pty Ltd to ensure the efficient and economical operation of air services within Australia by eliminating wasteful competition between that company and Trans-Australia Airlines and to rationalize the services of both airlines. The *Civil Aviation Agreement Act 1957* was enacted to extend the privileges and obligations of the 1952 Act to the new proprietor of the major private airline after the purchase of Australian National Airways Pty Ltd by Ansett Transport Industries Ltd. The Commonwealth passed the Airlines Equipment Act in 1958 and this provided for further

financial assistance to both airlines for the purchase of new aircraft and empowered the Commonwealth to limit the aircraft capacity being provided on competitive routes by these two operators.

The Airlines Agreement approved by the *Airlines Agreement Act 1961* consolidated all the arrangements and principles developed by the Government over the past decade for maintaining and securing the competitive airline system and made important arrangements affecting the introduction of new aircraft on Australian domestic routes. The *Civil Aviation Agreement Act 1952-1957*, amended by the 1961 Act, is now cited as the *Airlines Agreement Act 1952-1961*.

For reference to international agreements on civil aviation see Year Book of the Commonwealth of Australia No. 48, and for references to international organizations see Year Book No. 37.

Aircraft on Register

The total number of aircraft listed on the Australian register as at 30th June 1966 was 2,605 aircraft, an increase from 2,207 registered at June 1965. Corresponding figures for the South Australian-Northern Territory Region are given in the following table which shows aircraft classified according to operations.

**Classification of Operations of Aircraft
South Australia-Northern Territory Region**

Type of Operation	As at 30th June				
	1962	1963	1964	1965	1966
Private.....	70	82	104	108	116
Aerial work	32	41	43	51	67
Charter	40	47	39	48	72
Regular public transport	18	18	19	15	15
Total	160	188	205	222	270

Of interest is the increase in the use of aircraft for top dressing with super-phosphate and crop dusting with insecticides, etc., in South Australia; 363,186 acres were treated during 1962 and 1,257,231 acres during 1966.

Aerial Medical Services

Aerial medical services are carried out in the outback areas of Australia. The Royal Flying Doctor Service of Australia (S.A. Section) Inc. operates control stations at Alice Springs and Port Augusta. The Bush Church Aid Society (S.A. Branch) maintains aircraft at Ceduna on the West Coast and these aircraft operate within a radius of 400 miles.

Australian Flying Scholarship Scheme

The Commonwealth has subsidized flying training in Australia largely through the aero clubs since 1926. In 1961 the Commonwealth introduced a new system of subsidies to Australian flying training organizations including the aero clubs, flying schools and the Gliding Federation of Australia, spread over a four-year period. A feature of the new subsidy arrangements was the establishment of the Australian Flying Scholarship scheme which is designed to train career pilots for the Australian commercial aviation industry.

Passengers and Freight Carried

The number of passengers carried on civil airlines in South Australia has more than doubled on both interstate and intrastate services during the last 10 years. Freight carried interstate decreased considerably up to 1961-62 but has since increased until in 1965-66 the 1956-57 level was almost attained. Details are shown in the following table.

Passengers and Freight Carried on Civil Airlines, South Australia

Year	Passengers		Freight	
	Interstate	Intrastate	Interstate	Intrastate
			Short Tons	Short Tons
1956-57	262,623	71,024	10,864	1,139
1957-58	267,656	69,571	8,995	1,148
1958-59	311,365	91,042	8,547	1,255
1959-60	356,826	106,401	8,560	1,430
1960-61	338,476	110,972	7,772	1,482
1961-62	333,909	112,202	7,100	1,491
1962-63	375,465	117,178	7,576	1,459
1963-64	417,101	131,339	8,152	1,469
1964-65	526,883	144,630	9,290	1,398
1965-66	620,210	148,847	10,623	1,339

Note—short ton = 2,000 lb.

Passenger and freight traffic at principal airports in South Australia are given below for the years 1963-64 and 1964-65. Aircraft movements (*i.e.* landings or take-offs) at Adelaide Airport declined slightly during 1964-65.

Principal Airports, South Australia*Passenger and Freight Traffic and Aircraft Movements*

Airport	1963-64			1964-65		
	Passengers	Freight	Aircraft Movements	Passengers	Freight	Aircraft Movements
	No.	Short Tons	No.	No.	Short Tons	No.
Adelaide	526,764	7,109	18,190	618,101	8,197	18,138
Kingscote	32,821	239	1,240	40,591	226	1,335
Mount Gambier	15,821	101	1,158	16,781	106	1,170
Port Lincoln	33,859	419	1,638	38,858	439	1,480
Whyalla	16,918	231	878	22,901	198	982
Woomera	40,247	516	1,428	36,072	446	1,130

11.2. COMMUNICATION**CONTROL OF POSTS, TELEGRAPHS AND TELEPHONES**

The postal, telegraphic, and telephonic services in Australia are under the control of the Postmaster-General pursuant to the provisions of the *Post and Telegraph Act* 1901-1965. The Director-General of Posts and Telegraphs controls the Commonwealth Department under the Postmaster-General, whilst the principal officer in each State is the Director of Posts and Telegraphs.

The Postmaster-General's Department works in close co-operation with three important agencies: the Overseas Telecommunications Commission, which is responsible for establishing, maintaining, and operating public cable and radio telegraph services with oversea countries, ships at sea, and aircraft in flight; the Australian Broadcasting Control Board, which ensures the provision of services by broadcasting stations and television stations in accordance with plans prepared by the Board; and the Australian Broadcasting Commission, which controls the activities of the National Broadcasting Service and the National Television Service.

As a result of federation all the former colonial post and telegraph services were taken over by the Commonwealth on 1st March 1901.

EARLY HISTORY

Posts

Postal facilities were first established in South Australia on 10th April 1837 when the Colonial Storekeeper (Mr. Thomas Gilbert) was also appointed to the position of Postmaster by Governor Hindmarsh at a salary of \$60 per annum. The mails were received at his residence, a temporary hut on the bank of the River Torrens, where they were sorted and delivered. The sole charge levied on letters, whether received or dispatched, was one penny each irrespective of weight. The money was paid as a gratuity to captains of the vessels carrying them.

With the increase in mail and the need for larger accommodation the site of the Post Office was changed to a site in Gilles Arcade, Currie Street in June 1838, and to the south-eastern corner of North Terrace and King William Street later the same year. In July 1848 the General Post Office was moved to a new building on the opposite corner.

In 1851 the General Post Office was removed to the corner of King William and Franklin Streets into a new building which housed the Metropolitan Police Station, Court House, and Post Office. The present General Post Office with its Victoria clock tower was completed in 1872 at a cost of between \$80,000 and \$100,000. The earlier Post Office was demolished in 1891, and additions to the new General Post Office were completed in 1893 to provide accommodation for the Telegraph Office.

Post offices were established at Port Adelaide and Port Lincoln in 1839 and fortnightly mails were introduced and carried by police between Adelaide, Morphett Vale, Willunga, and Encounter Bay. House to house deliveries by letter carriers began in South Adelaide at this time. In 1840 there were 6 post offices in the colony employing 9 persons, and by 1860 there were 146 post offices employing 177 persons. Revenue in 1840 was \$464 but had risen to \$29,164 in 1860.

A Post Office Act passed in 1839 fixed the rate of inland postage at 3d. (2c) per letter or packet whilst the charges for ship letters remained at one penny (cent). A change in the letter rate of postage on inland letters was made to 2d. (2c) per ½oz. in 1854. Postage stamps, printed in England, were introduced in 1855 and prepayment of postage became compulsory; penny (cent) postcards were issued in December 1876. The money order department was opened in 1859, postal notes were issued in 1887, and in 1889 the parcels post was established.

Steam postal communication was inaugurated in 1852, and the first steamer arrived from London on 29th August. This steamer service was short lived but in the following year a contract was entered into for the conveyance of mails between England and Australia *via* Singapore, calling at Albany (King George's Sound), Adelaide, Melbourne, and Sydney. During 1859 a fresh contract was signed for the conveyance of a monthly mail *via* Mauritius, receiving and delivering the South Australian mails at Kangaroo Island. This route was abandoned in favour of a service from Ceylon direct to Albany and thence to Melbourne. In 1862 the Government of South Australia accepted the tender of the Australian Steam Navigation Company for a branch mail service to Albany.

Telegraphs

Mr. Charles Todd was appointed Superintendent of Telegraphs and Observer in February 1855. He arrived in South Australia with the necessary telegraph plant in November 1855 and in December the first telegraph line in the colony was commenced from Adelaide to Port Adelaide. The line was opened for business in February 1856. Intermediate stations were opened at Bowden and Alberton, and at the railway stations at Adelaide and Port Adelaide.

A telegraph line between Adelaide and Melbourne was opened in 1858 and a second line was completed by the end of 1861; a direct line between Sydney and Adelaide was opened in 1867. In the meantime, the telegraph in South Australia had been extended to Kapunda, Clare, Kooringa, and new mining centres at Kadina, Wallaroo and Moonta, Port Augusta, and other places.

An epic in Australian history was the erection of the Overland Telegraph line from Port Augusta to Port Darwin; 2,000 miles of telegraph through an almost unknown country. The first pole was planted at Port Darwin in September 1870, and at Port Augusta in October. On 22nd August 1872 the line was completed, to form a link with the submarine cable from London, which had already been extended from Java to Port Darwin. Before the overland line was ready an interruption occurred in the submarine cable so that the first through message from London to Adelaide could not be sent until October 1872.

A line from Adelaide to Perth was opened in 1877.

The first telegraph office in Adelaide occupied rented accommodation until the new General Post Office was opened in 1872. In 1870 the Post Office and the Telegraph Department were amalgamated and Charles Todd was appointed 'to be also Postmaster-General of the Province'.

Telephones

The first departmental trials of telephone communication in South Australia were made before the invention of the microphone, and in January 1878, communication was effected between Semaphore, Adelaide, and Kapunda, and later between Semaphore and Port Augusta. Another successful trial was made on the Adelaide-Darwin telegraph line between Beltana and Strangways Springs, a wire distance of 200 miles.

The first practical introduction of the telephone system in South Australia was to connect the Police Station with the Superintendent of the Fire Brigade and the Valve House in September 1880. This service was subsequently extended to include all the fire-reel stations in Adelaide. The next line was from Government House, Adelaide, to the Governor's summer residence at Marble Hill.

In May 1883 the Adelaide Telephone Exchange was opened with 48 subscribers and in September an exchange was opened at Port Adelaide. A telephone exchange building was erected adjoining the General Post Office in 1908.

DEVELOPMENT OF SERVICES

Although there were 713 post offices and 304 telegraph stations in South Australia and Northern Territory in 1901, the number of post offices increased to 924 and the number of telegraph stations increased to 1,004 by 1965-66. Revenue from postal services in 1901 was approximately \$280,000 whereas in 1965-66 it amounted to \$9,670,000; telegraph and telephone revenue in 1901 was \$262,000 compared with \$2,398,000 telegraph revenue and \$24,757,000 revenue from telephone services in 1965-66. The number of telephone lines connected in 1901 was 1,831 whereas there were 192,922 services in operation at 30th June 1966.

Details of post offices in operation and the number of persons employed in postal services in South Australia for the years 1961-62 to 1965-66 are given in the table below. Details in this and all other tables in this section include the Northern Territory; separate figures are not available.

Post Offices: Number and Employment
South Australia and Northern Territory

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
Post Offices—					
Official	169	170	172	173	173
Non-official	757	754	753	752	751
Telephone offices	107	106	110	108	105
Total	1,033	1,030	1,035	1,033	1,029
Persons employed—					
Permanent	6,305	6,499	6,649	6,650	7,026
Non-official staff	921	924	943	931	945
Temporary and part-time	244	259	258	272	277
Telephone office keepers	107	104	108	108	104
Mail contractors	354	279	355	363	339
All other	2,174	2,181	2,356	2,517	2,347
Total	10,105	10,246	10,669	10,841	11,038

Non-official post offices are conducted by persons who are not members of the Commonwealth Public Service and who receive an allowance based on business transacted. In many instances this type of business is conducted in conjunction with some other business activity. Offices from which both trunk line and local calls may be made and at which telegrams can be lodged by members of the public, but which do not provide other postal facilities, are known as telephone offices.

Revenue and Expenditure

The Post Office maintains a system of financial and management accounts. These accounts, known as its commercial accounts, are quite distinct from the cash accounts maintained to meet Treasury requirements. The latter accounts record cash receipts paid into the Commonwealth Public Account and the cash payments made from funds appropriated by the Federal Parliament for Post Office purposes.

Cash receipts and payments of the Postmaster-General's Department in South Australia for the years 1961-62 to 1965-66 are given in the following tables. The figures exclude trust fund transactions *e.g.* pension payments, Commonwealth Savings Bank operations, etc. Cash expenditure on capital works for the last five years is shown in a separate table.

Postmaster-General's Department: Revenue
South Australia and Northern Territory

Year	Postal	Telegraph	Telephone	Other	Total Revenue
			\$'000		
1961-62 ..	7,740	1,434	15,604	22	24,800
1962-63 ..	8,276	1,592	16,508	46	26,422
1963-64 ..	8,664	1,852	19,180	46	29,742
1964-65 ..	9,285	2,187	23,038	27	34,536
1965-66 ..	9,670	2,398	24,757	89	36,914

Postmaster-General's Department: Expenditure
South Australia and Northern Territory

Year	Salaries and Payments in Nature of Salary	Administrative Expenses	Stores and Material	Mail Services	Engineering Services	Rent, Repair and Maintenance	Total Non-Capital Expenditure
				\$'000			
1961-62	9,498	1,124	562	854	7,872	352	20,262
1962-63	9,738	1,140	(a) 394	880	(a) 6,092	402	(a) 18,646
1963-64	10,274	1,480	(a) 324	926	(a) 7,940	392	(a) 21,336
1964-65	11,399	1,591	(a) 332	979	(a) 8,428	481	(a) 23,211
1965-66	12,124	1,740	(a) 407	1,018	(a) 9,155	604	(a) 25,048

(a) Expenditure on motor vehicles, postal plant and certain non-engineering plant now included under capital works expenditure.

Postmaster-General's Department: Cash Expenditure on Capital Works
South Australia and Northern Territory

Year	Telephone Services	Telegraph Services	Other Plant and Equipment and Motor Vehicles	Buildings	Sites and Properties	Total
				\$'000		
1961-62	7,514	96	276	1,084	80	9,050
1962-63	10,176	142	(a) 1,026	916	34	(a) 12,294
1963-64	11,138	176	(a) 1,166	1,204	44	(a) 13,728
1964-65	13,834	210	(a) 1,181	1,111	149	(a) 16,485
1965-66	14,252	270	(a) 1,248	1,004	85	(a) 16,859

(a) Includes expenditure on motor vehicles, postal plant and certain non-engineering plant recorded in previous table for earlier years.

Postal Articles Handled

Articles handled by the Postmaster-General's Department in South Australia and Northern Territory during the years 1961-62 to 1965-66 are shown in the following table.

Postal Articles Handled
South Australia and Northern Territory

Year	Letters and Postcards	Newspapers and Packets	Parcels (a)	Registered Articles	All Articles
	'000				
Posted for delivery—					
Within Australia—					
1961-62	143,442	13,718	1,266	769	159,195
1962-63	147,962	14,185	1,253	749	164,149
1963-64	156,379	16,463	1,310	756	174,908
1964-65	165,279	16,901	1,327	696	184,203
1965-66	177,760	17,067	1,337	782	196,947
Beyond Australia—					
1961-62	5,497	762	38	65	6,362
1962-63	5,523	848	40	61	6,472
1963-64	6,410	900	41	54	7,405
1964-65	7,247	1,184	46	59	8,536
1965-66	7,979	1,507	51	62	9,599
Received from beyond					
Australia—					
1961-62	(b)	5,442	66	28	(b)
1962-63	3,241	4,977	72	28	8,318
1963-64	4,479	5,111	80	28	9,698
1964-65	5,571	5,467	88	30	11,156
1965-66	6,332	5,321	100	31	11,785

(a) Includes registered parcels.

(b) Comparable figures not available.

Money Orders and Postal Notes

The number of money orders issued in Australia in 1944-45 was approximately 3.5 million, whereas in 1965-66 12.2 million were issued. On the other hand, the number of postal notes issued declined from 22.7 million issued in 1944-45 to approximately 15 million in 1965-66. In South Australia money orders and postal notes paid in 1944-45 amounted to \$2,995,000 and \$1,072,000 respectively; in 1965-66 the corresponding values were \$34,226,000 and \$1,165,000.

Money Orders Issued and Paid
South Australia and Northern Territory

Year	Money Order Offices	For Payment Within Australia				For Payment Beyond Australia			
		Number Issued	Value	Number Paid	Value	Number Issued	Value	Number Paid	Value
	Number	'000	\$'000	'000	\$'000	'000	\$'000	'000	\$'000
1961-62	524	(a) 800	17,298	(a) 746	16,616	56	342	15	190
1962-63	531	(b) 962	(b) 25,910	(b) 899	(b) 25,064	54	350	15	192
1963-64	535	(b) 1,050	(b) 28,254	(b) 970	(b) 27,318	57	376	16	236
1964-65	543	1,040	31,910	1,036	30,944	61	413	19	293
1965-66	547	1,200	34,759	1,103	33,867	67	425	22	359

(a) Estimated.

(b) Include official money orders used in bringing to account Telephone Account collections and War Service Homes repayments.

Total commission charged on money orders issued in 1965-66 amounted to \$219,000. Fee on postal notes issued in 1965-66 amounted to \$125,000.

Postal Notes Issued and Paid
South Australia and Northern Territory

Year	Postal Note Offices	Postal Notes Issued		Postal Notes Paid	
		Number	Value	Number	Value
	Number	'000	\$'000	'000	\$'000
1961-62	925	2,785	2,520	890	1,072
1962-63	924	3,059	2,852	922	1,114
1963-64	925	2,951	2,814	938	1,138
1964-65	925	3,158	3,083	951	1,169
1965-66	923	3,162	3,165	947	1,165

Telegraph System

Australia's up-to-date telegraph service, known as TRESS (Teleprinter Reperator Switching System) was first introduced in South Australia in 1959, before being extended to the other States. This system, using teleprinters and automatic switching apparatus, has eliminated the intermediate handling of telegraph traffic, resulting in greater speed and economy.

Another telegraph service known as TELEX has been available to Post Office customers in South Australia since 1957. TELEX subscribers are provided with a teleprinter in their own premises and may be connected through the teleprinter exchange with other TELEX subscribers anywhere in Australia and in a number of oversea countries. Since 1957, when there were 18 subscribers in South Australia, the number had grown to 243 at 30th June 1966.

The number of telegraph stations, the number of telegrams dispatched and received, and some information on the operations of TELEX during the years 1959-60 to 1965-66 are shown below.

Telegraph Services
South Australia and Northern Territory

Year	Telegraph Stations	Telegrams			Teleprinter Exchange		
		Dispatched within Australia	Dispatched beyond Australia	Received from beyond Australia	Subscribers	Local Calls	Trunk Calls
	Number	'000	'000	'000	Number	'000	'000
1959-60	983	1,745	90	71	61	2	27
1960-61	986	1,731	82	69	79	2	40
1961-62	998	1,714	77	69	100	2	55
1962-63	1,028	1,783	80	72	122	13	79
1963-64	1,008	1,863	85	79	161	19	119
1964-65	1,004	2,009	99	83	215	26	165
1965-66	997	2,129	106	86	243	22	226

The Post Office picturegram service is used extensively by Adelaide newspapers to send and receive photographs to and from other parts of Australia and oversea countries for publication within a few hours of being taken. This service is also used by business and professional people to transmit photographs of documents, X-rays, and other matter capable of being photographed.

Telephone Services

The Post Office has continued to provide additional subscriber services, more and better trunk line circuits, and has installed automatic telephone exchanges. Between 1945 and 1966 the number of trunk line channels in the State increased from 760 to 3,976 and the number of country automatic telephone exchanges from 20 to 274. There are 31 automatic exchanges in the metropolitan area (*i.e.* the area within a 10 mile radius of the General Post Office).

Steady progress is being made towards the Post Office objective of nationwide subscriber to subscriber direct dialling, known in Post Office language as S.T.D. or Subscriber Trunk Dialling. This is operating to a limited extent in South Australia—at 30th June 1967 Port Elliot and Victor Harbor exchanges had access to Adelaide exchanges whilst three Adelaide city exchanges had access to Melbourne exchanges.

Telephone Services South Australia and Northern Territory

At 30th June	Telephone Exchanges	Telephone Services					Total	Trunk Line Channels in Service
		Ordinary Exchange	Duplex	Party Line	Private Branch Exchange	Public Telephones		
1960.....	727	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	138,019	2,102
1961.....	739	123,198	2,972	1,670	14,541	2,121	144,502	2,262
1962.....	737	131,328	2,710	1,656	14,878	2,213	152,785	2,483
1963.....	740	139,484	2,366	1,600	16,231	2,331	162,012	2,752
1964.....	742	150,615	1,948	1,562	16,796	2,393	173,314	2,991
1965.....	743	158,973	1,624	1,510	17,615	2,527	182,249	3,403
1966.....	743	169,381	1,132	1,459	18,331	2,619	192,922	3,976

n.a.—Not available.

Metropolitan services are all operated through automatic exchanges, whereas at 30th June 1966, 35,773 country services were automatic and 31,800 services were manually connected. Metropolitan services totalled approximately 125,000 and of these 80,000 were residence services. In the country, business phone services accounted for the larger share (about 65%) of services.

Other Operations

Following amendments to the Broadcasting and Television Act, a new type of receiving licence was introduced on the 1st April 1965. The new licence, Combined Receiving Licence, is issued to persons owning both a broadcast and television receiver at the one address and replaces the individual licences formerly held although broadcast listeners' licences and television viewers' licences are still issued to persons owning only one type of receiver.

The number of broadcast listeners' licences, television viewers' licences and combined receiving licences in force at the 30th June 1962 to 1966 and revenue from these licences during the years 1961-62 to 1965-66 are given in the following table.

**Broadcast Listeners' and Television Viewers' Licences
South Australia and Northern Territory**

Item	Unit	1961-62	1962-63	1963-64	1964-65	1965-66
Listeners' Licences	Number (a)	249,673	256,741	266,027	219,064	93,052
Viewers' Licences	Number (a)	143,794	167,502	194,430	158,667	45,031
Combined Licences	Number (a)	—	—	—	49,976	188,695
Revenue.....	\$'000	2,531	2,837	3,063	3,586	3,832

(a) At 30th June.

Television viewers' licences totalled 6,124 at 30th June 1959, although the official opening of the first station was in September 1959. Further information on radio and television services is contained in Part 6.4. under the heading of Culture and Recreation.

Details of radio and television stations under the control of the Postmaster-General in South Australia are shown in the following table.

Radio and Television Stations, South Australia^(a)

As at 30th June

Radio Communication Stations	1962	1963	1964	1965	1966
Broadcasting—					
National	8	8	8	8	8
Commercial	8	8	8	8	8
Television—					
National	1	1	1	2	3
Commercial	2	2	2	2	4
Transmitting and receiving—					
Fixed—					
Aeronautical	6	6	5	5	5
Outpost.....	182	187	183	179	178
Other.....	83	90	97	57	72
Land—					
Aeronautical	17	11	8	8	10
Base station for mobile services	366	395	427	474	543
Coast.....	13	14	14	16	21
Special experimental ...	35	40	44	51	56
Mobile	4,188	4,754	5,394	6,251	7,223
Amateur	544	586	615	649	678
Total stations.....	5,453	6,102	6,806	7,710	8,809

(a) Excludes stations in Northern Territory.

Note—A fixed station is established at a fixed location for the exchange of radio messages with other fixed stations whereas a land station is established at a fixed location for the exchange of radio messages with mobile stations. An outpost station is established in an outback area and communicates with control stations operated by such organizations as the Royal Flying Doctor service.

PUBLIC FINANCE

12.1. STRUCTURE OF PUBLIC FINANCE

The collection of public revenue and the expenditure of public moneys in South Australia are the responsibility of three groups of authorities:

- (i) State Government and semi-government.
- (ii) Commonwealth Government.
- (iii) Local government.

The power to raise revenue from taxation is vested in the State, Commonwealth, and local government authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to each other and to the public. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government and some semi-government authorities is derived from grants from other government authorities. Grants are made by the Commonwealth to the State Government and by the latter to semi-government and local government bodies. A further source of funds is the loan market; Government securities are issued for loan raisings in Australia and overseas.

Authorization for expenditure by State and Commonwealth Government departments is given by Appropriation Acts or by Special Acts of their respective Parliaments. Each State semi-government undertaking derives its authority for expenditure from the provisions of the specific Act under which it has been set up. The Local Government Act, 1934-1966, contains sections relating to the expenditure of local government moneys.

In this chapter, reference will be made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the Government of this State. Greater detail of the Commonwealth Government finance is published annually in the Year Book of the Commonwealth of Australia.

12.2. COMMONWEALTH-STATE FINANCIAL RELATIONS

Payments from the Commonwealth to the State Governments fall into four categories:

- (i) Contributions under the financial agreement towards public debt charges—Section 105A.
- (ii) Special grants made to the “claimant” States on the recommendation of the Commonwealth Grants Commission—Section 96.
- (iii) Payments for special purposes determined by the Commonwealth and expended through the States, usually for convenience of administration.
- (iv) Payments to compensate for foregoing the right to levy income tax.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT

Prior to Federation in 1901, each State exercised the right to raise its own revenue by means of various forms of taxation, customs and excise duties (including interstate customs), fees for services, licence fees, etc.

Under the Commonwealth Constitution the Commonwealth Government assumed responsibility for certain activities; was vested with the power to levy income tax in addition to the States; and took over from the States the right to raise customs and excise duties, interstate customs being abolished.

The States were compensated for their loss of revenue by the provisions of section 87 (known as the Braddon Clause) of the Constitution, which reads:

“During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.”

The scheme of allocation among the States is laid down in sections 89 and 93.

Under the *Surplus Revenue Act* 1910, the Commonwealth was to retain the whole of the customs and excise revenue and make a fixed annual payment of two dollars fifty cents per head of population to each State for a period of ten years. Although there were moves to have it changed, this method of payment continued until 1927.

Commonwealth subsidy paid to South Australia under Section 87 of the Constitution was \$1,685,016 for 1909-10; under the *Surplus Revenue Act* 1910, the subsidy was \$1,029,244 for 1910-11.

FINANCIAL AGREEMENT 1927

With the repeal of the *Surplus Revenue Act* 1910, the States were faced with the total loss of *per capita* payments, and this led to the financial agreement between the Commonwealth and the States on 12th December 1927. It was later affected by agreements made under the powers of section 105A of the Constitution which was amended in 1928. The main features of the financial agreement were:

- (i) The taking over of the public debts of the States by the Commonwealth; but leaving the States with the obligation to find the interest.
- (ii) The payment by the Commonwealth to the States of an annual fixed amount of \$15,165,824 (an amount equal to the *per capita* payments for 1926-27) as a contribution towards interest on State debts.
- (iii) The provision of sinking funds to repay the debt.
- (iv) The establishment of an Australian Loan Council.

SPECIAL GRANTS

The Constitution provides, in section 96, for the granting of special financial assistance to the States. Prior to 1933, financial assistance of varying amounts was granted to South Australia, Western Australia, and Tasmania.

In 1933, the Commonwealth Government appointed the Commonwealth Grants Commission, of three members, to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto. From 1933 applications were lodged by the three States already mentioned. Western Australia and Tasmania have applied each year to date but South Australia agreed with the Commonwealth not to apply for special grants in other than exceptional circumstances after 1st July 1959 when new financial arrangements, under the *States Grants Act* 1959, came into operation.

TAX REIMBURSEMENTS

Uniform taxation of incomes throughout Australia was introduced by the Commonwealth Government in 1942 to implement its financial policy for meeting the exigencies of war finance. The Commonwealth became the sole authority levying taxes upon incomes from 1st July 1942 to the end of the first full financial year after the cessation of the war. Each State received an annual payment from the Commonwealth, as reimbursement for loss of income tax revenue, under the *States Grants (Income Tax Reimbursement) Act* 1942. A similar arrangement was made under the *State Grants (Entertainments Tax Reimbursement) Act* 1942.

The Acts of 1942 were repealed in 1946 by the States Grants (Tax Reimbursement) Act which prescribed a fixed grant for each of the financial years 1946-47 and 1947-48 and, for subsequent years, an amount to be varied in accordance with changes in population and in average wages per person employed.

FINANCIAL ASSISTANCE GRANTS

With the increasing financial needs of the States it became necessary for the Commonwealth to make grants in excess of those prescribed in the 1946 Act. Financial aid was extended by a States Grants (Special Financial Assistance) Act passed each year from 1951 to 1958 and by the States Grants (Additional Assistance) Act of 1958.

The *States Grants Act 1959*, repealed the States Grants (Tax Reimbursement) Act and provided for a new system of annual payments which were described as "financial assistance" grants. The Act incorporated an arrangement designed to eliminate the need for supplementary grants by providing for adjustment of grants each year according to variations in population and increases (if any) in average wage per person employed: the latter adjustment included what became known as a "betterment" factor. This legislation was superseded by the *States Grants Act 1965* which retained the basic framework of the 1959 Act but increased the "betterment" factor by making it 1.2% of the total grant otherwise determined for each year: this Act also provided for an increase in the first year grant to Victoria, and a cumulative increase in the basic grant to Queensland.

The 1965 Act provides for consultation between the Commonwealth and the States concerning review of the legislation in relation to years subsequent to 1969-70 or earlier years in the event of substantial change in the financial relationships between the Commonwealth and a State or States.)

OTHER FINANCIAL ASSISTANCE

In addition to the grants under the Financial Agreement, the special grants recommended by the Commonwealth Grants Commission, and the financial assistance grants, the Commonwealth makes payments to the States for specific purposes.

Grants for road works have been made since 1923, and from 1931 to 1958 were based on a percentage, varied from time to time, of Commonwealth petrol taxation. A new scheme of Commonwealth assistance to the States for roads was established by the Commonwealth Aid Roads Act 1959. The Commonwealth undertook to provide \$500,000,000 for distribution, according to stated criteria, to the States during the five years to 30th June 1964. The Commonwealth Aid Roads Act 1964 stipulated a sum of \$750,000,000 for distribution to the States during the five years from 1st July 1964. The criteria for distribution to the States, and South Australia's share of these grants, are mentioned in references and text given in Part 8.3. Roads and Bridges.

Up to 30th June 1966 the Commonwealth had provided \$24,030,000 under the *Railway Standardization (South Australia) Agreement Act 1949*. The Commonwealth had also provided \$2,635,000 under the *Railway Equipment Agreement (South Australia) Act 1961* for the purchase of locomotives and wagons for the carriage of ore from Broken Hill to Port Pirie. Over a period of 50 years the State must repay 30% of the amount provided by the Commonwealth under these two agreements.

Under the *Tuberculosis Act 1948*, States are reimbursed by the Commonwealth for expenditure of a capital and maintenance nature on the provision of facilities for the diagnosis, treatment and control of tuberculosis.

The *States Grants (Mental Institutions) Act* 1955 provided for financial assistance to the States for capital expenditure on mental institutions to a maximum of \$20,000,000. This Act was replaced by the *States Grants (Mental Health Institutions) Act* 1964 under which the States are entitled to receive assistance amounting to one-third of the total expenditure incurred by them, with Commonwealth approval, in building and equipping mental health institutions.

Payments to the States for recurrent expenditure of universities commenced in 1951-52. Grants for capital works and equipment for universities were introduced in 1958. Under the *Universities (Financial Assistance) Act* 1963-65 the States were to receive total payments in excess of \$134,000,000 during the period of three calendar years 1964 to 1966 towards recurrent and capital expenditure for universities.

During 1964 and 1965 the Commonwealth introduced several types of grants designed to assist education and research in the States. These relate to science laboratories in Government and private secondary schools, training of persons for employment in trade and technical occupations, education in non-university tertiary institutions, and approved research projects.

Also in 1964 the Commonwealth authorized payments to assist in the investigation and measurement of river and underground water resources.

For more complete historical and current information on Commonwealth financial assistance to the States reference should be made to the most recent issue of the bulletin "*Commonwealth Payments to or for the States.*"

The following table shows the pattern of Commonwealth payments to or for the State of South Australia since the financial agreement in 1927.

Commonwealth Payments To or For the States^(a), South Australia

	1929-30	1939-40	1949-50	1959-60	1965-66
	\$'000				
Financial Agreement—					
Interest on State Debt	1,408	1,408	1,408	1,408	1,408
Sinking Fund on State Debt	254	360	488	1,583	2,335
Special Grants	720	1,990	8,348	2,852	—
Financial Assistance Grants (tax reimbursements)	—	—	10,734	55,350	86,467
Commonwealth Aid Roads Act	522	1,006	2,039	9,846	16,024
Grants to Universities	—	—	—	1,787	6,017
Science Laboratories and Technical Training	—	—	—	—	1,209
Research Grants	—	—	—	—	223
Mental Health Institutions—Contributions to Capital Expenditure	—	—	—	184	242
Tuberculosis Act, 1948—Reimbursement of Capital Expenditure	—	—	—	214	14
Blood Transfusion Services	—	—	—	32	61
Road Safety Practices	—	—	14	23	13
Natural Disaster Payments	—	—	—	70	—
Agricultural Extension Services	—	—	30	102	104
Water Resources Investigations	—	—	—	—	52
Eyre and Barkly Highways	—	—	(b)	27	25
Railway Projects	—	40	40	102	6,431
Morgan-Whyalla Waterworks	—	—	50	—	—
Price Control Reimbursements	—	—	148	—	—
Coal Strike Emergency Grant	—	—	1,347	—	—
	2,904	4,804	24,646	73,580	120,625

(a) Excludes assistance for relief to primary producers and payments for medical research, Social Services, etc.

(b) Payments from 1st July 1947 to 30th June 1959 were made from Commonwealth Aid Roads Trust Account and details are not available.

NATIONAL WELFARE FUND

The States also receive, from the Commonwealth through the National Welfare Fund, payments in respect of hospital and pharmaceutical benefits, nutrition of children and reimbursement of maintenance expenditure on tuberculosis sanatoria. In South Australia the receipts are paid into the Consolidated Revenue Account (or a suspense account in the case of the payment for free milk for school children). Receipts for the year 1965-66 were hospital benefits \$989,000, pharmaceutical benefits \$508,000, free milk for school children \$799,000, tuberculosis reimbursement of maintenance expenditure and surveys \$690,000.

The amounts stated above for hospital and pharmaceutical benefits relate to particular classes of patients and a limited range of drugs in government hospitals and are only a small portion of the total hospital and pharmaceutical benefits (see page 211) which are paid from National Welfare Fund to or for residents of this State.

12.3. STATE GOVERNMENT FINANCE

State Government accounting in South Australia is on a "cash" basis and receipts and payments fall into five main divisions, viz the Consolidated Revenue Account, Loan Fund Accounts, Special Commonwealth Advances, Trust Fund Accounts and Deposit and Suspense Accounts.

CONSOLIDATED REVENUE ACCOUNT

This account is credited with receipts from State taxation, fees, licences, and charges for services, recoveries of interest and sinking fund, sales of Crown lands, and Commonwealth tax reimbursement and other grants. The account is debited with the cost of revenue collection, legislative and administrative functions, interest and sinking fund on the public debt, provision of social services, operation of public undertakings and development of State resources. The resultant balance represents the State's surplus or deficit for the year.

A table showing receipts and payments for the financial year 1965-66 and four earlier years is set out below.

Consolidated Revenue Account, South Australia

Particulars	1929-30	1939-40	1949-50	1959-60	1965-66
			\$'000		
Receipts	21,102	25,511	58,721	160,555	236,816
Payments	24,354	25,837	59,100	161,177	243,650
+ Surplus (or - Deficit) ..	-3,252	-325	-379	-622	-6,834

<i>Per Head of Population</i>					
	\$	\$	\$	\$	\$
Receipts	36.37	42.72	85.50	171.99	219.72
Payments	41.97	43.28	86.05	172.65	226.06

Sources of Revenue

The sources of revenue for the financial years 1961-62 to 1965-66 were as follows:

Consolidated Revenue Account: Sources of Revenue, South Australia

Total Revenue

Source of Revenue	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Taxation	25,150	26,940	29,825	34,901	36,852
Business undertakings	57,097	57,727	62,904	63,887	66,597
Territorial—Land sales, rents, etc.....	1,563	1,683	2,009	2,193	2,067
Other—					
Interest and exchange.....	15,039	16,220	17,280	18,148	19,167
Fees, fines, rents, etc.	17,757	17,632	19,327	23,489	24,258
Commonwealth Grants (a)	69,798	74,965	79,660	79,563	87,875
Total	186,405	195,168	211,006	222,181	236,816

Per Head of Population

	\$	\$	\$	\$	\$
Taxation	25.74	27.06	29.23	33.29	34.19
Business undertakings	58.45	58.02	61.65	60.93	61.79
Territorial—Land sales, rents, etc.....	1.60	1.69	1.97	2.09	1.92
Other—					
Interest and exchange.....	15.39	16.29	16.94	17.31	17.78
Fees, fines, rents, etc.	18.18	17.71	18.94	22.40	22.51
Commonwealth Grants (a)	71.45	75.28	78.08	75.88	81.53
Total	190.81	196.00	206.81	211.90	219.72

Proportion of Total Revenue

	Per Cent				
Taxation	13.49	13.80	14.14	15.71	15.56
Business undertakings	30.63	29.58	29.81	28.75	28.12
Territorial—Land sales, rents, etc.....	0.84	0.86	0.95	0.99	0.87
Other—					
Interest and exchange.....	8.07	8.31	8.19	8.17	8.09
Fees, fines, rents, etc.	9.53	9.04	9.16	10.57	10.25
Commonwealth Grants (a)	37.44	38.41	37.75	35.81	37.11
Total	100.00	100.00	100.00	100.00	100.00

(a) Includes grants under Financial Agreement, Disabilities (section 96) grants, and Taxation Reimbursements.

Taxation

Until the introduction of the uniform income tax scheme in 1942-43, income tax was the major source of taxation revenue in South Australia. Revenue from this form of taxation for the years 1939-40 to 1941-42 was \$4,718,000, \$4,952,000 and \$5,638,000 respectively or 51.70%, 57.02%, and 59.45% of total revenue from taxation.

Other forms of State taxation are included in the table for the financial years 1961-62 to 1965-66; the major forms of taxation now left to the State are motor tax, succession and stamp duties, and land tax.

Revenue from Taxation, South Australia

Tax	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Land tax	4,776	4,914	4,899	4,969	5,638
Succession duties	4,584	5,250	6,160	6,604	6,134
Racing tax (a)	1,478	1,467	1,468	1,664	1,676
Motor tax	9,269	9,744	10,651	(b) 11,398	(b) 11,917
Stamp duties	4,132	4,621	5,383	8,636	9,764
Liquor licences	432	443	747	1,095	1,142
Other licences	204	212	206	195	220
Hospital rating	275	289	311	341	361
Total	25,150	26,940	29,825	34,901	36,852

Proportion of Total Taxation

	Per Cent				
Land tax	18.99	18.24	16.43	14.24	15.30
Succession duties	18.22	19.49	20.65	18.92	16.65
Racing tax (a)	5.87	5.45	4.92	4.76	4.55
Motor tax	36.86	36.17	35.71	(b) 32.66	(b) 32.33
Stamp duties	16.43	17.15	18.05	24.74	26.49
Liquor licences	1.72	1.65	2.51	3.14	3.10
Other licences	0.82	0.78	0.69	0.56	0.60
Hospital rating	1.09	1.07	1.04	0.98	0.98
Total	100.00	100.00	100.00	100.00	100.00

(a) Amounts retained by racing and trotting clubs, or paid to those clubs by Betting Control Board are excluded. For the years 1961-62 to 1965-66 these amounts were: \$1,159,000, \$1,112,000, \$1,146,000, \$1,298,000 and \$1,227,000.

(b) Excludes road maintenance charges which amounted to \$1,426,000 in 1964-65 and \$1,903,000 in 1965-66.

In addition to the fields of taxation open to the State Government, there are fields of taxation in which the Commonwealth Government has sole taxing authority, e.g. customs and excise duties (since Federation), sales tax, etc. Prior to 1942 the Commonwealth Government levied income tax in addition to that imposed by the States, but since the commencement of uniform taxation the Commonwealth Government has been the sole levier of income tax in practice, although the States may still legally operate in this field. Total taxation collected by the Commonwealth Government in South Australia far exceeds that received into the State Consolidated Revenue Account; this is evident from the following table for the years 1961-62 to 1965-66.

Commonwealth Taxation Collected, South Australia

Tax	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Income tax	117,362	114,797	135,569	176,310	188,763
Sales tax	24,488	26,392	28,431	33,224	31,014
Payroll tax	9,857	10,673	11,520	13,168	13,877
Customs duties	10,793	15,070	14,031	16,398	15,002
Excise duties	41,557	42,697	45,368	50,363	62,288
Estate duty	2,867	3,020	3,212	4,584	3,958
Gift duty	626	775	772	1,053	731
Wool tax	677	709	736	1,507	1,912
Stevedoring industry charge	813	860	978	1,015	917
Other	102	287	298	346	306
Total	209,143	215,280	240,914	297,969	318,768
	\$	\$	\$	\$	\$
Per head of population	213.39	215.50	236.17	285.61	295.75

Business Undertakings

Approximately thirty per cent of the receipts into the Consolidated Revenue Account come from State Government business undertakings. These are mainly service undertakings supplying (throughout part or most of the State) such services as passenger and freight rail carriage, sewerage, water supply, water storage, harbor facilities, etc. Produce stores provide refrigeration for the storage of goods in Adelaide whilst at Port Lincoln lambs, pigs and cattle are treated for export or local consumption. Revenue from business undertakings for the financial year 1938-39 was \$9,914,000, for 1955-56 \$45,010,000 and for 1965-66 it was \$66,597,000.

Revenue from Business Undertakings, South Australia

Undertaking	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Railways (a)	36,363	35,969	37,829	37,572	37,763
Harbors, jetties and lights .	5,160	5,024	6,131	6,126	6,195
Sewers	4,535	4,810	5,398	5,742	6,705
Waterworks and water conservation	9,164	9,810	11,178	11,973	13,368
Irrigation and drainage	783	797	850	840	861
Produce stores	493	598	438	554	505
Forestry (b)	600	720	1,080	1,080	1,200
Total	57,097	57,727	62,904	63,887	66,597

(a) Includes grant from Treasury each year—\$8,200,000 in 1961-62, \$8,000,000 in 1965-66.

(b) Contribution to Consolidated Revenue from surplus earned. Figures for the other undertakings are total revenue.

Payments from Consolidated Revenue Account

Although public moneys from the Consolidated Revenue Account are expended by various Government departments the following table shows expenditure on a functional basis:

Consolidated Revenue Account: Expenditure
Classified According to Functions, South Australia

Function	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Legislation and general administration	11,233	12,282	12,049	12,471	13,956
Law, order, public safety ..	8,369	8,687	9,326	10,236	11,018
Regulation of trade and industry	583	589	669	751	757
Education	35,209	38,797	43,898	49,438	55,636
Encouragement of science, art and research	808	861	1,030	1,165	1,221
Promotion of public health and recreation	19,552	20,869	23,807	26,715	30,354
Social amelioration	3,122	3,075	3,380	3,667	4,097
War obligations	907	866	951	848	535
Local government	27	52	42	200	203
Development and maintenance of State resources other than business undertakings	13,249	14,606	15,926	17,344	17,736
Business undertakings	50,062	48,906	48,982	50,460	52,559
Revenue deficiencies	—	—	—	—	—
Public debt charges—					
Interest (and exchange)	34,340	37,794	39,988	43,099	46,495
Sinking fund	7,930	7,204	7,707	8,409	9,084
Total	185,392	194,589	207,755	224,803	243,650
	\$	\$	\$	\$	\$
Per head of population	189.16	194.79	203.66	215.48	226.06

Public debt charges were 22.80% of consolidated revenue expenditure in 1961-62 and 22.81% in 1965-66. Apart from public debt charges and expenditure by business undertakings, expenditure on education, 18.99% in 1961-62 and 22.83% in 1965-66, exceeded that on other individual functions.

Expenditure on public health was 10.55% of the total in 1961-62 and 12.46% in 1965-66.

If the public debt charges are allocated to the various functions and all receipts, with the exception of revenue from taxation and Commonwealth grants, are offset against the payments for the corresponding functions, a table showing the "net cost of functions" can be prepared. Such a table for the financial years 1964-65 and 1965-66 is set out below showing also the net cost per head of population.

**Consolidated Revenue Account: Expenditure
Net Cost of Functions, South Australia**

Function	1964-65		1965-66	
	Net Cost	Per Capita	Net Cost	Per Capita
	\$'000	\$	\$'000	\$
Legislative and general administration ..	9,826	9.37	10,520	9.76
Law, order, and public safety	7,824	7.46	8,456	7.85
Regulation of trade and industry	450	0.43	435	0.40
Education	48,441	46.20	54,205	50.29
Encouragement of science, art and research	1,124	1.07	1,222	1.13
Promotion of public health and recreation	22,544	21.50	26,261	24.36
Social amelioration	3,197	3.05	3,661	3.40
War obligations	872	0.83	592	0.55
Local government	200	0.19	215	0.20
Development and maintenance of State resources other than business undertakings	13,417	12.80	15,161	14.07
Business undertakings	8,715	8.31	10,364	9.62
Revenue deficiencies	475	0.45	469	0.43
Total	117,085	111.67	131,561	122.06

Total net cost of functions increased in 1965-66 from the total in 1964-65 by \$14,476,000 (or 12.4%). Net cost of education represented 41.2% of the total net cost in 1965-66, an increase of approximately \$5,764,000 on expenditure on education in 1964-65. Total net cost *per capita* rose by \$10.39.

Business Undertakings, Expenditure

Further details of the expenditure of business undertakings for the years 1961-62 to 1965-66 are given in the table below.

Business Undertakings: Expenditure, South Australia

Function	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Railways	36,739	35,978	36,078	36,786	37,337
Navigation, harbors, lights	2,942	2,885	3,090	3,256	3,294
Water supply, sewerage, irrigation, and drainage..	9,903	9,519	9,351	9,912	11,416
Produce Department	478	523	463	505	512
Total	50,062	48,906	48,982	50,460	52,559

TRUST FUNDS ACCOUNTS

These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. Some of the larger balances at 30th June 1964, 1965 and 1966 are listed in the table below.

Trust Funds Accounts, South Australia

Balances at 30th June

Particulars	1964	1965	1966
		\$'000	
Commissioners of Charitable Funds	705	525	1,128
Electricity Trust of South Australia	1,377	1,349	1,117
Fire Brigades Board	199	247	389
Legacy Club	207	225	126
Municipal Tramways Trust	550	550	550
Police Pensions Fund	70	347	200
Royal Adelaide Hospital Endowment Fund	672	716	741
South Australian Housing Trust Fund	1,853	795	1,221
South Australian Superannuation Fund	519	359	680
University of Adelaide	1,382	2,565	2,746
Sailors and Soldiers Distress Fund	177	157	129
World War II—Service Welfare Fund	187	173	163
Other	1,173	1,480	1,477
Balances on which interest is paid	9,071	9,488	10,667
Agricultural Research and Service Grants	172	171	192
Crown Solicitors Trust Account	204	145	323
Leigh Creek Coal Fund	1,378	872	1,021
Public Trustee—Common Fund Reserve	180	184	188
Commonwealth Grant towards Science Laboratories and Technical Training	—	778	139
Other	751	839	454
Balances on which no interest is paid	2,685	2,989	2,317
Total Trust Funds	11,756	12,477	12,985

SPECIAL COMMONWEALTH ADVANCES

Pursuant to Commonwealth-State agreements, the Commonwealth has made sums available to the State for the erection of housing by State instrumentalities, and for loans to home builders, and also for railway standardization purposes. These advances are not subject to sinking fund conditions but are repayable to the Commonwealth by annual instalments in terms of the respective agreements.

Advances received from the Commonwealth pursuant to the Housing Agreement totalled \$21,057,000 for 1965-66. Of these advances, \$10,200,000, was allocated by the Treasurer to the South Australian Housing Trust, and \$10,857,000 to the Home Builders Fund. Liability of the State to the Commonwealth on this account at 30th June 1966 was \$662,600,000.

During 1965-66 funds provided by the Commonwealth for railway standardization works totalled \$6,431,000. The State's liability to the Commonwealth at 30th June 1966, after allowing for repayment of \$756,000 was \$6,453,000.

Under the *Railway Equipment Agreement (South Australia) Act 1961*, the Commonwealth agreed to make available to the State, funds up to a maximum of \$2,650,000 for the purposes of providing diesel locomotives and ore wagons for the Port Pirie-Broken Hill railway. Thirty per cent of the total amount advanced is repayable over a 50-year period, together with interest thereon. The State's liability to the Commonwealth at 30th June 1966 was \$743,000.

DEPOSIT AND SUSPENSE ACCOUNTS

Deposit and suspense accounts which at 30th June 1966 showed a credit balance of \$14,338,000, are mainly working accounts to facilitate the allocation of charges and recoups to various headings of revenue and expenditure.

LOAN FUND ACCOUNTS

These accounts record the capitalized expenditure on construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores, and advances to public authorities and for primary production and housing. Moneys used for such purposes are raised by the sale of Commonwealth Government securities on behalf of the State pursuant to the financial agreement which also provides for the redemption of such securities over specified periods from sinking funds contributed by the State and Commonwealth to the National Debt Commission.

Gross expenditure from these accounts for the years 1961-62 to 1965-66 is shown in the table below.

Loan Fund Accounts: Gross Expenditure, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Undertakings—					
Railways	4,897	4,092	5,028	6,400	5,565
Harbors and jetties	2,895	2,994	2,439	2,142	2,609
Metropolitan water supply and sewers	11,222	12,734	12,695	17,152	16,336
Country water supply and sewers (a)	10,984	10,800	10,725	11,948	10,426
Water conservation	138	26	16	(b)	9
Irrigation works	273	400	301	337	437
South Eastern drainage ..	1,304	932	1,016	902	669
Afforestation	2,409	1,958	2,090	1,880	2,044
Produce stores	81	32	40	132	193
Loans and advances—					
Advances to settlers, etc.	1,119	676	1,071	1,241	1,403
State Bank	—	400	2,000	1,000	1,000
Advances for housing	1,600	700	600	600	700
Electricity Trust	4,600	6,000	5,500	6,000	6,000
City of Adelaide	—	—	—	87	340
Other loans and advances	73	211	396	366	319
Other purposes—					
Roads and bridges	400	580	950	—	—
Buildings—					
Hospitals	1,846	1,457	2,794	5,129	7,314
Schools	11,888	11,910	9,850	11,183	11,759
Police and courts	1,312	1,153	2,220	1,025	909
Other	2,172	1,258	2,195	4,364	3,965
River Murray weirs, etc.	160	120	240	390	644
Leigh Creek coalfield ..	600	—	—	—	—
Mines Department stores, etc.	463	249	364	295	304
Land repurchased for settlement	38	24	5	1	—
Education Department, purchase of buses	270	263	268	279	281
Data processing equipment	—	—	—	24	554
Metropolitan floodwaters, etc.	255	530	551	596	1,020
Other	311	103	143	124	(c) 966
	61,310	59,602	63,497	73,597	75,766
Floating conversion loans—					
Expenses, etc.	67	79	100	43	192
Total	61,377	59,681	63,597	73,639	75,958

(a) Includes Morgan-Whyalla water main.

(b) Less than \$500.

(c) Includes \$791,000 nominal increase in Loan Account occasioned by repatriation of oversea debt.

LOAN RAISINGS AND THE PUBLIC DEBT

State Debts Taken Over by Commonwealth

Under the financial agreement the Commonwealth took over on 1st July 1929 State debts existing on 30th June 1927; and all debts of each State existing on 1st July 1929 for money borrowed by that State are deemed by the agreement to be money borrowed by the Commonwealth for and on behalf of the State; and in respect of these debts, the Commonwealth assumed the liabilities of the States.

For a period of 58 years from 1st July 1927 the Commonwealth agreed to contribute the sum of \$15,169,824 each year towards the interest payable on the State debts (\$1,407,632 to South Australia). The balance of the interest payable on State debts was to be paid to the Commonwealth by the States.

Australian Loan Council

One of the main features of the financial agreement was the establishment of an Australian Loan Council which was set up to co-ordinate the borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as chairman, and the State Premiers, or Ministers nominated by them in writing. Each year, the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

Subject to the decisions of the Loan Council the Commonwealth arranges for all borrowings for or on behalf of itself or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount, and other charges, the Commonwealth or any State may borrow within its own territory, for any purpose, money from any authorities, bodies, funds, or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

Since 1936 the Australian Loan Council has, by the consent of its members, exercised substantial control over the limits of borrowing by local government and semi-government authorities.

National Debt Commission

Sinking funds established by the financial agreement between the Commonwealth and the States under the provisions of the *National Debt Sinking Fund Act* 1923-1959, were designed to redeem the States' debt over differing periods of years and with contributions by the Commonwealth and States varying in accordance with the differing natures of the indebtedness.

The contributions of the Commonwealth and the States in respect of the States' debts are not accumulated but, subject to the financial agreement, are applied by the Commission to the redemption of the public debts of the States, and the

repurchase of securities issued in respect thereof. Under the provisions of the financial agreement, repurchased or redeemed securities must be cancelled, and the debts of the States are reduced accordingly.

For further information on the detailed operations of the National Debt Sinking Fund see the Official Year Book of the Commonwealth of Australia, particularly No. 37.

Contributions by the Commonwealth on behalf of South Australia, and by the State Government to the National Debt Sinking Fund, and redemptions and repurchases of securities by payment from the fund for the financial years 1964-65 and 1965-66 are given in the following tables. Corresponding figures for Australia are also stated.

National Debt Sinking Fund

Particulars	1964-65		1965-66	
	South Australia	Australia	South Australia	Australia
Receipts—	\$'000			
Contributions by Commonwealth	2,193	16,646	2,335	17,761
Contributions by State (a)	2,447	18,695	2,589	19,810
4½ per cent contributions by State on cancelled debt	5,006	38,315	5,402	41,441
4 per cent contributions on funded deficits	55	2,483	55	2,493
Contributions by State on loans for wasting assets	146	606	180	640
Interest received from State in respect of repurchased securities to date of cancellation of securities	4	26	12	106
Interest on the temporary investments of State funds during the year	Dr. 9	Dr. 36	4	30
Special contributions in respect of loans converted at a discount	20	222	20	222
Total receipts	9,862	76,958	10,597	82,503
Expenditure—				
Redemptions and repurchases—				
In Australia	7,783	52,808	7,711	60,861
In London	1,062	14,612	1,793	11,685
In New York	1,119	9,948	1,332	11,775
In Canada	48	358	105	782
Discounts on conversion loans—				
In Australia	—	—	—	—
In London	—	—	—	—
In New York	—	—	—	—
Total expenditure	10,012	77,726	10,941	85,104

(a) Includes \$1.50% contributions on Commonwealth Government debentures issued on behalf of the States.

The Loan Fund

An overall picture of loan raisings to finance State Government loan works in South Australia during 1965-66, is given by the following statement. The total face value of new loans raised less redemptions, cancellations, and conversions shows the movement in the public debt.

The Loan Fund

(1) <i>Cash operations—</i>	\$'000	\$'000
Deficit at 30th June 1965		59
Receipts—		
New loan raising		61,892
Repayments		10,632
		72,464
Payments		74,930
		2,465
(2) <i>Movement in public debt—</i>		
The public debt at 30th June 1965		902,823
<i>Add: Face value of new loans raised—</i>		
For cash		62,129
For conversion		104,514
		1,069,467
<i>Less: Face value of securities redeemed and cancelled by National Debt Commission</i>	9,824	
Loans converted	104,514	114,338
		955,128
The public debt as at 30th June 1966		955,128

The Public Debt

The following table gives details of the public debt and total indebtedness of South Australia as at 30th June 1966 and for nine previous years. A further table shows the annual interest payable on the public debt for these years and the average rate of interest.

Public Debt and Total Indebtedness, South Australia
As at 30th June

Year	Public Debt—Being Interest Bearing Securities Outstanding		Other Interest Bearing Indebtedness (a)	Non-Interest Bearing Indebtedness (a)	Total Indebtedness	
	Total	Per Head			Total	Per Head
	\$'000	\$			\$'000	\$
1957.....	552,880	633.19	40,809	692	594,381	680.72
1958.....	593,628	661.94	56,085	1,418	645,131	719.37
1959.....	635,404	689.98	58,566	1,872	695,842	755.61
1960.....	678,210	717.44	69,201	2,327	749,739	793.11
1961.....	722,038	744.88	82,253	2,291	806,582	832.09
1962.....	763,399	775.06	98,841	2,166	864,405	877.61
1963.....	807,044	800.81	120,954	2,232	930,230	923.05
1964.....	853,555	824.97	136,236	2,685	992,477	959.24
1965.....	902,823	848.71	157,484	2,989	1,063,297	999.56
1966.....	955,128	875.68	180,466	2,317	1,137,911	1,043.26

(a) Gross less securities held on these accounts.

Public Debt: Interest and Average Rate, South Australia

As at 30th June

Year	Annual Interest on Debt in (a)				Average Rate Per Cent (a)			
	Australia	London	Other	Total	Australia	London	Other	Total
	\$'000	\$'000	\$'000	\$'000	\$	\$	\$	\$
1957....	18,766	2,029	303	21,098	3.89	3.23	4.14	3.82
1958....	20,990	2,004	396	23,390	4.02	3.22	4.33	3.94
1959....	22,887	2,214	493	25,594	4.10	3.36	4.51	4.03
1960....	25,223	2,185	582	27,991	4.20	3.36	4.69	4.13
1961....	27,415	2,204	850	30,468	4.28	3.42	4.91	4.22
1962....	30,374	2,181	975	33,530	4.47	3.41	5.03	4.39
1963....	31,672	2,347	1,231	35,249	4.43	3.50	5.13	4.37
1964....	33,612	2,534	1,193	37,339	4.42	3.61	5.13	4.38
1965....	37,088	2,530	1,137	40,756	4.57	3.65	5.13	4.51
1966....	40,928	2,360	1,267	44,555	4.73	3.65	5.21	4.66

(a) Based on the Debt and nominal rate of interest payable at 30th June, taking no account of exchange.

Rates of interest and years of maturity on the public debt of South Australia are shown below.

Public Debt According to Rate of Interest, South Australia

As at 30th June

Nominal Rate Per Cent	1962	1963	1964	1965	1966	1966 Redeemable In—	
						Australia	Other (a)
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
6	1,352	1,322	1,322	1,322	1,322	—	1,322
5.75	2,040	2,028	1,956	1,903	5,283	—	5,283
5.5	6,522	14,586	18,164	17,898	17,285	—	17,285
5.375	35,172	35,172	35,172	35,172	35,172	—	35,172
5.25	68,332	20,908	20,634	47,298	105,188	101,221	3,967
5	175,935	197,822	197,648	247,879	342,316	338,658	3,658
4.75	64,969	77,914	67,132	78,988	78,888	76,926	1,962
4.625	—	—	7,458	7,458	7,458	7,458	—
4.5	168,943	147,210	168,836	171,263	154,644	152,763	1,881
4.25	29,084	85,346	92,892	96,169	63,101	63,101	—
4	20,466	36,096	36,096	36,096	9,794	197	9,597
3.75	16,353	16,183	42,438	42,423	26,592	26,276	316
3.5	889	876	864	852	844	—	844
3.4875	2	2	2	2	2	2	—
3.25	23,151	23,151	22,748	21,889	21,049	—	21,049
3.125	88,405	78,451	62,358	9,842	—	—	—
3	16,236	16,230	16,230	16,130	12,453	253	12,200
2.75	3,769	3,769	3,768	3,769	3,709	—	3,709
2.5	5,872	5,872	5,872	5,872	5,872	—	5,872
2.325	694	690	690	656	652	652	—
1.5	6,040	5,872	5,702	5,530	5,355	5,355	—
1	7,197	6,980	6,754	6,516	6,268	6,268	—
Special bonds (c)	21,976	30,563	38,822	47,900	51,882	51,882	—
Total	763,399	807,044	853,556	902,823	955,128	866,183	88,945

(a) \$64,624,000 redeemable in U.K., \$20,093,000 in U.S.A., \$1,788,000 in Canada, \$1,402,000 in Switzerland and \$1,039,000 in Netherlands. Converted at rates current at the time of the several raisings.

(b) Commonwealth Debentures.

(c) Rate of interest varies from 3½ to 5½% according to date of maturity.

Public Debt According to Year of Maturity, South Australia
As at 30th June

Year of Maturity	1962	1963	1964	1965	1966	1966 Redeemable In—	
						Australia	Other (a)
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1962-63	108,186	—	—	—	—	—	—
1963-64	47,029	47,029	—	—	—	—	—
1964-65	84,640	84,497	84,498	—	—	—	—
1965-66	46,503	105,510	105,510	109,436	—	—	—
1966-67	37,260	36,947	72,836	85,157	85,149	84,305	844
1967-68	59,203	58,980	58,980	74,076	102,072	89,292	12,781
1968-69	59,186	59,080	59,080	59,080	68,011	68,011	—
1969-70	35,865	35,800	35,376	34,501	59,663	44,997	14,666
1970-71	32,989	32,955	32,930	32,893	32,796	28,094	4,701
1971-72	16,024	29,215	29,174	31,591	31,472	26,821	4,651
1972-73	24,216	53,523	53,420	53,283	53,183	51,221	1,962
1973-74	353	353	18,302	18,302	18,302	18,302	—
1974-75	27,996	27,874	33,532	54,466	59,218	46,648	12,570
1975-76	25,571	25,527	25,528	25,527	52,451	50,393	2,058
1976-77	402	402	402	402	402	402	—
1977-78	420	3,492	3,468	3,467	3,467	421	3,047
1978-79	6,816	6,709	6,578	6,429	6,278	439	5,839
1979-80	32,346	32,212	32,074	31,916	31,764	29,783	1,981
1980-85	84,422	89,313	100,164	175,714	181,633	166,078	15,555
1985-90	2,115	37,295	53,222	53,156	107,980	104,484	3,496
1990-95	3,925	3,822	3,718	3,613	3,506	3,506	—
Variable	21,976	30,563	38,822	43,904	56,676	51,882	4,794
Optional	5,755	5,745	5,744	5,711	905	905	—
Interminable	197	197	197	197	197	197	—
Indefinite	2	2	2	2	2	2	—
Total	763,399	807,044	853,556	902,823	955,128	866,183	88,945

(a) \$64,624,000 redeemable in U.K., \$20,093,000 in U.S.A., \$1,788,000 in Canada, \$1,402,000 in Switzerland and \$1,039,000 in Netherlands. Converted at rates current at the time of the several raisings.

12.4. SEMI-GOVERNMENT FINANCE

REVENUE AND EXPENDITURE

Many semi-governmental authorities produce annual reports reviewing their activities and most of them publish annual financial statements. In South Australia there is no consolidated tabulation of statistics covering revenue and expenditure of semi-governmental authorities although a recent extension of public finance work is directed to this end.

Business Undertakings

Some semi-governmental authorities are regarded as business undertakings because they seek to cover a substantial part of their costs by selling goods and services to the public. The following tables show revenue and expenditure of some of those business undertakings for the financial years 1961-62 to 1965-66.

The Electricity Trust of South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Funds employed	184,785	198,666	211,262	224,931	237,946
Income	34,058	36,602	40,066	44,046	48,792
Operating expenses	25,614	27,824	29,903	32,877	37,008
Surplus on operating	8,444	8,778	10,163	11,169	11,784
Debenture interest	7,989	8,504	9,263	10,059	10,830
Net surplus	455	274	900	1,110	955

The Leigh Creek Coal Fund

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Funds employed	11,926	11,884	15,664	15,796	16,190
Income	4,445	4,969	5,365	5,740	6,130
Operating expenses	4,099	4,677	5,076	5,493	5,883
Interest	196	219	208	151	121
Surplus	150	74	81	96	99

The South Australian Housing Trust

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Funds employed	147,465	160,800	174,030	187,789	202,686
Income	8,156	9,132	10,410	11,279	12,502
Expenditure	3,646	4,053	4,501	4,937	5,513
Interest on loan capital	3,984	4,565	5,068	5,428	5,847
Surplus	526	514	841	914	1,142

The Municipal Tramways Trust

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Funds employed (Net)	6,874	6,500	6,180	5,946	5,548
Income	5,430	5,436	5,473	5,899	6,049
Operating expenses	5,212	5,166	5,194	5,487	5,806
Surplus on operating	218	270	279	411	243
Interest charges	556	535	516	518	505
Deficit	338	265	237	108	261
Grant from S.A. Government	60	27	60	20	20
Net deficiency	278	238	177	87	241

The State Bank of South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Funds employed	31,058	40,680	52,676	64,250	75,865
Income	2,698	3,336	3,884	4,640	5,452
Management expenses, etc.	902	916	1,038	1,095	1,181
Interest on customers' deposits	388	484	458	506	678
Interest on advances from the Treasurer of S.A.	1,074	1,486	1,898	2,402	2,919
Net profit	334	450	490	638	674

The Savings Bank of South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Funds employed (a).....	280,618	300,946	328,442	350,073	370,863
Income	12,300	13,354	14,194	15,924	17,336
Management expenses, etc.	2,850	2,858	3,386	3,669	4,244
Interest on customers' deposits	9,010	9,496	9,716	10,672	11,975
Net profit	440	1,000	1,092	1,583	1,117

(a) Includes current liabilities of which depositors' balances are the principal component.

GRANTS FROM STATE GOVERNMENT

The State Government makes grants to most of the statutory bodies and the following table shows grants to some semi-government authorities during each of the five years ended 30th June 1966. These grants represent a very large proportion of such grants made by the State Government from the Consolidated Revenue Account.

Semi-Government Authorities: Grants From State Government

Name	1961-62	1962-63	1963-64	1964-65	1965-66
			\$'000		
Adelaide Children's Hospital	2,012	2,318	1,970	1,874	1,790
Adelaide University (a)	5,402	6,198	6,988	9,026	10,711
Artificial Breeding Board ..	—	70	38	53	38
Australian Mineral Development Laboratories	270	270	270	—	—
Botanic Gardens	124	136	141	162	170
Electricity Trust of South Australia	—	200	170	499	—
Fire Brigades Board	136	148	152	162	191
Home for Incurables	110	110	310	576	1,001
Institute of Medical and Veterinary Science	396	504	574	676	710
Municipal Tramways Trust	60	26	60	20	20
National Park Commissioners	50	60	78	116	119
Queen Victoria Maternity Hospital (b)	246	280	248	823	1,632
Renmark Irrigation Trust ..	100	100	300	300	300
S.A. Institute of Technology (c)	840	960	1,330	1,386	1,740
Waite Agricultural Research Institute	716	700	824	1,040	1,080
Total	10,462	12,080	13,452	16,713	19,502

(a) Includes Commonwealth grants to State for University purposes but excludes grants to Residential Colleges. Includes Adelaide University at Bedford Park (opened as Flinders University in 1966).

(b) Excludes grants for maintenance of X-ray tuberculosis services.

(c) Includes Commonwealth grants.

LOAN RAISINGS AND DEBT OUTSTANDING

Details of semi-government authorities' loan raisings and debt outstandings are published in the tables below. These statistics cover loan raisings and debt of public hospitals, abattoirs boards, vermin boards, the Renmark Irrigation Trust, the Enfield General Cemetery Trust, and the Fire Brigades Board, in addition to those business undertakings mentioned above under the heading Revenue and Expenditure.

New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debts are excluded.

Debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized, and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more, have also been included. Current liabilities such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds, less all bank credit balances (including fixed deposits), which do not form part of a sinking fund to repay a loan.

The following tables show new money loan raisings for the year ended 30th June 1964 and debt outstanding as at 30th June 1963 and 1964. A further table shows debt outstanding as at 30th June 1964 according to rate of interest and year of maturity.

**Semi-Government Authorities: New Money Loan Raisings and Funds
Provided for Redemption of Debt, South Australia, 1963-64.**

Authority	New Loan Raisings in Australia			Funds for Redemption		
	Government	Public	Total	Government	Public	Total
	\$'000					
Tramways	—	—	—	622	—	622
Electricity Supply	8,000	6,912	14,912	835	51	886
Fire Brigades	—	—	—	—	4	4
Industry Assistance ..	—	—	—	3	—	3
Banking	11,924	—	11,924	675	—	675
Housing	9,200	3,962	13,162	857	72	928
Miscellaneous	39	32	71	31	11	42
Total ..	29,163	10,906	40,069	3,023	139	3,162

Semi-Government Authorities: Debt Outstanding, South Australia

At 30th June 1963 and 1964

Authority	Debt in Australia as at					
	30th June 1963			30th June 1964		
	Government	Public	Total	Government	Public	Total
	\$'000					
Tramways	11,886	—	11,886	11,265	—	11,265
Electricity Supply	107,504	74,760	182,264	114,668	81,623	196,291
Fire Brigades	—	68	68	—	63	63
Hospitals	8	8	16	—	16	16
Industry Assistance ..	14	—	14	12	—	12
Banking	36,146	—	36,146	47,598	—	47,598
Housing	131,500	17,946	149,446	139,844	21,836	161,679
Miscellaneous	1,934	74	2,008	1,940	100	2,040
Total debt	288,992	92,856	381,848	315,328	103,638	418,965
	Annual Interest Payable					
	\$'000					
Total interest..	12,542	4,856	17,398	13,740	5,383	19,123

Semi-Government Authorities: Debt Outstanding According to Rate of Interest and Year of Maturity, South Australia

At 30th June 1964

Rate of Interest	Debt	Year of Maturity	Debt
	\$'000		\$'000
No interest	244	Fixed dates—	
Under 3 per cent	106	1964-65	3,396
3 and under 3½ per cent	35,044	1965-66	6,824
3½ and under 4 per cent	25,454	1966-67	6,095
4 and under 4½ per cent	124,149	1967-68	9,452
4½ and under 5 per cent	93,736	1968-69	15,513
5 and under 5½ per cent	109,339	1969-70	6,488
5½ and under 6 per cent	30,882	1970-71	6,672
6 per cent and over	11	1971-72	4,716
Not specified	—	1972-73	6,853
		1973-74	6,941
		1974-75	3,493
		1975-76	3,390
		1976-77	2,776
		1977-78 and onwards	8,625
		Not stated	13,153
		Instalments—	
		Yearly or less	314,346
		Not stated	212
		Net overdraft	20
Total debt	418,965	Total debt	418,965

12.5. LOCAL GOVERNMENT FINANCE

For the purpose of determining the scope of local government finance statistics, a local government authority is defined as:

- (i) An authority set up under a local government Act to carry out the functions of local government in a defined area (known as a municipality, city, corporate town, or district council area) and which is elected by the residents or property owners, or both, in the area.
- (ii) An authority created or acquired by a local government authority (as defined above) or by two or more local government authorities.

REVENUE AND EXPENDITURE

At the beginning of this chapter it was mentioned that the expenditure of moneys by local government bodies was authorized by the Local Government Act, 1934-1966. This authorization appears in Part XV, sections 287 to 290, of the Act whilst section 284 sets out the revenue of a council. Section 296 (1) of this part reads as follows:

“On or before the first day of November in every year, the council shall cause to be prepared a statement of and balance-sheet of the accounts of the council for the financial year then last past.”

These statements are the basis of the statistics on receipts and payments of local government authorities published in this section on local government finance.

Assessments

Assessments for property rating are based upon annual value or land value. Briefly, annual value is based on the estimated gross annual rental at which a ratable property would be let from year to year with an allowance, not exceeding one-fourth, to cover all outgoings. Some councils adopt the valuations of the Engineering and Water Supply Department which are based on annual value (or improved value). The land value (or unimproved value) is adopted from the assessment of land by the Commissioner of Land Tax or a council may make its own assessment. At 30th June 1966, 45 out of the total number of 142 councils based assessments on land value.

Rating of Properties

Under the provisions of the Act, the council may declare a general rate on the property assessed for the financial year ending the thirtieth day of June next after the declaring of the rate. A differential rate may be declared, for any portion of a local government area, if at least three-quarters in number of the whole of the members of the council vote in favour of the declaring of the rate; the mayor shall not be included as one of the members of the whole number.

The Act also provides for “a particular rate for defraying the expense of watering any public street or road or place”. The council may levy this watering rate without the consent of the ratepayers. However, it needs their consent to levy a special rate “if the general rate is insufficient for carrying out any purpose by this or any other Act authorized to be carried out by the council”. These and other provisions are contained in Part XII.

Government Grants

Government grants for construction and maintenance of roads are covered by Part XVI of the Act; Sections 299 (1) and (2) are as follows:

299 (1) The Governor may direct that in any financial year there shall be payable out of the Highways Fund established under the Highways Act, 1926-1963, an amount as grants to councils.

(2) Subject to Section 300, the said amount shall be divided among such councils, and in such proportions, as the Governor, on the recommendation of the Director of Local Government Department, may think fit.

Section 300 sets the division of the total grants between metropolitan and non-metropolitan councils at 25% and 75% respectively. Section 300 (a) makes provision for an additional grant for roads to the council of the City of Adelaide.

Revenue Receipts and Payments

The following tables show the receipts and payments of local government authorities: the first table shows detailed particulars for the year 1964-65 and the second contains a summary for the years 1955-56 to 1964-65.

**Local Government Authorities: Revenue Receipts and Payments
South Australia, 1964-65**

Particulars	Metropolitan (a)	Country	Total
Receipts		\$'000	
Taxation—			
Rates, including arrears and fines	11,019	7,606	18,625
Licences, dog and other	114	86	200
Public works and services—			
Health activities	94	183	277
Council property	920	480	1,400
Road work—			
Reimbursement from Highways Department	836	2,957	3,792
Other	2,008	1,556	3,565
Other	158	169	327
Government grants	271	3,533	3,804
Business undertakings	—	1,621	1,621
Other	211	128	339
Total receipts	15,632	18,320	33,952
Payments			
Administration	1,750	1,181	2,931
Debt services (including business undertakings)—			
Interest	964	411	1,375
Principal	902	1,356	2,258
Public works and services—			
Roads and bridges	7,781	11,622	19,403
Health services	1,387	924	2,311
Street lighting	521	214	735
Council property	2,204	1,109	3,313
Fire brigades	209	231	440
Other	142	259	401
Grants—Charities and other	39	54	92
Business undertakings	—	1,569	1,569
Other	—	7	7
Total payments	15,899	18,936	34,834

(a) Twenty-one Local Government areas which constituted the metropolitan area for census purposes prior to 30th June 1966.

**Local Government Authorities: Revenue Receipts and Payments
South Australia**

Year	Revenue Receipts			Revenue Payments			
	Government Grants (a)	Rates	Total (Including Other)	Administration	Roads and Bridges	Health and Sanitary	Total (Including Other)
				\$'000			
1955-56 ..	2,476	8,162	16,310	1,235	9,946	1,263	16,808
1956-57 ..	2,706	9,563	18,436	1,416	11,106	1,402	18,777
1957-58 ..	3,120	10,333	19,721	1,504	11,238	1,405	19,340
1958-59 ..	3,076	11,060	21,080	1,800	12,480	1,588	21,154
1959-60 ..	2,974	11,971	22,535	1,735	13,173	1,791	23,047
1960-61 ..	3,524	13,076	25,034	2,201	(b)15,561	1,701	25,746
1961-62 ..	2,984	14,887	27,969	2,289	16,856	1,846	28,111
1962-63 ..	3,215	15,943	29,094	2,499	16,355	1,988	28,915
1963-64 ..	4,317	16,968	33,725	2,577	19,823	2,109	33,763
1964-65 ..	3,804	18,826	33,952	2,931	19,403	2,311	34,834

(a) Excludes re-imbusement for work done on behalf of Highways Department.

(b) Expenditure on drainage included in "Other" from 1961-62.

LOAN RAISINGS AND DEBT OUTSTANDING

Local government authorities' loan raisings and debt outstanding are shown in the following tables. The definitions of "new loans raised" and "debt", given on page 498 under "Semi-government Finance", apply to the statistics in this section also.

The tables given below show new money loan raisings and debt outstanding for the years 1955-56 to 1964-65. A further table shows debt outstanding as at 30th June 1965 according to rate of interest.

**Local Government Authorities: New Money Loan Raisings and
Funds Provided for Redemption of Debt, South Australia**

Year	New Loan Raisings in Australia			Funds for Redemption		
	Govt	Public	Total	Govt	Public	Total
				\$'000		
1955-56	950	1,612	2,562	616	(a)358	974
1956-57	481	1,641	2,122	742	(a)532	1,274
1957-58	794	1,854	2,648	906	356	1,262
1958-59	926	1,866	2,792	682	462	1,144
1959-60	662	2,036	2,698	661	511	1,172
1960-61	1,409	2,501	3,910	681	577	1,258
1961-62	831	3,613	4,444	807	643	1,450
1962-63	1,157	3,959	5,116	860	778	1,638
1963-64	1,518	5,118	6,636	917	1,258	2,175
1964-65	726	5,391	6,117	1,038	1,219	2,258

(a) Excludes amounts credited to Sinking Funds.

Local Government Authorities: Debt Outstanding and Annual Interest Payable, South Australia

Year	Debt in Australia			Annual Interest Payable		
	Govt	Public	Total	Govt	Public	Total
	\$'000					
1955-56	2,650	6,264	8,914	36	252	288
1956-57	2,297	6,353	8,650	38	296	334
1957-58	2,227	7,995	10,222	46	386	432
1958-59	2,632	9,308	11,940	54	460	514
1959-60	2,613	10,767	13,380	58	544	602
1960-61	3,336	12,700	16,036	67	653	720
1961-62	3,365	15,933	19,298	87	837	924
1962-63	3,673	18,953	22,626	85	1,011	1,096
1963-64	4,296	23,226	27,522	99	1,234	1,333
1964-65	4,069	27,235	31,304	103	1,443	1,546

Local Government Authorities: Debt Outstanding According to Rate of Interest and Purpose, South Australia
At 30th June 1965

Rate of Interest	Debt	Purpose	Debt
	\$'000		\$'000
No Interest	1,718	Light and power	617
Under 3 per cent	1	Water supply, sewerage and drainage	5,742
3 and under 3½ per cent	227	Roads, streets, bridges and footpaths	16,511
3½ and under 4 per cent	265	Recreational	2,405
4 and under 4½ per cent	251	Council properties	5,078
4½ and under 5 per cent	2,642	Other (including not stated) ..	952
5 and under 5½ per cent	14,346		
5½ and under 6 per cent	11,233		
6 per cent and over	269		
Not specified	352		
Total debt	31,304	Total debt	31,304

LOAN FUND PAYMENTS

The following table shows the principal purposes for which loan funds were expended during recent years.

Local Government Authorities: Loan Fund Payments, South Australia

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65
	\$'000				
Roads, bridges, streets, footpaths, drainage and sewerage	2,726	2,550	4,259	4,277	3,600
Council properties	257	459	328	661	1,285
Parks, gardens and recreational reserves	476	335	419	426	678
Other (a)	201	53	516	200	479
Total	3,662	3,397	5,521	5,564	6,043

(a) Includes business undertakings, redemptions and advances.

PART 13

PRIVATE FINANCE

13.1. BANKING

LEGISLATION

Under Section 51 of the Commonwealth Constitution Act the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money".

The principal Commonwealth Acts at present in force relating to banking are—

- (a) The *Reserve Bank Act* 1959-1966, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;
- (b) The *Commonwealth Banks Act* 1959-1966, providing for the constitution and management of the Commonwealth Banking Corporation; and
- (c) The *Banking Act* 1959-1966, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The *Banking Act* 1959-1966 came into operation on 14th January 1960, replacing the *Banking Act* 1945-1953. It applies to all banks operating in Australia or its Territories, except State banks trading in their own State. The objects of the Act are (1) to provide a uniform legal framework for regulating the banking system (2) to safeguard depositors from loss (3) to provide for the co-ordination of banking policy under the direction of the Reserve Bank (4) to control the volume of credit in circulation and bank interest rates (5) to mobilize and to provide machinery for the control of foreign exchange and gold reserves of the Australian economy.

State banking legislation relates to the incorporation of banks and the constitution and management of State Banks. South Australian Acts at present in force relating to banking are—

The State Bank Act, 1925-1958 and

The Savings Bank of South Australia Act, 1929-1959.

THE RESERVE BANK

The Reserve Bank of Australia functions as a Central Bank, controls the Australian note issue through the Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Governments of the Commonwealth and some of the States.

Liabilities and assets of each department of the Reserve Bank are shown in the table below.

Reserve Bank of Australia, Liabilities and Assets

At 30th June 1966

Particulars	Central Bank Department	Note Issue Department	Rural Credits Department	Total (a)
Liabilities (\$'000)				
Capital	40,000	—	9,428	49,428
Reserve funds	25,330	9,510	5,921	40,761
Development fund	—	—	660	660
Notes on issue	—	835,269	—	835,269
Deposits, bills payable and other—				
Statutory reserve deposits ...	471,924	—	—	471,924
Other trading bank deposits ..	130,231	—	—	130,231
Savings bank deposits	418,573	—	—	418,573
Other	351,556	21,455	158,670	(a) 389,597
Total	1,437,613	866,234	174,678	(a) 2,335,782
Assets (\$'000)				
Gold and balances held abroad ..	551,455	435,023	—	986,478
Other oversea securities	171,264	134,811	—	306,075
Australian Government securities	392,212	296,243	—	688,455
All other	322,682	157	174,678	(a) 334,774
Total	1,437,613	866,234	174,678	(a) 2,335,782

(a) Inter-department accounts have been offset in totals.

Further details of the activities of the Reserve Bank are given in the Year Book of the Commonwealth of Australia.

THE COMMONWEALTH BANKING CORPORATION

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act 1959* and came into being on 14th January 1960. It is the controlling body for the Commonwealth Trading Bank, the Commonwealth Savings Bank and the Commonwealth Development Bank.

Particulars relating to the Development Bank are given below, while details of the other two banks are included in later sections relating to all trading banks and savings banks.

COMMONWEALTH DEVELOPMENT BANK

The Development Bank is a supplementary source of finance for development and does not compete with conventional lenders, but provides financial help when such help is thought desirable, and finance is not otherwise available on suitable terms. The primary consideration of the bank's operations in deciding whether finance should be made available is the prospects of success and not necessarily the value of security available. In South Australia all the major private banks and the State Bank of South Australia are agents of the Development Bank for the receipt of loan applications.

The capital of the Development Bank (\$61.7 million at 30th June 1966) consists of the capital of the Mortgage Bank and Industrial Finance Department of the Commonwealth Bank immediately prior to 14th January 1960, \$10 million provided by the Reserve Bank, \$20 million provided by the Commonwealth Government in the 1961-62 Budget, and such other sums as are provided by the Commonwealth Development Bank reserve fund. The net profits of the bank are paid to this reserve fund.

TRADING BANKS

Banks Originating in South Australia

With a subscribed capital of \$500,000 in 50,000 shares of \$10 each, the first trading bank promoted in South Australia was the Bank of Adelaide which was incorporated by an Act of Parliament, and assented to on the 5th December 1865. The bank formally opened for business on 11th December of the same year. The Bank of Adelaide now has branches in all mainland States.

Pursuant to the State Advances Act of 1895 the State Bank of South Australia was constituted and commenced business in 1896. The original Act directed that advances were to be made on first mortgage to farmers, other primary producers and local government authorities. In 1925 legislation was enacted which enlarged the scope of the activities of the bank by making provision for loans on overdraft and all business of general banking. The State Bank also administers the under-mentioned Acts on behalf of the State—

Advances for Homes Act, 1928-1958.

Advances to Settlers Act, 1930-1958.

Loans to Producers Act, 1927-1962.

Advances for Wire-netting and Vermin Proof Materials under the Vermin Act, 1931-1964.

Loans for Fencing and Water Piping Act, 1938-1952.

Student Hostels (Advances) Act, 1961.

The State Bank of South Australia does not operate branches or agencies outside the State.

Assets

The following table gives some particulars of assets held by trading banks in Australia. The figures quoted are averages of assets at the close of business on each Wednesday in June 1966.

Trading Banks in Australia: Assets, June 1966
Excludes Inter-branch Accounts and Contingencies

Assets	Common-wealth Trading Bank	Private Banks	Other Cheque-paying Banks	Total
	\$'000			
Gold, bullion and Australian notes	27,870	115,286	6,344	149,500
Cash with Reserve Bank	1,905	5,120	6,294	13,319
Australian public securities—				
Commonwealth and State	267,484	790,006	99,045	1,156,535
Local and semi-governmental authorities	11,401	877	2,721	14,999
Statutory Reserve Deposit Account with Reserve Bank	85,845	386,732	953	473,530
Loans to authorized dealers in short term money market	9,242	51,760	13,805	74,807
Other loans, advances and bills discounted	473,400	2,371,610	338,181	3,183,191
Bank premises, furniture and sites..	10,582	117,852	18,958	147,392
Other assets	48,832	314,648	22,565	386,045
Total assets	936,561	4,153,891	508,866	5,599,318

Branches and Agencies

Of the 15 trading banks which operate in Australia, the 9 banks listed below conduct business in South Australia:

Government banks:

Commonwealth Trading Bank
State Bank of South Australia

Private banks:

Australia and New Zealand Bank Ltd
Bank of Adelaide
Bank of New South Wales
Commercial Bank of Australia Ltd
Commercial Banking Co. of Sydney Ltd
English, Scottish and Australian Bank Ltd
National Bank of Australasia Ltd

At 30th June 1966 there were 433 branches and 297 agencies in South Australia, compared with Australian totals of 4,544 branches and 1,746 agencies.

The following table shows that in recent years there has been a considerable expansion in the number of metropolitan branches, but virtually no change in the number of country branches.

Trading Bank Branches and Agencies, South Australia
At 30th June

Bank	Branches					Agencies
	1962	1963	1964	1965	1966	1966
Commonwealth Trading Bank ..	27	37	37	42	45	28
State Bank of South Australia ...	34	35	35	35	35	16
Private banks	309	318	331	344	353	253
Total—Metropolitan area	147	167	180	189	203	132
Country	223	223	223	232	230	165
Total State	370	390	403	421	433	297

Interest Rates

The following table sets out interest rates on fixed deposits and maximum interest rates on overdrafts applying in South Australia at 30th June each year from 1960 to 1966. The sharp rise in interest rates following the credit restrictions of November 1960 can be clearly seen.

Trading Banks: Interest Rates, South Australia
At 30th June

At 30th June	Fixed Deposits					Overdrafts (Maximum Rate)
	30 days	3 months	6 months	12 months	24 months	
	Per Cent per Annum					
1960....	(a)	2½	2½	2¾	3½	6
1961....	(a)	4	4	4½	(a)	7
1962....	(a)	3¾	3¾	4	(a)	7
1963....	(a)	3½	3½	3½	(a)	6½
1964....	3¾ (b)	3¾	3¾	4	(a)	7
1965....	4½ (b)	4½	4½	4½	4½	7½
1966....	4½ (b)	4½	4½	4½	4½	7½

(a) Not applicable.

(b) On deposits of \$100,000 or more only.

Deposits, Advances, Etc.

Details of deposits and advances of trading banks in South Australia are given in the next table. Deposits not bearing interest are on current account and may be withdrawn on demand. Deposits bearing interest include some deposits on current account, but most are deposits for fixed terms—usually 3, 6, 12 or 24 months. The minimum term for fixed deposits was reduced from 3 months to 30 days for large amounts, following an announcement to this effect from the Reserve Bank on 7th April 1964.

Long-term trends in two relationships (a) deposits not bearing interest to total deposits and (b) loans, advances, etc. to total deposits—show considerable fluctuations. During the 1930's non-interest-bearing deposits were less than 30% of total deposits (reaching a low of 23.9% in 1933) but this proportion rose steeply during and after the Second World War to a peak of 74.1% in

1953. This fell steadily to 58.3% in 1964, then to 52.9% in 1966, reflecting a similar pattern throughout Australia, although the proportion of non-interest-bearing deposits has generally been somewhat lower in this State than the Australian average. In the 1930's, loans and advances were customarily made at a rate of over 70% of total deposits, and in two years loans and advances actually exceeded deposits. However, during the war there was a reduction in advances made coupled with a rapid increase in deposits, so that by 1949 loans and advances were only 29% of deposits. This proportion has since increased and reached 73.0% in 1966. Total loans and advances have risen to more than six times the 1949 level.

Trading Banks: Average Weekly Deposits and Advances, South Australia

June Quarter 1962 to 1966

June Quarter	Deposits			Loans, Advances, Etc. (a)	Proportion to Total Deposits	
	Bearing Interest	Not Bearing Interest	Total		Deposits Not Bearing Interest	Loans, Advances, Etc. (a)
	\$'000	\$'000	\$'000	\$'000	%	%
1962....	111,035	170,463	281,498	161,506	60.6	57.4
1963....	118,766	172,127	290,893	181,162	59.2	62.3
1964....	137,120	191,365	328,485	199,816	58.3	60.8
1965....	162,021	190,391	352,411	239,123	54.0	67.9
1966....	175,058	196,305	371,362	271,132	52.9	73.0

(a) Excludes loans to authorized dealers in the short-term money market. Includes bills discounted.

Separate details for 1966 for each of the Government banks and for all private banks are as follows:

Trading Banks: Deposits and Advances, South Australia

June Quarter 1966

Bank	Deposits			Loans, Advances, Etc. (a)
	Bearing Interest	Not Bearing Interest	Total	
	\$'000			
Commonwealth Trading Bank	16,687	19,991	36,678	26,880
State Bank of South Australia	16,327	20,622	36,948	91,250
Private trading banks	142,045	155,693	297,735	153,002
Total	175,058	196,305	371,362	271,132

(a) Excludes loans to authorized dealers in the short-term money market. Includes bills discounted.

The following table relates to trading bank advances outstanding for all banks in South Australia and the Northern Territory except the State Bank of South Australia. Advances are classified according to type of borrower in July of each year from 1962 to 1966.

Trading Banks^(a), South Australia and Northern Territory
Advances to Resident Borrowers (b) by Type of Borrower
As at Second Wednesday in July

Classification	1962	1963	1964	1965	1966
	\$m.				
Business advances—					
Agriculture, grazing and dairying—					
Mainly sheep grazing	15.8	16.4	17.8	19.8	20.1
Mainly wheat growing	6.8	7.6	8.5	10.3	13.8
Mainly dairying and pig raising	2.8	3.6	3.7	3.8	4.8
Other	8.2	9.4	10.3	11.9	13.4
Total agriculture, etc.	33.6	37.0	40.4	45.8	52.0
Manufacturing	19.6	18.5	19.0	29.2	34.4
Transport, storage and communications ..	1.6	1.9	2.4	2.8	3.4
Finance—					
Building and housing societies	0.6	0.6	0.2	0.6	0.8
Pastoral finance companies	1.4	1.0	1.7	1.1	6.4
Hire-purchase and other finance companies	1.4	1.6	2.7	2.6	2.3
Other	1.4	1.2	2.1	1.6	1.5
Total finance	4.8	4.4	6.7	5.9	11.1
Commerce—					
Retail trade	17.0	16.4	16.2	17.2	19.4
Wholesale trade (c)	17.8	15.7	17.7	21.9	21.1
Total commerce	34.8	32.1	33.8	39.0	40.5
Building and construction	3.4	4.3	4.7	4.6	4.9
Other business	7.8	9.7	11.2	12.1	13.7
Unclassified	2.6	4.6	4.3	3.3	2.5
All business advances—					
To companies	61.0	60.5	67.1	82.2	90.4
Other	47.2	51.9	55.5	60.6	72.0
Total business advances	108.2	112.4	122.6	142.8	162.4
Advances to public authorities	0.4	0.5	0.4	0.7	0.8
Personal advances—					
Building or purchasing own home	9.6	11.0	11.5	12.8	13.5
Other	7.8	10.0	11.6	12.7	14.1
Total personal advances	17.4	21.0	23.1	25.4	27.6
Advances to non-profit organizations	1.8	1.8	2.0	1.9	2.4
Total advances to resident borrowers	127.8	135.6	148.1	170.9	193.2

(a) Covers advances by the Commonwealth Trading Bank and all private trading banks, but excludes advances by the State Bank of South Australia.

(b) "Resident borrowers" include institutions carrying on business, and individuals permanently residing in Australia or Papua-New Guinea. Advances to "non-resident borrowers" amounted to approximately \$100,000.

(c) Includes temporary advances to woolbuyers.

Debits to Customers' Accounts

Debits to customers' accounts generally represent the total of all cheques drawn by customers of the banks. The average weekly debits to customers' accounts of all cheque-paying banks, including the Rural Credits Department of the Reserve Bank and the Commonwealth Bank, in South Australia in recent years was as follows:

	\$'000
1960-61	116,087
1961-62	116,519
1962-63	131,791
1963-64	154,777
1964-65	170,254
1965-66	172,615

These figures are the averages of debits during weeks ending on Wednesdays.

SAVINGS BANKS**Savings Bank of South Australia**

The Savings Bank of South Australia commenced operations on 11th March 1848 following the enactment of an ordinance in 1847. In 1848 the bank had 214 depositors, with depositors' funds amounting to \$10,626. By 1875 the number of depositors had grown to 22,662, depositors' balances amounted to \$1,633,654 and agencies had been established in thirty townships throughout the State.

The Savings Bank of South Australia does not operate branches in other Australian States, although it has appointed agents to act for it in other States and in the United Kingdom. At 30th June 1966 there were 126 branches and 780 agencies in South Australia and in addition there were 821 school bank agencies.

The total value of depositors' balances first exceeded \$200 million in 1956, and has subsequently increased rapidly to exceed \$343 million by 1966. At 30th June 1966, Mortgage Loans outstanding totalled almost \$126 million following record mortgage lending of \$22 million in 1965-66 which was predominantly to depositors for building or purchasing homes (\$17,266,781) but included also \$3,040,770 for purchase or development of rural properties. Further details of operations in recent years are as follows:

Savings Bank of South Australia, Summary of Business

Year	Operative Accounts (a)	Amount Deposited During Year	Amount Withdrawn During Year	Depositors' Balances (a)	Mortgage Loans (a)	Government Securities Held (a)
	No.	\$'000	\$'000	\$'000	\$'000	\$'000
1961-62	847,906	220,709	217,278	260,866	75,716	164,642
1962-63	847,614	237,647	227,805	279,920	84,972	173,079
1963-64	858,072	276,537	260,657	304,271	96,935	184,178
1964-65	870,983	319,465	310,684	322,841	110,704	195,315
1965-66	884,250	347,984	338,330	343,062	125,833	199,467

(a) At end of year.

Development of Savings Banks

Post offices in South Australia acted as agencies for the Savings Bank of South Australia until the establishment of the Commonwealth Bank in 1912 when they switched to act as agencies for this bank.

Savings bank business was conducted entirely by these two government banks until 1956, when the first of the private banks entered the field. At present savings banking facilities in South Australia are provided by the nine banks listed below.

Government:

Commonwealth Savings Bank
Savings Bank of South Australia

Private:

Australia and New Zealand Savings Bank Ltd
Bank of Adelaide Savings Bank Ltd
Bank of New South Wales Savings Bank Ltd
Commercial Savings Bank of Australia Ltd
Commercial Banking Co. Savings Bank Ltd
English, Scottish and Australian Savings Bank Ltd
National Bank Savings Bank Ltd

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, and deposits as small as ten cents are still accepted. Generally, depositors cannot operate on their savings accounts by means of cheques, although most savings banks extend this facility to non-profit organizations such as friendly, co-operative and charitable societies, and in addition the Savings Bank of South Australia provides similar facilities for other depositors. Savings bank accounts have the advantages that deposits may be withdrawn on demand and that depositors receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

Assets

Under the provisions of the *Banking Act* 1959-1966 all savings banks, except State banks, which are subject to the Act are required to maintain in prescribed investments an amount that together with cash on hand in Australia is not less than the amount on deposit in Australia with the savings bank. These prescribed investments include deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth or State securities, loans for housing and loans to authorized dealers in the short-term money market.

A savings bank must hold at least 65% of depositors' funds in cash or approved securities.

Under the Act, a savings bank may not accept deposits from a profit-making body unless it is acting as a trustee for a non-profit-making beneficiary.

Details of assets of all savings banks in Australia at 30th June 1966 are as follows:

Savings Banks: Assets in Australia, 30th June 1966

(Excludes inter-branch accounts)

Assets	Common-wealth Savings Bank	State Savings Banks	Trustee Savings Banks (a)	Private Savings Banks	Total
			\$'000		
Coin, bullion and Australian notes	2,999	5,423	279	2,011	10,712
Deposits with Reserve Bank	216,210	56,043	500	146,450	419,203
Deposits in Australia with trading banks	29,727	72,218	5,436	21,646	129,027
Australian public securities—					
Commonwealth and States . . .	1,162,693	371,915	18,157	573,066	2,125,831
Local and semi-governmental authorities	307,800	382,093	30,439	478,479	1,198,811
Loans, advances and bills discounted (b)—					
Housing	550,641	395,433	16,543	395,903	1,358,520
Other	89,411	48,217	5,069	33,776	176,473
All other assets	47,756	45,474	4,274	29,802	127,306
Total assets	2,407,237	1,376,816	80,697	1,681,133	5,545,883

(a) Trustee banks do not operate in South Australia.

(b) Excludes loans to authorized dealers on the short-term money market.

Branches and Agencies

The number of branches of the government banks has increased steadily over recent years, whereas the number of branches of private banks increased suddenly during 1961-62 when several banks commenced operations in this State, and has since risen much less rapidly.

Savings Banks: Branches and Agencies, South Australia

At 30th June

Bank	Branches					Agencies	
	1962	1963	1964	1965	1966	1965	1966
Commonwealth Savings Bank . .	53	61	64	65	68	926	906
Savings Bank of South Australia	110	117	121	123	126	764	780
Private banks	265	318	331	344	353	590	599
Total—Metropolitan area	189	231	248	257	273	1,239	1,236
Country	239	265	268	275	274	1,041	1,050
Total State	428	496	516	532	547	2,280	2,286

Deposits

Until 1961, the total of depositors' balances in savings banks per head of population was higher in South Australia than in any other State. Although deposits per head are now higher in Victoria than in South Australia, the figure for this State is still well above the Australian average, as can be seen from the table below.

Savings Banks: Accounts and Deposits, Australia and South Australia

At 30th June	South Australia			Australia		
	Accounts Operative (a)	Deposits	Deposits per Head of Population	Accounts Operative (a)	Deposits	Deposits per Head of Population
	'000	\$m.	\$	'000	\$m.	\$
1962....	1,019	361.9	367.5	9,599	3,469.7	324.3
1963....	1,104	416.1	412.9	10,323	3,939.7	361.3
1964....	1,181	475.8	459.9	11,051	4,476.2	402.7
1965....	1,254	519.2	488.1	11,769	4,886.6	431.2
1966....	1,319	558.9	512.4	12,469	5,253.7	455.2

(a) Excludes school bank and inoperative accounts.

The Savings Bank of South Australia has always held most of the total of depositors' balances in this State, although its share of total on deposit has dropped from about 72% in 1962 to 61% in 1966. In that time the private banks have increased their share from 5% in 1962 to nearly 17% in 1966.

Savings Bank Deposits, South Australia

At 30th June	Commonwealth Savings Bank	Savings Bank of South Australia	Private Savings Banks	Total
	\$m.			
1962.....	83.8	260.8	17.3	361.9
1963.....	92.9	279.9	43.3	416.1
1964.....	105.7	304.3	65.8	475.8
1965.....	115.5	322.8	80.9	519.2
1966.....	122.6	343.1	93.2	558.9

The next table gives an indication of the amount of business conducted by banks during a year. It shows that in each of the last five years, both the amount deposited and the amount withdrawn during the year exceeded the total amount on deposit at the end of the year.

Movements in Savings Bank Deposits, South Australia

Year	Amount on Deposit at Beginning of Year	Deposits during Year (a)	Withdrawals during Year (a)	Interest Added during Year	Increase in Depositors' Balances during Year	Amount on Deposit at End of Year
	\$m.					
1961-62	333.4	413.4	396.6	11.7	28.5	361.9
1962-63	361.9	490.2	448.9	12.9	54.2	416.1
1963-64	416.1	579.6	532.6	12.7	59.7	475.8
1964-65	475.8	671.4	643.3	15.3	43.4	519.2
1965-66	519.2	721.5	699.1	17.2	39.7	558.9

(a) Includes inter-branch transfers.

Interest Rates

At 30th June 1966 the interest rate on both ordinary savings accounts and special society cheque accounts varied from 3½% to 3¾% on balances up to \$6,000. On deposits in excess of this amount, no interest was allowed for ordinary savings accounts, and a reduced rate applied to society accounts. Interest is calculated on the lowest balance in the account each month.

School Banking

Special banking facilities for school children were introduced to South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28th April 1908. For many years this bank was the only one engaged in this field, but in recent years the Commonwealth Savings Bank and some private banks have commenced similar services at some private schools. However, the Savings Bank of South Australia has sole access to public schools, and retains a major share of school banking business.

With a view to encouraging thrift in school children, deposits as small as one cent are accepted.

Details of school banking in this State are as follows:

	Agencies	Operative Accounts '000	Depositors' Balances \$'000
30th June 1964	877	173	3,410
1965	883	179	3,607
1966	883	181	3,775

13.2. INSURANCE

LIFE INSURANCE

The activities of life insurance companies operating in South Australia have been regulated by Commonwealth legislation since 1945. Under the *Life Insurance Act 1945-1965*, every company transacting life insurance business must be registered and must lodge a deposit of up to \$100,000, as security for policy holders, with the Commonwealth Treasurer. The Act is administered by the Insurance Commissioner who has wide powers of inquiry into the activities of any registered company.

Each company must establish at least one statutory fund and all moneys received in respect of life insurance business must be paid to, and form part of the assets of these funds. An actuarial investigation must be conducted at least once every five years, with the distribution of shareholders' dividends and policyholders' bonuses subject to sufficient surplus being revealed by such investigation. All premiums must be actuarially approved and the Commissioner has powers to suppress policies or proposals which he deems misleading.

Companies are required to furnish to the Commissioner certain accounting reports and statistical returns and it is from these returns that the statistical details in this section are obtained. The individual returns cover operations for the accounting year ending in the calendar year shown. For a majority of companies the closing date is 31st December, but a number balance earlier in the year.

During 1965 there were 35 companies operating in South Australia. All conducted ordinary life insurance business; 26 also undertook superannuation

business, *i.e.* the issuing of policies to the trustees of funds established for the provision of superannuation or retirement benefits, and 11 recorded industrial business whereby premiums are collected at intervals of less than two months.

Policies in Force

There has been a rapid growth in life insurance business in the post war years. For policies in force at the end of 1945, the sum assured amounted to \$130 million; by 1949 the figure had passed \$200 million and the \$500 million mark was reached in 1956. In 1965 life insurances in force exceeded \$1,370 million.

The table below illustrates the growth in life insurance business over the last 10 years. Although total business has been increasing, industrial business has been static, with the number of policies actually declining. The heavy relative decline in this form of business has been due to the high cost of collecting premiums and to the development of superannuation and group schemes.

Life Insurance: Policies in Force, South Australia

31st December	Ordinary (including Superannuation)				Industrial			
	Policies	Sum Assured	Bonus Additions	Annual Premiums	Policies	Sum Assured	Bonus Additions	Annual Premiums
	No.	\$'000	\$'000	\$'000	No.	\$'000	\$'000	\$'000
1956.....	312,706	414,963	32,684	14,576	397,506	62,591	1,960	3,006
1957.....	327,978	475,544	36,802	16,474	386,368	63,576	2,109	3,022
1958.....	341,088	534,616	41,820	18,065	378,679	65,107	2,312	3,065
1959.....	(a)389,071	605,433	48,090	19,868	369,621	65,986	2,575	3,077
1960.....	408,183	689,338	55,695	22,048	357,065	67,243	2,860	3,102
1961.....	424,267	773,307	63,418	24,075	340,649	68,255	3,077	3,111
1962.....	438,417	866,881	74,941	26,330	326,302	70,754	3,485	3,173
1963.....	449,824	961,053	87,634	28,597	312,496	73,418	4,062	3,238
1964.....	467,065	1,083,941	102,045	31,602	299,721	77,968	4,714	3,378
1965.....	486,237	1,212,109	n.a.	34,843	288,863	82,268	5,410	3,523

(a) Some "Voluntary Group" policies, previously counted as one policy, were converted to single policies for each person insured.

n.a.—Not available.

Details of policies in force at the end of 1965 are presented in the following table according to the type of policy and the nature of the business. The distinction between endowment insurance and endowment policy is that endowment insurance provides for the payment of the sum assured upon the insured reaching a specified age or upon his prior death, whereas the sum assured under an endowment policy is paid only upon the insured reaching the specified age.

Life Insurance: Policies in Force, South Australia, at end of 1965

Type of Policy	Ordinary		Superannuation		Industrial	
	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums
	\$'000					
Whole life insurances	513,251	11,370	15,583	435	5,800	290
Endowment insurances	353,128	14,879	145,573	5,797	74,431	3,118
Other insurances	148,864	901	13,544	171	—	10
Endowment	14,365	1,023	7,802	267	2,037	104
Total	1,029,608	28,173	182,502	6,670	82,268	3,523

Of the 35 companies undertaking ordinary business in 1965, 10 accounted for 91% of business registered at the end of the year, with the five largest accounting for 74%. Although 26 companies had superannuation policies registered, 10 companies accounted for 99%, and 3 for 75% of all superannuation business.

New Policies

During 1965 a total of 63,242 new life insurance policies, with an assured value of \$215,946,000, were issued in South Australia. This number exceeded the previous highest figure of 61,190 policies issued in 1961. The value, *i.e.*, amount assured, of new policies has increased continuously since 1945.

The number and value of new ordinary, superannuation, and industrial policies issued during the last five years is shown in the next table. The relative importance of industrial policies has declined from approximately 25% of total value in 1945 to little more than 5% in 1965. The average value of industrial policies is much lower than for ordinary and superannuation policies.

Life Insurance: New Policies Issued, South Australia

Policy	1961	1962	1963	1964	1965
	NUMBER ISSUED				
Ordinary	39,149	39,463	39,385	42,262	43,521
Superannuation	4,538	4,624	4,693	5,236	5,583
Industrial	17,503	15,728	13,444	13,192	14,138
Total	61,190	59,815	57,522	60,690	63,242
	AMOUNT ASSURED (\$'000)				
Ordinary	119,525	127,572	130,504	152,460	167,043
Superannuation	16,696	21,309	25,504	34,553	37,648
Industrial	7,407	8,754	9,175	10,777	11,254
Total	143,628	157,636	165,183	197,790	215,946

Annual premiums on new policies issued in 1965 amounted to \$5,778,000 and of this amount \$3,389,000 was for endowment insurances and \$1,792,000 for whole of life insurances. Details of amount issued and premiums payable for the various types of policy issued in 1965 are shown below.

Life Insurance: New Business, South Australia, 1965

Type of Policy	Ordinary		Superannuation		Industrial	
	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums
	\$'000					
Whole life insurances	79,976	1,646	3,878	105	745	42
Endowment insurances	41,466	1,902	27,151	1,068	10,503	420
Other insurances	43,207	249	4,067	44	—	3
Endowment	2,394	209	2,552	89	6	—
Total	167,043	4,007	37,648	1,305	11,254	465

details are given of mortgages on South Australian and Northern Territory real estate, loans on policies registered in, and "other" loans to persons resident in these areas. Only those loans which form assets of the statutory funds have been included since 1961.

Life Insurance: Loans Outstanding, South Australia^(a)

Nature of Collateral	1961	1962	1963	1964	1965
			\$'000		
Mortgage of real estate	63,129	65,773	63,207	62,611	64,431
Policies—					
Advances of premiums.....	2,134	2,370	1,662	1,786	2,077
Other	7,205	7,779	8,425	9,107	10,082
Other collateral	294	231	214	207	272
Total	72,763	76,152	73,509	73,712	76,861

(a) Includes Northern Territory.

GENERAL INSURANCE

General insurance in South Australia is conducted entirely by private organizations. The State Government maintains the Government Accident Insurance Office, but its activities are confined to carrying certain government insurance—largely workmen's compensation.

Companies, or firms of persons, carrying on general insurance business are required, under the State Stamp Duties Act, 1923-1966, to take out an annual licence, the fee for which varies with premium income. In addition such companies or persons must, under the Commonwealth *Insurance Act* 1932-1966, have a deposit in the form of approved securities with the Commonwealth Treasurer.

There were 175 companies licensed to write general insurance business in South Australia in 1965-66, 74 of which had head offices overseas. Business was recorded by 163 companies. The majority of companies are members of the Fire & Accident Underwriters Association and are known as "tariff" companies. These companies maintain uniform policies and premiums.

Statistics in this section are compiled from annual returns submitted by the companies. The return from each company gives details for the 12 months ending on the company's normal balancing date within the year shown.

The following tables give details of revenue and expenditure for general insurance over the last 5 years. The tables contain selected items of statistics and should not be combined and construed as profit and loss statements or revenue accounts. The first table shows premiums and investment income earned by the companies. Premiums represent the full amount receivable in respect of policies issued and renewed in the year less returns, rebates, and bonuses, paid or credited to policy holders in the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts shown differ from "earned premium income" for the year. Premiums have increased over the period covered by the table and hence have been greater than earned premium income in each year.

Investment income relates to interest, dividends, rents, etc., from investments made within the State.

General Insurance: Revenue, South Australia

Source of Revenue	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
<i>Premiums—</i>					
Fire and sprinkler leakage ..	5,396	6,211	6,969	6,227	6,537
Householders' comprehensive	2,885	3,129	(a) 3,534	(a) 3,862	(a) 4,197
Loss of profits	563	570	615	697	764
Hailstone	222	227	302	314	253
Marine	1,171	1,343	1,567	1,485	1,366
Motor vehicle—					
Compulsory third party.	4,843	5,326	5,868	6,601	7,867
Other	9,755	10,436	12,157	13,970	15,336
Employers' liability and workmen's compensation	4,773	5,410	5,704	6,901	8,100
Personal accident	1,677	1,889	1,856	2,075	2,192
Public risk, third party	571	648	887	871	934
Burglary	425	458	(a) 393	(a) 427	(a) 475
Other	1,061	1,303	1,285	1,342	1,412
Total premiums ..	33,342	36,951	41,138	44,772	49,433
<i>Revenue from investments</i>	<i>398</i>	<i>548</i>	<i>557</i>	<i>661</i>	<i>688</i>
Total revenue	33,740	37,499	41,695	45,433	50,121

(a) Some business previously included as "Burglary" now classified as "Householders' comprehensive".

Details of claims and other expenditure are given below. Claims include provision for outstanding claims and represent claims incurred during the year. Other expenses mainly represent payments made during the year. Taxation payments will therefore be based on income earned in previous years.

General Insurance: Expenses, South Australia

Type of Expense	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
<i>Claims—</i>					
Fire and sprinkler leakage ..	1,393	1,279	1,435	2,017	1,748
Householders' comprehensive	549	801	(a) 721	(a) 748	(a) 831
Loss of profits	112	25	10	168	146
Hailstone	32	68	21	123	209
Marine	396	428	629	672	583
Motor vehicle—					
Compulsory third party.	3,584	4,304	4,738	4,972	6,975
Other	5,805	6,746	7,800	9,434	9,921
Employers' liability and workmen's compensation	3,411	3,787	3,614	4,441	5,111
Personal accident	719	800	906	899	999
Public risk, third party	206	212	236	364	306
Burglary	164	177	(a) 192	(a) 227	(a) 284
Other	452	698	642	681	730
Total claims	16,826	19,324	20,943	24,745	27,843
<i>Other expenses—</i>					
Contributions to fire brigades	535	588	674	646	715
Commission and agents' charges	3,801	4,250	4,602	5,094	5,312
Management	6,868	7,105	7,695	8,432	9,298
Taxation	1,194	1,117	1,208	1,787	1,576
Total expenses	29,224	32,384	35,123	40,703	44,744

(a) Some business previously included as "Burglary" now classified as "Householders' comprehensive".

Under the Fire Brigades Act, 1936-1958, insurance companies contribute approximately 60% of the cost of maintaining the services of the Fire Brigades Board.

Compulsory insurance for workmen's compensation and motor vehicle third party risks is provided for under State legislation.

Employers, unless specifically exempted, are required under the Workmen's Compensation Act, 1932-1966, to effect an insurance cover providing compensation for workmen suffering injuries in the course of their employment. Details of workmen's compensation provisions are given in Part 7.4. page 268.

Under the Motor Vehicles Act, 1959-1967, all vehicles other than those belonging to the Crown must be covered by a third party policy protecting the owner against any liability for death or injury to others resulting from use of the vehicle. Particulars are given in Part 11.1. page 458.

13.3. OTHER PRIVATE FINANCE

THE STOCK EXCHANGE OF ADELAIDE

In the 1860's, Green's Buildings in King William Street became a favourite location for trading in the bank, insurance, railway, shipping, gold, copper and silver shares of South Australia and of Victoria. The Adelaide Stock Exchange and the Stock Exchange of South Australia came into existence, and they amalgamated to form the Stock Exchange of Adelaide on 2nd September 1887, with membership limited to 65. The new exchange began in Pirie Street and moved to King William Street, near Grenfell Street, in 1882. At this stage, 70 vestibule members enjoyed the right to do business with the 70 full members. The present building was erected and occupied by the Exchange in 1901.

In 1904 the Exchange was formed into a limited liability company with 72 shares of \$400 each, reducing to the present membership of 60 in 1955. Trading was conducted on the call system until the end of 1961 when post trading came into operation.

Basically the Exchange provides facilities for trading in securities, with transactions being conducted by brokers who constitute its membership. The Exchange operates under a set of rules and regulations which govern both the behaviour of companies, through the various listing requirements, and the conduct of members. Management is by a committee of six, elected by members, with a president and vice-president being elected from the six.

Lists of quotations are issued by the Exchange twice daily and lists of dividends and new issues are produced weekly. The *Official Record* providing enlarged and additional information is published monthly. Transfer marking and noting services are available to members of the Exchange and to the public through solicitors and accountants.

A visitors gallery overlooking the trading floor enables members of the public and organized parties to witness proceedings.

The Stock Exchange of Adelaide

Particulars	Year Ended 20th March				
	1963	1964	1965	1966	1967
	\$'000				
Nominal value of listed securities	9,784,000	10,284,000	10,670,000	11,310,000	11,715,000
Turnover of securities—					
Commonwealth loans, semi-government loans, debentures and unsecured notes	8,192	6,750	6,044	5,074	4,633
Shares (all classes)	32,526	41,140	34,376	27,168	17,287
Total turnover	40,718	47,890	40,420	32,242	21,920

BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building Societies Act, 1881-1938. The Act is administered by the Registrar of Building Societies with whom all building societies must be registered.

The societies fall into two categories—permanent societies and Starr-Bowkett societies.

Permanent societies, as their name implies, have no fixed arrangement for termination of operations. They derive their funds from the issue of shares and by receiving deposits and loans. An additional source of funds for certain permanent societies has been provided by the Commonwealth-State Housing Agreement (see page 313). Advances for the purpose of building or acquiring homes are made to members upon security of their shares, and to members and other persons by way of mortgage.

Starr-Bowkett societies have a limited life and are financed by members' subscriptions. As subscriptions accumulate, interest-free advances are made to members, with priority being determined by ballot. When all members have received a loan the society is wound up with share capital being returned to shareholders as loans are repaid.

Building Societies: Societies, Shareholders and Borrowers, South Australia

Year	Societies		Shareholders		Borrowers	
	Permanent	Starr-Bowkett	Permanent	Starr-Bowkett	Permanent	Starr-Bowkett
1961-62	5	21	18,164	6,690	3,110	2,298
1962-63	5	21	17,781	6,479	3,296	2,337
1963-64	5	21	18,993	6,355	3,585	2,427
1964-65	5	21	20,003	6,185	3,870	2,590
1965-66	5	21	21,090	5,867	4,094	2,493

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balancing dates. The figures for each year represent the aggregate of returns with balancing dates in that year.

Building Societies: Assets and Liabilities, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Assets—					
Advances on mortgages and shares	11,114	12,530	13,967	15,790	17,239
Land and buildings	330	332	332	334	412
Other investments	277	297	320	396	448
Cash and deposits	152	192	355	241	166
Other	30	32	32	41	52
Total assets	11,903	13,383	15,005	16,801	18,317
Liabilities—					
Subscriptions	6,357	6,768	7,332	7,959	8,430
Loans due to Government (a)	3,305	4,142	4,977	5,857	6,712
Deposits	1,382	1,567	1,720	1,804	2,010
Reserves and profits	781	844	911	971	1,043
Bank overdraft	4	4	—	133	59
Other	74	58	66	79	64
Total liabilities	11,903	13,383	15,005	16,801	18,317

(a) Loans made to permanent building societies under the Commonwealth-State Housing Agreement.

Details of financial transactions by building societies during 1965-66 are given below.

Building Societies: Transactions, South Australia, 1965-66

Particulars	Permanent	Starr-Bowkett	Total
	\$'000		
Income—			
Interest on mortgage loans	784	—	784
Other	85	45	130
Total	869	45	914
Expenses—			
Interest on borrowed funds	649	—	649
Administration and taxation	152	29	181
Total	801	29	830
Deposits—			
Received	1,100	—	1,100
Repaid	894	—	894
Government housing funds (a)—			
Received	1,060	—	1,060
Repaid	114	—	114
Advances—			
Paid	3,098	423	3,521
Repaid	1,578	372	1,950

(a) Transactions between Societies and State Treasury.

CO-OPERATIVE SOCIETIES

For the purpose of collecting the statistics in this section co-operative societies have been defined as producing, manufacturing, marketing or distribution societies which substantially fulfil the following conditions:

1. The greater part of the business of such a society to be transacted with its own shareholders.
2. Any distribution of surplus after payment of dividend on share capital to be amongst suppliers or customers in proportion to the business transacted with the society.
3. Limitation of voting power to one vote per person.
4. Dividend on share capital not to exceed 10%.

All such societies must be registered under the Industrial and Provident Societies Act, 1923-1966. The Registrar of Industrial and Provident Societies must approve the rules of each society before it may be registered.

Co-operative societies may be classified under three broad headings—those serving producers, those serving consumers, and those fulfilling both functions. In the table below societies and members have been classified under these headings.

Co-operative Societies: Societies and Membership, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
Societies—					
Producers' societies	36	36	37	40	41
Consumers' societies	20	19	19	19	18
Producers' and consumers' societies	14	14	14	14	14
Total	70	69	70	73	73
Members—					
Producers' societies	15,703	16,239	16,530	16,784	18,137
Consumers' societies	97,539	88,783	93,382	95,618	98,257
Producers' and consumers' societies	3,163	3,261	3,312	3,426	3,648
Total members	116,405	108,283	113,224	115,828	120,042

Of the 41 producers' societies operating in 1965-66, 7 were co-operative wineries or distilleries, 10 represented dairy producers, and 12 were associated with fruit and vegetable production. Eight of the remaining 12 societies were associated with other rural production. Of the 18 co-operative consumers' societies, 9 were trading as general storekeepers, the remainder offering specialist products or services. Producer-consumer societies were generally associated with the fruitgrowing industry.

Particulars of the aggregate income and expenditure of co-operative societies for the last five years are given in the following table.

Co-operative Societies: Income and Expenditure, South Australia

Particulars	1961-62	1962-63	1963-64	1964-65	1965-66
	\$'000				
Income—					
Sales	41,202	40,564	41,814	45,422	49,732
Other	2,480	3,005	3,468	3,707	4,482
Total	43,682	43,570	45,282	49,130	54,214
Expenditure—					
Purchases	33,696	31,330	33,297	36,848	37,511
Working expenses	8,302	8,467	9,054	9,783	12,144
Interest on borrowed funds .	441	472	481	559	573
Distribution of surplus—					
Rebates and bonuses ...	1,733	3,110	2,459	2,340	3,443
Dividends to shareholders	269	284	304	370	367
Provision and other appropriations	657	575	684	789	1,023
Total	45,098	44,238	46,279	50,689	55,061

Details of the liabilities and assets of the societies in each category for 1965-66 are given below. The seven co-operative wineries and distilleries accounted for 29% of producer society assets.

Co-operative Societies: Liabilities and Assets, South Australia, 1965-66

Particulars	Producers' Societies	Consumers' Societies	Producers' and Consumers' Societies	Total
	\$'000			
Liabilities—				
Capital	2,181	4,181	788	7,151
Loan capital	6,252	2,794	2,668	11,714
Bank overdraft	1,617	78	2,047	3,744
Sundry creditors	2,018	613	1,700	4,330
Accumulated profits	854	868	3	1,724
Reserves and reserve funds (a)	3,957	1,117	857	5,931
Other (b)	6,615	98	1,281	7,994
Total	23,493	9,750	9,344	42,587
Assets—				
Land and buildings	5,418	2,600	1,876	9,894
Fittings, plant and machinery ..	4,753	310	854	5,918
Stock	7,399	2,314	679	10,391
Sundry debtors	3,730	413	1,653	5,796
Cash	624	156	262	1,041
Profit and loss account	60	15	—	75
Other (c)	1,509	3,942	4,022	9,473
Total	23,493	9,750	9,344	42,587

(a) Excludes provision for depreciation and bad debts.

(b) Includes amounts due to members.

(c) Includes investments and advances to members.

ESTATES OF DECEASED PERSONS

During recent years more than 80% of estates of deceased persons have been administered by executors following grants by the Supreme Court of probate on wills left by the deceased. Should the executorship of a will fail for any reason, for example by the death or renunciation of a nominated executor, the Court issues "letters of administration with the will annexed" but the more usual "letters of administration" relate to the estates of persons who died intestate. Tables in this section contain details of estates covered by the three types of grant during specified years.

Estates generally are those located in South Australia and not necessarily estates of deceased residents of this State. The net value of an estate is the gross value less proved liabilities: these liabilities do not include Commonwealth estate duty or State succession duties.

The following table shows the number and value of estates for which probate or administration was granted by the Supreme Court during the five years to 1965.

Estates of Deceased Persons, South Australia

Year	Estates No.	Gross Value of Estates		Net Value of Estates \$'000	Average Net Value per Estate \$
		Real \$'000	Personal \$'000		
MALES					
1961.....	2,173	10,159	20,007	28,219	12,986
1962.....	2,345	11,929	24,615	34,312	14,632
1963.....	2,411	13,887	26,895	36,818	15,271
1964.....	2,764	14,551	29,621	41,323	14,951
1965.....	2,523	15,166	30,915	41,368	16,396
FEMALES					
1961.....	1,675	6,000	10,313	15,367	9,174
1962.....	1,713	6,167	10,900	16,088	9,392
1963.....	1,715	5,988	10,403	15,337	8,943
1964.....	1,926	6,718	14,553	20,003	10,386
1965.....	1,892	6,476	15,914	21,256	11,234
PERSONS					
1961.....	3,848	16,159	30,320	43,586	11,327
1962.....	4,058	18,096	35,515	50,400	12,420
1963.....	4,126	19,875	37,298	52,155	12,641
1964.....	4,690	21,268	44,174	61,327	13,076
1965.....	4,415	21,642	46,829	62,624	14,184

The distribution of estates through various size groups and the gross value of real and personal estate respectively in each group are shown below for the years 1964 and 1965.

For both years estates with an individual net value under \$2,000 formed more than 25% of the total number but less than 2% of total net value, while estates under \$10,000 constituted 70% of total numbers but less than 20% of total net value. The few estates, less than 6% of the total, with an individual net value of \$50,000 or more constituted between 40% and 45% of total net value.

Real estate formed slightly less than one-third of the total gross value for all estates but more than half for estates graded to net values between \$4,000 and \$10,000.

Estates of Deceased Persons: Size and Structure of Estates, South Australia

Size of Net Estate	1964				1965			
	Estates	Value of Estates			Estates	Value of Estates		
		Gross		Net		Gross		Net
		Real	Personal			Real	Personal	
\$	No.	\$'000	\$'000	\$'000	No.	\$'000	\$'000	\$'000
Under 2,000	1,248	429	1,155	1,015	1,108	364	1,227	964
2,000 but under 4,000.....	695	889	1,557	2,060	699	752	1,671	2,054
4,000 but under 6,000.....	590	1,729	1,616	2,957	510	1,383	1,546	2,558
6,000 but under 8,000.....	506	2,170	1,726	3,518	475	2,076	1,554	3,297
8,000 but under 10,000....	287	1,385	1,363	2,562	327	1,553	1,573	2,915
10,000 but under 20,000....	619	3,118	5,997	8,536	562	3,094	5,404	7,924
20,000 but under 30,000....	259	1,932	4,766	6,390	258	1,861	4,833	6,348
30,000 but under 40,000....	135	1,277	3,591	4,691	136	1,445	3,540	4,721
40,000 but under 50,000....	93	991	3,393	4,172	89	1,179	2,974	4,028
50,000 but under 100,000...	183	4,078	9,000	12,450	157	3,415	9,666	10,936
100,000 but under 200,000...	57	2,201	5,748	7,734	76	2,908	7,016	9,675
200,000 but under 400,000...	15	552	3,035	3,541	12	1,199	2,188	3,209
400,000 and over	3	517	1,229	1,702	6	413	3,634	3,995
All estates.....	4,690	21,268	44,174	61,327	4,415	21,642	46,829	62,624

The following table provides an analysis of estates on which probate or administration was granted during 1965 according to the age group of persons leaving those estates.

Estates of Deceased Persons: Age and Sex of Deceased, Value of Estates, South Australia, 1965

Age of Deceased	Males				Females			
	Estates	Value of Estates			Estates	Value of Estates		
		Gross	Net	Average Net		Gross	Net	Average Net
		No.	\$'000	\$'000		\$'000	No.	\$'000
Under 21 years ..	12	59	53	4.4	(a)	(a)	(a)	(a)
21 to 29 years ...	39	271	239	6.1	7	39	30	4.3
30 to 39 years ...	78	979	809	10.4	16	600	587	36.7
40 to 49 years ...	132	1,961	1,637	12.4	56	458	405	7.2
50 to 59 years ...	340	5,523	4,881	14.4	122	1,070	997	8.2
60 to 69 years ...	611	12,046	11,244	18.4	344	4,179	3,893	11.3
70 to 79 years ...	757	15,593	13,315	17.6	659	8,649	8,270	12.6
80 years and over	529	9,413	8,959	16.9	668	7,108	6,790	10.2
Age not stated ..	25	235	231	9.2	20	287	282	14.1
All ages	2,523	46,081	41,368	16.4	1,892	22,389	21,256	11.2

(a) Included with age group 21 to 29 years.

During each of the three years for which this analysis has been made there was a general tendency for the average net value of estates to increase progressively through the age groups. However, in both 1963 and 1965 the average size of estates decreased in the two highest age groups for males and in 1965 there was a decrease in the 80 years and over group for females. Other exceptions to the general trend have usually been in groups containing relatively few estates of which one or two were of exceptional value.

REAL ESTATE MORTGAGES

The Real Property Act, 1886-1963, provides for the registration of mortgages on real estate and details of new loans and discharges are given in the following table.

Mortgages: Real Estate, South Australia

Year	New Loans		Discharges	
	Number	\$'000	Number	\$'000
1956-57	17,995	84,904	12,321	31,346
1957-58	21,039	88,692	14,478	40,722
1958-59	24,395	113,926	16,715	43,072
1959-60	28,874	124,337	19,454	50,791
1960-61	29,187	164,801	20,093	56,426
1961-62	28,070	137,072	21,331	59,782
1962-63	33,929	181,982	25,607	74,785
1963-64	37,813	207,097	29,002	93,116
1964-65	38,631	220,077	30,334	95,425
1965-66	38,779	262,812	30,661	104,547

With the exception of 1961-62, new loans have increased over the period covered by the table. The number of new loans in 1965-66 was 115% higher than in 1956-57, and during this period the average amount of each new loan has increased from \$4,718 to \$6,777.

INSTALMENT CREDIT FOR RETAIL SALES

The post-war era has seen extensive development in the use of instalment credit schemes in retail merchandising. Instalment credit is defined as covering all schemes under which repayment is made by regular predetermined instalments, such as hire-purchase, time payment, budget accounts and certain personal loans. Lay-bys and credit accounts not involving regular repayments are excluded.

Care should be taken in relating figures in this section to those for retail sales, as the following statistics include certain sales to final purchasers, such as plant, machinery and tractors, which are not covered by the survey of retail sales. Transactions specifically excluded are the financing of sales of land and buildings, property improvements, services such as repair work and travel facilities, and rental and leasing schemes.

Although of declining relative importance, hire-purchase remains the principal form of instalment credit. The distinguishing feature of a hire-purchase agreement is that ownership of the goods does not pass to the purchaser until the final instalment has been paid. Hire-purchase transactions include the

letting of goods with an option to purchase and agreements to purchase by instalments, irrespective of whether the instalments are described as rent, hire or otherwise. Hire-purchase transactions are regulated by State legislation through the Hire-Purchase Agreements Act, 1960-1962, which provides for the content of hire-purchase agreements and for the rights and duties of parties to such agreements.

Details of instalment credit arranged during 1965-66 are given below according to the nature of the commodity financed. In this and the following table the motor vehicle group includes new and used motor cars, motor cycles, commercial vehicles, tractors, caravans, motor parts and accessories. Plant and machinery includes farm machinery and implements, earth moving equipment, aircraft, industrial plant and machinery, business machines, and commercial refrigeration. Included in household and personal goods are furniture and furnishings, domestic refrigerators, electrical goods, musical instruments, bicycles, and other household and personal goods.

Instalment Credit for Retail Sales: New Agreements

South Australia and Northern Territory, 1965-66

Particulars	Unit	Motor Vehicles, Tractors, Etc.	Plant and Machinery	Household and Personal Goods	Total
Hire-purchase—					
Number of agreements	'000	35.7	3.5	70.6	109.7
Value of goods (a)	\$ million	49.1	7.0	13.1	69.2
Amount financed (a)	\$ million	32.9	4.6	10.6	48.1
Other instalment credit—					
Amount financed (a)	\$ million	16.7	0.3	18.2	35.2

(a) Excludes hiring charges, interest, and insurance

Instalment credit transactions may be divided into two classes of business; retail business and non-retail finance business. The former category covers retailers providing their own finance and subsidiaries set up by retailers primarily for the purpose of financing their own sales. All other businesses engaged in instalment credit financing of retail sales, irrespective of whether their main activity is finance, constitute non-retail finance business.

In the following table amounts financed in recent years are shown by class of business. The figures relate to the type of business undertaking the agreement, even if the agreement is subsequently assigned, discounted or mortgaged with another type of business.

Of the \$47.6 million provided by non-retail finance businesses for motor vehicle purchases in 1965-66, \$23.5 million was for new vehicles and \$24.1 million for used vehicles.

Instalment Credit for Retail Sales: Amount Financed^(a)
South Australia and Northern Territory

Year	Motor Vehicles, Tractors, Etc.	Plant and Machinery	Household and Personal Goods	Total
	\$m.	\$m.	\$m.	\$m.
RETAIL BUSINESSES				
1961-62	2.5	0.3	22.9	25.7
1962-63	2.5	0.3	23.8	26.6
1963-64	2.6	0.3	22.5	25.4
1964-65	2.3	0.3	23.0	25.6
1965-66	2.0	0.4	20.7	23.0
NON-RETAIL FINANCE BUSINESSES				
1961-62	29.5	3.0	6.8	39.3
1962-63	38.4	3.5	6.9	48.8
1963-64	44.9	3.8	7.6	56.3
1964-65	55.6	4.2	8.2	68.0
1965-66	47.6	4.4	8.1	60.2
ALL BUSINESSES				
1961-62	32.0	3.3	29.7	65.0
1962-63	40.9	3.8	30.7	75.4
1963-64	47.6	4.1	30.1	81.8
1964-65	57.9	4.5	31.2	93.6
1965-66	49.6	4.9	28.8	83.3

(a) Excludes hiring charges, interest and insurance.

Particulars of instalment credit provided by both classes of business were first collected in 1957, and details of balances outstanding at the end of each of the last eight years are given below.

Instalment Credit for Retail Sales: Balances Outstanding^(a)
South Australia and Northern Territory

At 30th June

Particulars	1959	1960	1961	1962	1963	1964	1965	1966
	\$ million							
Type of business—								
Retail businesses	20.4	33.4	41.0	39.8	39.7	37.1	35.1	31.5
Non-retail finance businesses	59.2	80.2	81.4	71.0	75.6	84.7	102.6	101.8
Total	79.6	113.6	122.4	110.8	115.3	121.7	137.7	133.3
Type of credit—								
Hire-purchase	74.2	101.8	102.8	85.8	84.6	87.4	90.7	83.9
Other instalment credit	5.4	11.8	19.6	25.0	30.8	34.4	47.0	49.4
Total	79.6	113.6	122.4	110.8	115.3	121.7	137.7	133.3

(a) Includes hiring charges, interest and insurance.

APPENDIX A

STATISTICAL SUMMARY

In the next 22 pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State, with details being given (wherever they are available) for every 5th year for the period 1836-1926, and for each single year thereafter. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period of some 130 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes (page 533) where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

"*n.a.*" Not available.

"—" Nil.

"p" Preliminary information subject to revision.

STATISTICAL SUMMARY

POPULATION

Year	Population Estimate at 31st December				Population Growth			
	South Australia			Adelaide Metropolitan Area	Natural Increase	Rate of Natural Increase (a)	Net Increase	Rate of Population Growth %
	Males	Females	Persons	Persons				
1836.....	309	237	546				546	
1841.....	8,755	6,730	15,485				855	5.84
1846.....	14,711	11,182	25,893 (b)	13,871	577	22.29	3,433	15.29
1851.....	37,321	29,217	66,538 (b)	32,810	1,786	26.85	2,838	4.46
1856.....	56,264	51,622	107,886 (b)	36,524	3,341	30.97	10,499	10.78
1861.....	67,409	63,403	130,812 (b)	44,857	3,589	28.00	5,230	4.17
1866.....	88,024	80,883	168,907 (b)	54,251	4,029	24.39	7,430	4.60
1871.....	97,019	91,625	188,644 (b)	61,361	4,704	25.21	4,098	2.22
1876.....	116,894	107,666	224,560 (b)	71,794	4,674	21.51	14,484	6.89
1881.....	152,453	133,518	285,971 (b)	103,942	6,696	23.81	9,578	3.47
1886.....	160,814	145,896	306,710	n.a.	6,943	22.54	-2,603	-0.84
1891.....	168,826	155,895	324,721	132,575	6,526	20.23	5,774	1.81
1896.....	179,024	173,043	352,067	150,929	5,974	16.95	99	0.03
1901.....	(c)180,440	(c)178,890	(c)359,330	163,430	(c) 5,105	14.29	(c) 2,080	0.58
1906.....	184,803	181,710	366,513	175,641	5,049	13.90	3,892	1.07
1911.....	214,061	205,331	419,392	199,183	7,019	17.05	12,530	3.08
1916(d).....	212,585	229,253	441,838	219,285	6,780	15.35	-4,147	-0.93
1921.....	251,170	250,572	501,742	259,588	6,992	14.07	10,736	2.19
1926.....	285,013	275,912	560,925	305,509	6,606	11.92	13,877	2.54
1927.....	289,303	280,327	569,630	314,331	6,364	11.26	8,705	1.55
1928.....	289,639	282,948	572,587	316,394	6,261	10.96	2,957	0.52
1929.....	288,597	284,376	572,973	310,916	5,626	9.83	386	0.07
1930.....	288,618	285,849	574,467	310,526	5,133	8.96	1,494	0.26
1931.....	289,397	287,682	577,079	310,458	4,191	7.28	2,612	0.45
1932.....	290,254	289,039	579,293	311,840	3,564	6.16	2,214	0.38
1933.....	291,727	291,019	582,746	313,000	3,996	6.88	3,453	0.60
1934.....	292,531	291,958	584,489	314,000	3,056	5.24	1,743	0.30
1935.....	293,667	293,095	586,762	315,000	3,107	5.31	2,273	0.39
1936.....	294,835	294,935	589,770	317,000	3,447	5.86	3,008	0.51
1937.....	295,653	296,144	591,797	318,000	3,738	6.34	2,027	0.34
1938.....	297,604	298,238	595,842	321,500	3,871	6.53	4,045	0.68
1939(d).....	299,212	300,101	599,313	323,000	3,879	6.50	3,471	0.58
1940(d).....	297,885	301,171	599,056	330,000	4,309	7.19	-257	-0.04
1941(d).....	301,645	304,721	606,366	350,000	4,677	7.78	7,310	1.22
1942(d).....	303,511	307,467	610,978	355,000	4,566	7.50	4,612	0.76
1943(d).....	305,655	310,372	616,027	360,000	6,663	10.86	5,049	0.83
1944(d).....	308,853	314,177	623,030	365,000	7,327	11.83	7,003	1.14
1945(d).....	312,588	318,294	630,882	372,000	7,984	12.73	7,852	1.26
1946(d).....	317,238	323,180	640,418	380,000	9,352	14.72	9,536	1.51
1947(d).....	325,399	329,233	654,632	388,000	10,102	15.62	14,214	2.22
1948.....	335,085	335,530	670,615	399,000	9,122	13.79	15,983	2.44
1949.....	349,600	346,018	695,618	415,500	9,669	14.21	25,003	3.73
1950.....	364,705	358,138	722,843	433,500	10,566	14.89	27,225	3.91
1951.....	375,188	368,597	743,785	447,500	10,279	14.03	20,942	2.90
1952.....	388,433	380,137	768,570	464,000	10,834	14.35	24,785	3.33
1953.....	397,610	388,055	785,665	476,000	11,194	14.42	17,095	2.22
1954.....	409,733	398,517	808,250	491,300	11,048	13.87	22,585	2.87
1955.....	423,042	411,619	834,661	508,900	10,958	13.36	26,411	3.27
1956.....	436,807	425,145	861,952	526,400	11,371	13.40	27,291	3.27
1957.....	448,411	437,841	886,252	541,300	11,960	13.68	24,300	2.82
1958.....	458,401	449,652	908,053	554,300	12,304	13.72	21,801	2.46
1959.....	471,868	462,629	934,497	570,300	12,429	13.49	26,444	2.91
1960.....	483,802	473,220	957,022	582,100	13,162	13.93	22,525	2.41
1961.....	493,284	483,723	977,007	590,600	14,584	15.04	19,985	2.05
1962.....	501,705	493,786	995,491	596,600	13,129	13.27	18,484	1.86
1963.....	512,896	506,327	1,019,223	605,500	13,166	13.05	23,732	2.33
1964.....	527,092	521,266	1,048,358	616,400	11,960	11.59	29,135	2.78
1965.....	541,984	536,934	1,078,918	626,700	12,103	11.49	30,560	2.83
1966.....	552,407	547,915	1,100,322	n.a.	10,996	10.46	21,404	1.98

(a) Excess of births over deaths per 1,000 of mean population. (b) At date of census.

(c) Northern Territory included prior to 1901, but subsequently excluded.

(d) During the 1914-18 war, defence personnel leaving the State were treated as departures, but during the 1939-45 war they were retained in the population and troops of other States and Countries were excluded.

DEMOGRAPHY

Year	Births		Infant Deaths (a)		Deaths		Rates from Principal Causes (b)		
	Number	Rate (b)	Number	Rate (c)	Number	Rate (b)	Diseases of the Heart	Cancer	Tuber- culosis
1846	937	36.19			360	14.02			
1851	2,759	41.47	539	195.36	973	14.62			
1856	4,488	41.60	610	135.92	1,147	10.63	0.05	0.98	
1861	5,551	43.30	1,064	191.68	1,962	15.30	0.08	1.25	
1866	6,782	41.06	1,385	204.22	2,753	16.67	0.16	1.25	
1871	7,082	37.95	851	120.16	2,378	12.74	0.18	1.05	
1876	8,224	37.84	1,228	149.32	3,550	16.34	0.35	1.22	
1881	10,708	38.08	1,364	127.38	4,012	14.27	0.32	1.16	
1886	11,177	36.29	1,409	126.06	4,234	13.75	0.34	1.34	
1891	10,737	33.36	976	90.77	4,211	13.08	0.49	1.31	
1896	10,012	28.44	1,015	101.02	4,038	11.47	0.53	1.17	
1901	9,079	25.41	909	100.12	3,974	11.12	0.60	1.06	
1906	8,921	24.57	675	75.66	3,872	10.66	0.77	1.08	
1911	11,057	28.86	670	60.60	4,038	9.81	1.04	0.74	0.85
1916	11,857	26.85	868	73.21	5,077	11.50	1.29	0.81	0.93
1921	11,974	24.09	784	65.48	4,982	10.02	1.13	0.92	0.80
1922	12,001	23.77	570	47.50	4,608	9.13	1.08	0.96	0.75
1923	11,692	22.69	705	60.30	4,961	9.63	1.00	0.95	0.72
1924	11,592	22.01	595	51.33	4,870	9.25	1.04	0.97	0.73
1925	11,457	21.22	528	46.09	4,979	9.22	1.07	0.94	0.70
1926	11,483	20.73	509	44.33	4,877	8.81	1.00	0.96	0.71
1927	11,492	20.33	614	53.43	5,128	9.07	1.03	0.94	0.64
1928	11,408	19.98	542	47.51	5,147	9.02	1.07	1.01	0.60
1929	10,665	18.63	436	40.88	5,039	8.80	1.10	1.11	0.60
1930	9,984	17.42	483	48.38	4,851	8.46	1.05	1.04	0.51
1931	9,079	15.77	330	36.35	4,888	8.49	1.39	1.20	0.58
1932	8,521	14.74	312	36.62	4,957	8.58	1.48	1.13	0.48
1933	8,900	15.32	286	32.13	4,904	8.44	1.40	1.17	0.52
1934	8,459	14.50	301	35.58	5,403	9.26	1.64	1.12	0.48
1935	8,270	14.13	289	34.95	5,163	8.82	1.76	1.04	0.44
1936	8,911	15.16	277	31.09	5,464	9.29	1.87	1.26	0.40
1937	8,985	15.24	297	33.06	5,247	8.90	1.77	1.23	0.44
1938	9,410	15.86	287	30.50	5,539	9.34	2.02	1.30	0.37
1939	9,618	16.11	336	34.93	5,739	9.61	2.21	1.18	0.38
1940	10,017	16.72	356	35.54	5,708	9.53	2.25	1.25	0.37
1941	10,965	18.24	356	32.47	6,288	10.46	2.62	1.26	0.37
1942	11,278	18.51	448	39.72	6,712	11.02	2.73	1.25	0.41
1943	13,145	21.43	482	36.67	6,482	10.57	2.82	1.31	0.35
1944	13,311	21.49	387	29.07	5,984	9.66	2.64	1.27	0.30
1945	14,033	22.38	394	28.08	6,049	9.65	2.87	1.23	0.32
1946	15,813	24.90	428	27.07	6,461	10.17	3.03	1.29	0.29
1947	16,317	25.23	396	24.27	6,215	9.61	2.86	1.28	0.30
1948	15,870	24.00	472	29.74	6,748	10.20	3.08	1.42	0.28
1949	16,042	23.58	444	27.68	6,373	9.37	2.90	1.23	0.21
1950	17,306	24.39	416	24.04	6,740	9.50	3.05	1.24	0.19
1951	17,463	23.84	428	24.51	7,184	9.81	3.24	1.24	0.15
1952	17,884	23.69	413	23.09	7,050	9.34	3.10	1.29	0.12
1953	18,156	23.39	375	20.65	6,962	8.97	3.00	1.27	0.06
1954	18,227	22.89	388	21.29	7,179	9.01	3.11	1.22	0.08
1955	18,494	22.55	431	23.30	7,536	9.19	3.12	1.28	0.06
1956	18,964	22.35	377	19.88	7,593	8.95	3.24	1.16	0.05
1957	19,536	22.35	403	20.63	7,576	8.67	2.91	1.29	0.05
1958	20,047	22.35	449	22.40	7,743	8.63	2.93	1.26	0.07
1959	20,372	22.12	422	20.71	7,943	8.62	2.89	1.22	0.05
1960	20,966	22.19	397	18.94	7,804	8.26	3.06	1.21	0.04
1961	22,399	23.09	448	20.00	7,815	8.06	2.92	1.26	0.06
1962	21,361	21.68	409	19.15	8,232	8.35	3.06	1.37	0.03
1963	21,367	21.21	399	18.67	8,201	8.14	2.99	1.27	0.04
1964	20,866	20.18	397	19.03	8,906	8.61	3.24	1.32	0.01
1965	20,891	19.65	385	18.43	8,788	8.27	3.11	1.30	0.03
1966	20,319	18.63	356	17.52	9,323	8.55	3.23	1.33	0.02

(a) Under one year of age from 1871, under two years of age in prior years.

(b) Rate per 1,000 of mean population.

(c) Rate per 1,000 live births registered.

SOCIAL DEVELOPMENT

Marriages and Divorces; Law and Order

Year	Marriages		Divorces (b)	Bank- ruptcies	Court Convictions		Police	
	Total	Rate (a)			Supreme Court (c)	Magis- trate's Courts (d)	Active Strength	Expen- diture by State (e)
								\$'000
1841.....				36	37			
1846.....	220	8.50		16	40			
1851.....	189	2.84		106	103		127	
1856.....	1,171	10.85		88	85	2,919	174	
1861.....	1,158	9.03		115	62	3,025	151	
1866.....	1,299	7.86		252	107	4,341	208	90
1871.....	1,250	6.70		247	91	4,864	187	74
1876.....	1,852	8.52		200	129	7,905	257	108
1881.....	2,308	8.21		696	213	13,231	371	164
1886.....	1,976	6.42	10	535	121	6,808	401	178
1891.....	2,315	7.21	5	142	85	6,918	388	172
1896.....	2,183	6.20	6	240	110	5,149	347	150
1901.....	2,304	6.45	6	165	98	4,968	359	152
1906.....	2,679	7.38	3	172	92	5,249	373	153
1911.....	4,036	9.80	20	190	74	7,303	423	183
1916.....	3,602	8.16	14	324	52	7,145	541	262
1921.....	4,383	8.82	88	155	97	8,968	566	391
1926.....	4,503	8.13	71	439	174	21,417	633	499
1927.....	4,501	7.96	97	493	196	22,876	645	524
1928.....	4,146	7.26	113	446	264	18,665	717	550
1929.....	3,719	6.50	106	306	261	17,353	802	630
1930.....	3,312	5.78	146	622	304	15,609	785	656
1931.....	3,069	5.33	138	996	274	14,760	763	641
1932.....	3,636	6.29	134	654	236	14,705	743	586
1933.....	3,973	6.84	163	570	224	13,060	740	550
1934.....	4,310	7.39	188	626	206	13,728	719	549
1935.....	4,845	8.28	211	597	172	14,838	705	556
1936.....	5,182	8.81	213	551	171	14,920	701	570
1937.....	5,340	9.06	206	468	183	17,297	692	599
1938.....	5,489	9.25	243	461	172	18,341	712	641
1939.....	5,670	9.50	241	630	179	20,429	724	654
1940.....	6,950	11.60	309	437	163	18,364	723	677
1941.....	6,855	11.40	273	284	177	21,990	707	689
1942.....	8,129	13.34	312	222	211	(f)	680	695
1943.....	6,263	10.21	452	93	208	22,502	674	712
1944.....	6,019	9.72	503	49	158	22,079	704	734
1945.....	5,321	8.49	617	24	203	20,554	771	770
1946.....	6,700	10.55	654	23	231		830	819
1947.....	6,668	10.31	695	32	246	20,585	833	888
1948.....	6,704	10.14	630	32	185	24,491	869	1,052
1949.....	6,247	9.18	590	52	205	24,164	928	1,208
1950.....	6,585	9.28	661	44	207	22,834	942	1,398
1951.....	6,646	9.07	637	53	307	25,496	913	1,647
1952.....	6,241	8.27	581	76	328	28,675	952	2,073
1953.....	6,149	7.92	628	91	330	27,432	982	2,429
1954.....	6,190	7.77	594	89	312	30,229	986	2,429
1955.....	6,226	7.59	624	106	340	25,482	969	2,617
1956.....	6,277	7.40	567	150	362	29,264	969	2,517
1957.....	6,581	7.53	529	244	459	28,221	1,018	1,647
1958.....	6,505	7.25	483	278	437	30,658	1,143	3,303
1959.....	6,614	7.18	503	366	499	32,621	1,183	3,677
1960.....	6,607	6.99	610	368	580	34,203	1,243	4,084
1961.....	6,804	7.01	718	561	606	42,531	1,301	4,499
1962.....	7,021	7.13	685	620	718	52,155	1,376	5,043
1963.....	7,302	7.25	765	584	745	53,531	1,466	5,651
1964.....	7,765	7.51	887	675	629	57,524	1,441	5,825
1965.....	8,680	8.16	852	582	713	55,806	1,496	6,245
1966.....	9,051	8.30	1,069	648	738	62,612	1,558	6,912
1966.....	9,051	8.30	1,069	648	738	72,004	1,595	7,319

- (a) Rate per 1,000 of mean population. (b) Dissolutions made absolute. (c) Distinct persons only.
 (d) Each type of offence counted separately when there are multiple charges against an individual.
 (e) Net expenditure from 1939, previously gross expenditure. (f) Year ended 30th June from 1943.

SOCIAL DEVELOPMENT

Education

Year	Number of Schools		Number of Scholars				University of Adelaide		Total State Expenditure on Education
	Public	Private	Public Schools			Private Schools	Students	Receipts (including Government Grants)	
			Primary (a)	High (a)	Technical (b)				
							\$'000	\$'000	
1851	115		3,031						6
1856	147		6,516						24
1861	219		10,711						30
1866	292	236	14,690						44
1871	307	n.a.	15,791						48
1876	281	326	25,889				58	16	116
1881	405	363	36,888				74	102	268
1886	504	n.a.	44,405				197	26	254
1891	552	285	47,094				246	24	266
1896	639	232	59,944				320	24	312
1901	706	230	63,183				591	38	390
1906	708	215	57,270			9,753	626	43	380
1911	743	184	55,494	1,800	2,811	12,596	641	40	522
1916	857	(c)222	63,935	3,047	3,571	(c)14,748	491	55	650
1921	973	177	77,111	3,067	6,045	15,870	1,338	177	1,183
1926	1,019	195	79,204	6,527	7,216	18,543	1,575	221	1,762
1927	1,028	193	80,298	7,472	7,748	18,088	1,724	238	2,093
1928	1,043	191	81,231	8,060	7,750	17,867	1,778	221	2,184
1929	1,068	196	80,618	8,861	8,324	17,997	1,813	252	2,256
1930	1,074	195	80,332	9,558	7,783	17,142	2,085	322	2,330
1931	1,075	193	81,218	10,503	6,585	15,951	2,092	218	2,185
1932	1,087	190	80,905	9,880	6,302	15,965	2,084	224	1,990
1933	1,107	195	80,215	9,683	6,808	15,703	2,123	245	1,978
1934	1,111	192	78,753	8,778	7,457	16,171	2,066	238	1,936
1935	1,123	193	77,714	8,936	8,339	16,427	2,072	230	1,931
1936	1,100	190	75,411	9,280	8,654	17,007	2,025	420	2,117
1937	1,091	193	72,849	9,722	9,247	17,381	2,113	335	2,238
1938	1,078	184	69,664	9,701	9,610	17,036	2,307	323	2,359
1939	1,054	188	66,861	10,608	9,721	17,207	2,354	286	2,452
1940	1,060	182	65,682	10,546	9,980	19,974	2,443	418	2,523
1941	1,006	181	63,303	10,761	10,518	20,098	2,211	300	2,515
1942	950	178	61,326	10,173	9,768	19,207	1,799	328	2,563
1943	897	172	59,764	11,196	10,952	20,690	1,897	536	2,588
1944	909	168	59,460	12,265	12,534	21,001	2,132	405	2,816
1945	837	159	60,029	11,583	14,178	22,031	2,599	381	3,096
1946	811	157	61,242	11,870	16,175	22,317	3,723	508	3,387
1947	782	155	63,853	11,723	16,665	21,954	4,045	670	4,001
1948	773	154	66,653	11,550	18,145	23,202	4,266	620	4,673
1949	759	157	71,337	11,922	18,664	23,666	4,126	608	5,210
1950	743	158	76,369	12,732	18,910	25,112	4,069	871	6,201
1951	728	156	81,642	14,106	18,961	26,921	3,720	1,053	7,806
1952	716	155	89,630	15,121	20,206	28,851	3,612	1,387	9,842
1953	723	157	97,262	16,933	20,542	29,798	3,565	1,631	12,097
1954	716	166	105,022	17,972	21,785	30,853	3,555	1,588	13,020
1955	701	165	111,909	19,485	23,078	32,957	3,617	1,854	14,458
1956	699	171	118,365	22,134	25,647	35,326	3,828	2,132	17,293
1957	694	171	123,132	24,734	27,482	36,591	4,424	2,368	18,980
1958	689	171	128,340	28,538	32,747	38,589	4,816	3,603	21,475
1959	683	172	132,769	33,449	34,390	40,449	5,300	4,054	25,767
1960	697	173	135,522	38,414	31,373	42,125	5,723	4,669	29,944
1961	707	176	138,650	42,447	32,205	42,834	6,250	6,398	34,471
1962	701	176	140,710	47,139	33,525	44,160	6,824	7,019	40,309
1963	702	178	144,248	50,402	35,369	44,500	7,416	7,805	44,842
1964	707	181	149,491	54,937	39,748	45,435	8,203	9,939	50,854
1965	723	183	156,432	58,848	n.a.	45,478	8,658	8,559	57,362

(a) Net enrolment. Includes correspondence scholars and scholars receiving junior technical education.
 (b) Net enrolment plus correspondence scholars. Includes Institute of Technology.
 (c) Private schools compulsorily registered—previous years incomplete.

SOCIAL DEVELOPMENT

Health

Year	General Hospitals				Mental Hospitals		Medical Practitioners Registered	Nurses Registered
	Number of Hospitals	Patients Treated	Revenue		Admissions During Year	Patients at end of Year		
			State Aid	Total				
			\$'000	\$'000				
1846.....	1				10	6	22	
1851.....	1	413			9	11	68	
1856.....	1	559			69	73	101	
1861.....	1	795			68	167	111	
1866.....	1	1,257			88	224	85	
1871.....	1	1,433			111	324	77	
1876.....	1	2,282			149	427	94	
1881.....	1	2,258			199	606	113	
1886.....	1	2,022			207	744	152	
1891.....	1	2,301			224	815	177	
1896.....	1	2,633			195	934	279	
1901.....	1	3,554			214	988	341	
1906.....	9	4,476			231	994	242	
1911.....	21	8,547	96	132	273	1,084	299	
1916.....	27	12,453	130	186	302	1,158	326	
1921.....	31	15,642	254	397	272	1,190	360	
1922.....	41	17,964	314	532	277	1,207	363	797
1923.....	43	19,905	320	510	247	1,217	389	966
1924.....	43	21,544	350	570	238	1,206	402	1,104
1925.....	45	21,640	384	642	280	1,275	434	1,194
1926.....	45	22,438	467	730	249	1,282	445	1,271
1927.....	46	24,480	500	751	272	1,306	476	1,309
1928.....	47	25,167	452	741	280	1,350	437	1,399
1929.....	49	25,787	601	915	260	1,374	445	1,472
1930.....	50	26,114	451	736	260	1,404	445	1,565
1931.....	51	26,505	356	574	250	1,395	457	1,601
1932.....	52	28,780	354	591	250	1,410	461	1,650
1933.....	52	29,306	405	678	271	1,465	464	1,687
1934.....	52	31,686	377	659	267	1,519	461	1,757
1935.....	52	31,878	369	652	269	1,572	480	1,826
1936.....	52	34,014	383	730	272	1,627	477	1,886
1937.....	52	35,477	414	775	270	1,709	509	1,977
1938.....	52	37,285	502	891	254	1,747	792	2,068
1939.....	55	39,146	539	931	286	1,800	804	2,239
1940.....	56	41,392	575	1,017	240	1,847	802	2,359
1941.....	55	40,593	607	1,063	247	1,905	814	2,562
1942.....	55	40,137	625	1,200	219	1,892	839	2,768
1943.....	57	41,620	642	1,301	197	1,889	846	2,914
1944.....	58	43,582	762	1,479	276	1,925	866	3,006
1945.....	(a)	(a)	(a)	(a)	(a)	(a)	883	3,153
1946.....	58	46,696	836	1,697	302	2,024	947	3,314
1947.....	59	52,388	1,135	2,133	332	2,107	983	3,380
1948.....	59	50,480	1,382	2,476	330	2,165	1,012	3,589
1949.....	60	53,558	1,671	3,065	398	2,213	1,053	3,808
1950.....	59	54,334	2,109	3,719	379	2,310	1,111	4,018
1951.....	60	57,401	2,694	4,503	452	2,411	1,172	4,199
1952.....	61	59,374	3,739	6,110	426	2,425	1,244	4,461
1953.....	62	61,681	4,673	7,442	498	2,534	1,202	4,585
1954.....	62	62,138	4,340	7,386	548	2,644	1,265	4,724
1955.....	63	64,310	5,524	8,819	516	2,612	1,348	4,884
1956.....	65	69,295	8,214	11,702	553	2,658	1,395	5,026
1957.....	65	73,249	11,370	15,449	543	2,594	1,469	5,122
1958.....	64	75,282	10,425	15,372	659	2,667	1,507	5,475
1959.....	65	79,426	10,260	15,638	712	2,643	1,601	5,583
1960.....	65	82,948	10,474	16,829	680	2,564	1,681	5,817
1961.....	66	87,386	10,155	17,414	748	2,506	1,739	6,123
1962.....	65	89,409	10,366	18,350	609	2,409	1,821	6,523
1963.....	65	94,144	10,007	19,307	578	2,221	1,883	6,879
1964.....	65	99,491	12,094	21,166	557	2,075	2,002	7,255
1965.....	65	105,098	14,171	24,084	477	1,885	2,080	7,699
1966.....	67	111,313	19,681	30,386	318	1,721	2,175	8,065

(a) Year ended 30th June from 1946.

SOCIAL DEVELOPMENT

Social Welfare

Year	Public Relief Expendi- ture	Child- ren's Welfare Expendi- ture	Pensions and Benefits Paid in South Australia by Commonwealth Government					Pensioners	
			Age and Invalid Pensions	War and Service Pensions	Child Endow- ment	National Health Services	Total (includes Other)	Age and Invalid	War and Service
			\$'000	\$'000	\$'000	\$'000	\$'000	Number	Number
1895-96	30.0	28.4							
1900-01	36.6	35.4							
1905-06	40.0	38.2							
1910-11	29.0	46.4						7,237	
1911-12	32.0	52.6						7,996	
1912-13	39.2	56.0						8,708	
1913-14	44.6	58.0						9,575	
1914-15	55.8	62.8						10,529	
1915-16	69.8	67.0	544	20				10,993	794
1916-17	76.0	74.6	704	230			1,052	11,301	4,272
1917-18	73.4	78.2	728	528			1,370	11,703	10,119
1918-19	72.4	79.4	882	822			1,816	11,782	14,959
1919-20	84.0	84.4	898	890			1,902	12,086	16,794
1920-21	101.8	95.0	910	1,028			2,060	12,320	14,663
1921-22	94.2	98.5	924	890			1,936	12,513	14,210
1922-23	86.2	97.1	942	876			1,936	12,759	14,341
1923-24	91.0	98.0	1,142	894			2,152	13,141	14,848
1924-25	101.4	98.6	1,174	932			2,224	13,519	15,542
1925-26	117.6	100.7	1,404	978			2,496	14,098	16,144
1926-27	129.8	102.8	1,454	1,006			2,574	14,666	16,589
1927-28	206.0	112.2	1,536	1,002			2,656	15,581	16,835
1928-29	298.2	109.8	1,648	986			2,746	16,774	16,581
1929-30	441.8	114.8	1,798	998			2,900	18,291	16,791
1930-31	154.8	103.7	1,982	994			3,074	20,602	16,653
1931-32	1,922.2	95.2	1,878	908			2,848	21,897	15,801
1932-33	1,500.6	90.9	1,826	844			2,726	21,461	15,517
1933-34	1,359.0	88.8	1,896	854			2,804	22,805	15,352
1934-35	1,277.0	87.8	2,068	892			3,016	24,517	15,248
1935-36	1,163.4	89.4	2,298	942			3,298	26,134	15,997
1936-37	1,086.6	89.4	2,522	1,036			3,622	27,308	16,340
1937-38	995.4	93.7	2,868	1,076			4,010	28,039	16,865
1938-39	989.6	94.0	2,836	1,098			4,008	28,857	16,680
1939-40	1,062.2	99.2	2,908	1,104			4,086	29,521	16,145
1940-41	389.9	101.4	3,032	1,088			4,192	29,642	15,424
1941-42	288.1	106.6	3,274	1,108	1,720		6,162	28,422	15,296
1942-43	232.8	113.3	3,628	1,274	1,810		7,076	27,423	16,333
1943-44	214.8	131.5	3,688	1,654	1,908		8,076	27,530	18,472
1944-45	215.4	143.1	3,624	1,838	1,870		8,276	27,507	22,071
1945-46	238.7	155.2	4,670	2,272	2,854	244	11,262	29,512	30,687
1946-47	250.7	197.8	5,102	2,692	3,196	856	13,212	32,387	35,117
1947-48	261.3	224.4	6,284	3,046	3,212	770	14,708	34,229	38,505
1948-49	279.3	255.6	7,170	3,718	4,024	1,054	17,442	35,470	42,931
1949-50	273.0	287.5	7,888	4,178	4,938	1,220	19,966	36,524	47,303
1950-51	279.0	337.6	8,600	5,214	7,564	2,122	25,216	36,582	51,589
1951-52	336.6	446.7	10,360	6,442	8,298	3,554	30,532	37,363	54,758
1952-53	445.6	466.8	12,616	7,130	9,540	4,154	25,878	39,700	58,591
1953-54	458.6	475.7	14,150	7,686	9,154	4,880	38,202	42,216	61,039
1954-55	487.2	491.2	15,310	8,778	9,428	5,824	41,560	45,147	63,767
1955-56	545.6	553.0	17,718	9,074	10,998	6,140	46,322	47,754	66,535
1956-57	686.4	494.0	19,244	9,572	10,500	6,710	48,926	50,209	68,291
1957-58	865.9	545.6	21,432	10,664	10,860	7,704	54,256	52,699	69,852
1958-59	770.4	674.6	23,150	10,860	12,618	9,868	60,460	55,181	71,331
1959-60	641.9	778.1	26,366	12,697	11,794	11,977	66,157	57,336	72,013
1960-61	691.4	914.8	28,537	13,722	14,092	12,811	73,594	60,483	72,695
1961-62	773.5	1,107.5	32,844	14,241	12,671	14,567	80,283	64,374	74,454
1962-63	693.1	1,129.9	33,951	14,867	12,861	16,066	83,393	64,156	73,239
1963-64	693.3	1,275.5	36,120	16,224	15,916	17,080	91,514	65,573	72,518
1964-65	704.3	1,516.8	38,509	16,006	16,563	18,948	96,362	66,798	70,678
1965-66	841.6	1,716.6	39,691	17,692	16,988	21,254	102,661	67,999	68,439

Note: Unemployment relief payments paid by State Government and included in Public Relief to 1939-40. Unemployment benefits from 1945-46 paid by Commonwealth Government and included in Total Pensions and Benefits Paid.

EMPLOYMENT AND UNEMPLOYMENT

Year	Total Wage and Salary Earners (a)		Factory Employment (b)		Rural Employment (c)		Unemployment Benefits		Unemployed Registered (At 30th June)
	Males	Females	Males	Females	Males	Females	Average No. on Benefit	Amount Paid	
	'000	'000	'000	'000	'000	'000		\$'000	
1911			22.6	5.3					
1912			23.1	5.4					
1913			23.3	5.2					
1914			22.1	4.8					
1915			20.8	4.7					
1916-17			20.8	5.2					
1917-18			21.3	5.3					
1918-19			22.4	5.5					
1919-20			23.4	6.0					232
1920-21			24.5	5.9					688
1921-22			25.0	6.2					880
1922-23			28.0	6.7					443
1923-24			30.3	7.0	37.9	3.5			491
1924-25			31.2	7.1	38.4	3.3			718
1925-26			33.1	6.9	38.8	3.2			1,391
1926-27			34.1	7.0	38.8	2.7			1,900
1927-28			32.3	6.8	38.7	2.5			5,009
1928-29			30.4	6.4	38.8	2.2			5,825
1929-30			26.5	5.7	38.4	2.3			11,297
1930-31			19.3	4.6	38.9	2.6			23,588
1931-32			18.9	4.9	39.2	2.8			23,738
1932-33			20.9	5.4	39.7	3.1			20,516
1933-34			23.7	5.7	40.0	3.4			16,559
1934-35			27.3	6.2	41.4	3.1			13,111
1935-36			31.4	7.1	41.7	2.6			10,970
1936-37			33.4	7.3	42.3	3.0			8,033
1937-38			36.3	7.8	41.4	2.9			7,737
1938-39			35.4	8.0	41.3	2.5			8,574
1939-40			36.3	8.7	38.7	2.8			5,978
1940-41			40.1	10.8	n.a.	n.a.			1,745
1941-42			49.9	15.3	n.a.	n.a.			—
1942-43			52.8	20.0	29.6	5.1			—
1943-44			50.7	18.9	32.9	6.5			—
1944-45			49.1	16.4	33.6	6.2			—
1945-46			49.5	13.7	35.7	5.5	778	146.4	3,147
1946-47			56.7	14.0	38.1	5.0	200	40.2	1,310
1947-48			59.1	14.3	38.1	5.8	51	8.0	778
1948-49			60.9	14.9	38.1	5.5	14	1.2	654
1949-50			63.1	15.3	38.6	7.0	326	66.2	431
1950-51			66.8	16.2	36.9	6.1	6	0.8	406
1951-52			68.0	15.9	37.4	4.7	17	2.0	1,613
1952-53			67.1	13.4	38.3	5.0	841	264.0	2,343
1953-54	178.6	55.7	70.7	14.8	37.8	5.6	270	100.4	964
1954-55	183.9	60.1	73.7	15.9	37.6	5.0	66	24.8	1,207
1955-56	194.0	64.0	76.1	16.4	37.3	4.7	77	22.2	1,948
1956-57	193.3	64.1	75.5	16.4	36.4	3.9	681	227.4	3,363
1957-58	194.4	66.0	75.9	16.6	35.2	2.7	1,534	611.0	5,082
1958-59	201.1	68.4	77.4	16.7	35.0	3.6	1,641	724.8	3,958
1959-60	206.4	72.6	81.3	17.7	33.8	2.6	1,223	498.2	4,547
1960-61	207.5	72.3	81.9	18.1	34.0	2.3	1,610	685.6	9,035
1961-62	211.2	76.7	81.8	17.3	33.7	2.1	3,643	1,785.6	6,886
1962-63	219.6	80.9	86.7	18.6	33.3	1.9	2,244	1,184.6	6,479
1963-64	229.4	86.0	90.9	19.9	33.2	1.4	1,513	751.0	4,339
1964-65	239.9	93.4	94.7	21.5	32.6	1.3	800	390.4	3,553
1965-66	242.3	97.6	96.2	22.1	32.1	1.0	1,306	708.9	7,357

(a) At June; includes all industries except rural, defence and female private domestics.

(b) Average employment including working proprietors during the year.

(c) Permanent employees only.

WAGES

Year	State Living Wage (a)		Commonwealth Basic Wage (a)		Minimum Weekly Wage Rates (b)		Average Weekly Wage of Factory Employees (c)	
	Males	Females	Males	Females	Males	Females	Males	Females
	\$	\$	\$	\$	\$	\$	\$	\$
1911			5.10				4.38	1.59
1912			5.10				4.67	1.59
1913			5.10				4.90	1.63
1914			5.55		5.44	2.41	5.05	1.73
1915			6.35		5.47	2.45	4.93	1.63
1916	5.40		6.15		5.90	2.48	n.a.	n.a.
1917	5.40		5.85		6.31	2.78	5.58	1.80
1918	6.30	2.75	6.40		6.55	2.94	5.89	1.99
1919	6.30	3.00	7.00		7.04	3.32	6.07	2.15
1920	7.50	3.00	8.95		8.27	4.06	6.22	2.47
1921	7.95	3.50	7.95		8.94	4.52	7.31	2.88
1922	7.75	3.50	7.95		8.75	4.40	7.81	3.06
1923	7.85	3.50	8.55		9.08	4.63	7.80	3.19
1924	8.20	3.80	8.40		9.18	4.65	8.18	3.38
1925	8.55	3.95	8.60		9.43	4.88	8.38	3.52
1926	8.55	3.95	8.55		9.57	5.00	8.67	3.62
1927	8.55	3.95	8.80		9.66	4.99	9.18	3.84
1928	8.55	3.95	8.50		9.62	5.09	9.42	3.95
1929	8.55	3.95	8.85		9.72	5.13	9.33	4.00
1930	7.50	3.95	7.80		9.27	5.12	9.26	3.99
1931	6.30	3.15	5.81		7.50	4.39	8.43	3.61
1932	6.30	3.15	5.72		7.26	4.09	7.45	3.17
1933	6.30	3.15	5.96		7.34	4.10	7.32	3.10
1934	6.30	3.15	6.30		7.55	4.19	7.21	3.05
1935	6.60	3.15	6.70		7.79	4.24	7.38	3.12
1936	6.60	3.30	6.90		7.95	4.33	7.49	3.12
1937	7.40	3.65	7.40		8.58	4.68	7.89	3.20
1938	7.40	3.65	7.60		8.71	4.78	8.15	3.29
1939	7.80	3.80	7.70		9.41	4.96	8.49	3.32
1940	8.40	4.10	8.00		9.85	5.21	8.60	3.49
1941	8.70	4.35	8.40		10.58	5.54	9.32	3.89
1942	9.40	4.62	9.30		11.50	6.02	11.26	5.18
1943	9.40	4.62	9.40		11.61	6.12	12.07	6.05
1944	9.40	4.62	9.30		11.58	6.53	12.11	6.56
1945	9.40	4.62	9.30		11.60	6.72	11.74	6.34
1946	9.85	5.50	10.20		12.41	7.60	11.76	6.00
1947	10.60	5.90	10.60		13.78	8.80	12.74	6.52
1948	11.70	6.65	11.60		15.22	9.51	14.82	7.67
1949	12.50	6.85	12.60		16.44	10.10	16.99	8.76
1950	15.80	11.85	15.80	11.85	19.79	14.21	18.74	9.90
1951	19.50	14.60	19.50	14.60	23.60	17.02	22.43	12.38
1952	22.90	17.15	22.90	17.15	27.08	19.68	27.55	15.60
1953	23.10	17.30	23.10	17.30	27.35	19.91	30.00	17.38
1954	23.10	17.30	23.10	17.30	28.16	19.99	31.71	17.92
1955	23.10	17.30	23.10	17.30	28.50	20.18	33.97	18.35
1956	24.10	18.05	24.10	18.05	29.63	20.92	35.59	19.11
1957	25.10	18.80	25.10	18.80	30.69	21.95	36.67	19.52
1958	25.60	19.20	25.60	19.20	31.24	22.38	37.32	20.63
1959	27.10	20.30	27.10	20.30	33.99	23.92	38.17	20.90
1960	27.10	20.30	27.10	20.30	34.22	24.29	41.85	22.13
1961	28.30	21.20	28.30	21.20	35.46	25.20	43.28	22.78
1962	28.30	21.20	28.30	21.20	35.65	25.23	43.86	23.47
1963	28.30	21.20	28.30	21.20	36.40	25.52	45.71	23.86
1964	30.30	22.70	30.30	22.70	38.69	27.29	47.25	25.23
1965	30.30	22.70	30.30	22.70	39.48	27.75	51.72	26.39
1966	32.30	24.20	32.30	24.20	41.74	29.41	52.30	27.31

(a) At end of year.

(b) Adult rates, at end of year, for all industries excluding rural.

(c) Excludes drawings of working proprietors.

STATISTICAL SUMMARY

PRICES

Year	Retail Price Indexes: Adelaide						Agricultural Produce at Principal Markets		
	"C" Series (a)			Consumer (b)			Wheat (Per Bushel) (c)	Barley (Per Bushel)	Wool (Per Lb.)
	Food and Groceries	Rent	All Groups	Food	Housing	All Groups			
							\$	\$	c
1901	575								
1906	549								
1911	570						0.346	0.375	7.07
1912	645						0.379	0.400	6.36
1913	626						0.358	0.375	7.40
1914	683	611	699				0.367	0.250	7.21
1915	858	574	780				0.725	0.550	6.97
1916	835	573	798				0.475	0.325	8.97
1917	805	606	832				0.475	0.367	11.39
1918	862	656	887				0.475	0.442	11.96
1919	1,012	707	1,018				0.550	0.542	12.14
1920	1,225	783	1,164				0.900	0.600	11.76
1921	941	819	989				0.800	0.442	11.22
1922	937	852	954				0.504	0.383	9.96
1923	1,019	887	1,008				0.492	0.375	14.80
1924	1,002	942	1,015				0.467	0.333	18.33
1925	1,029	963	1,028				0.608	0.542	19.14
1926	1,045	927	1,026				0.621	0.400	12.45
1927	1,030	942	1,018				0.529	0.363	12.35
1928	993	1,022	1,027				0.544	0.496	14.47
1929	1,055	986	1,037				0.473	0.377	12.47
1930	937	916	952				0.433	0.308	7.57
1931	789	755	837				0.229	0.225	5.68
1932	761	691	802				0.317	0.296	5.73
1933	731	694	789				0.281	0.223	6.10
1934	767	700	806				0.263	0.242	11.37
1935	780	736	820				0.304	0.271	6.82
1936	798	795	839				0.383	0.223	9.93
1937	826	832	859				0.515	0.406	11.38
1938	861	868	888				0.356	0.352	9.40
1939	897	888	906				0.227	0.271	7.58
1940	900	892	936				0.406	0.354	9.95
1941	905	893	988				0.447	0.486	9.87
1942	1,046	893	1,075				0.456	0.332	9.79
1943	1,003	893	1,102				0.531	0.450	11.37
1944	993	892	1,098				0.618	0.432	11.32
1945	1,002	892	1,102				0.563	0.546	11.21
1946	1,006	894	1,120				0.802	0.633	11.24
1947	1,067	897	1,165				0.993	0.892	18.37
1948	1,230	903	1,277				1.543	1.685	29.90
1949	1,351	912	1,393	56.1	68.7	61.6	1.242	0.838	36.78
1950	1,494	929	1,521	60.7	71.6	66.2	1.442	1.127	48.14
1951	1,931	949	1,833	70.1	75.9	74.7	1.463	1.169	107.63
1952	2,380	1,055	2,159	90.9	85.0	91.4	1.650	1.627	53.77
1953	2,444	1,155	2,246	100.0	100.0	100.0	1.681	1.613	62.48
1954	2,525	1,174	2,277	103.5	109.9	102.3	1.452	1.017	62.68
1955	2,657	1,247	2,354	106.1	113.0	103.5	1.335	1.360	54.73
1956	2,871	1,358	2,466	110.9	120.8	106.9	1.350	1.060	46.98
1957	2,710	1,468	2,463	114.7	129.2	111.1	1.450	1.100	61.52
1958	2,768	1,592	2,536	111.8	133.9	111.9	1.456	1.188	46.76
1959	2,998	1,674	2,647	117.5	137.1	114.5	1.402	1.121	38.03
1960				123.1	140.0	118.0	1.465	1.010	44.85
1961				132.2	148.7	122.9	1.507	0.916	40.14
1962				127.6	153.5	122.5	1.516	1.121	41.59
1963				126.0	154.9	122.1	1.468	1.100	44.87
1964				129.1	158.5	123.5	1.433	1.114	54.22
1965				136.6	164.6	128.6	1.412	1.153	44.14
1966				141.2	171.1	132.7	1.501	1.174	46.71

(a) Base: Average all groups six capital cities 1923 to 1927 = 1,000.

(b) Base of each group 1953-54 = 100

(c) Bulk wheat from 1962, previously bagged; price of bagged wheat in 1966 was \$1.597.

METEOROLOGY

Year	Rainfall				Evaporation	Sunshine	Temperature		
	Agricultural Areas (a)		Adelaide				Adelaide		
	Wheat-growing Season (b)	Total	Days of Rain	Total	Total	Total	Extreme Maximum	Extreme Minimum	Mean
	Inches	Inches	Days	Inches	Inches	Hours	°F.	°F.	°F.
1841			93	17.96					
1846			114	26.89					
1851			128	30.95					
1856			118	24.93					
1861	20.66	27.83	147	24.04			109.0	35.0	63.4
1866	19.89	21.86	116	20.11			109.5	37.2	63.8
1871	18.53	23.55	137	23.25	52.94		111.4	37.4	64.0
1876	13.66	15.74	110	13.43	60.95		114.2	32.5	62.5
1881	15.07	18.13	135	18.02	55.97		105.8	35.2	62.1
1886	15.20	17.36	141	14.42	55.93	2,588.0	112.4	35.6	62.7
1891	13.34	16.13	113	14.01	52.03	2,752.7	102.7	36.2	62.2
1896	12.32	16.92	121	15.17	52.65	2,643.9	111.2	34.4	63.4
1901	16.11	18.26	124	18.01	58.81	2,522.6	110.0	35.2	63.5
1906	16.43	19.49	127	26.53	55.13	2,366.4	113.1	36.1	63.7
1911	10.35	14.83	127	16.03	48.14	2,415.0	102.8	34.9	62.9
1916	19.18	21.18	142	28.16	55.53	2,511.9	107.5	38.3	62.0
1921	13.43	19.72	100	22.64	58.19	2,658.0	109.6	37.0	64.7
1926	13.65	15.11	116	22.20	57.99	2,688.6	104.1	37.4	63.1
1927	9.04	11.39	101	16.92	59.67	2,670.8	110.0	36.1	63.0
1928	8.95	12.50	107	19.43	60.44	2,750.2	108.7	35.4	63.4
1929	8.79	12.05	119	17.51	59.82	2,544.9	104.2	35.0	62.2
1930	11.06	12.59	116	18.65	66.24	2,744.1	112.4	36.9	64.9
1931	12.76	14.38	145	22.26	59.74	2,534.5	114.6	37.6	62.3
1932	14.61	17.80	141	25.04	52.84	2,351.9	110.3	36.8	62.6
1933	11.40	13.79	130	22.12	55.52	2,487.7	107.7	36.7	62.2
1934	11.67	13.44	115	20.24	61.63	2,528.3	110.5	37.7	64.4
1935	11.73	14.80	140	23.45	57.69	2,411.2	107.8	37.9	62.9
1936	9.44	13.39	123	19.34	60.03	2,430.8	103.7	37.1	62.8
1937	11.94	16.62	128	23.01	62.62	2,294.1	105.9	37.7	63.3
1938	9.62	12.95	119	19.26	66.18	2,425.9	106.6	36.0	63.2
1939	13.45	16.88	139	23.29	65.99	2,521.2	117.7	34.7	63.3
1940	8.19	10.53	116	16.16	66.86	2,564.6	110.1	36.5	62.6
1941	11.80	17.61	126	22.56	63.14	2,471.8	110.0	37.9	62.5
1942	16.51	18.89	133	25.44	65.91	2,422.2	112.5	38.2	63.2
1943	10.71	13.47	135	17.84	62.81	2,416.7	112.2	36.8	61.6
1944	9.16	11.18	114	17.13	64.29	2,333.7	103.4	32.5	62.3
1945	11.19	14.10	105	17.85	59.94	2,431.2	107.0	34.0	62.0
1946	10.32	20.29	135	22.59	54.51	2,301.0	106.4	35.6	61.3
1947	13.87	18.64	145	21.89	61.93	2,311.3	105.3	38.0	62.5
1948	12.51	14.06	122	21.40	63.85	2,401.7	110.1	37.2	61.3
1949	12.48	14.71	119	18.23	58.74	2,317.7	100.4	36.6	60.5
1950	11.29	14.59	91	16.06	65.25	2,677.5	104.0	38.4	62.6
1951	16.94	18.88	135	25.44	64.78	2,338.7	104.9	36.6	62.5
1952	16.27	18.63	128	19.99	59.97	2,459.2	105.5	34.9	60.4
1953	12.92	15.87	121	20.00	67.40	2,584.7	106.4	39.0	61.9
1954	11.24	13.83	109	16.73	66.13	2,502.6	103.0	38.1	62.0
1955	15.71	19.36	134	24.58	66.03	2,396.1	109.0	38.4	62.1
1956	18.18	20.46	154	27.24	64.50	2,378.6	100.9	39.4	61.6
1957	8.67	10.06	110	16.71	68.34	2,672.5	105.7	38.2	62.2
1958	14.21	16.25	121	17.57	65.81	2,454.7	102.2	34.2	61.6
1959	6.28	9.53	88	11.32	68.89	2,591.9	110.0	37.5	63.2
1960	15.59	18.94	129	23.07	63.22	2,355.6	107.2	36.4	61.3
1961	11.99	13.45	122	14.91	n.a.	2,586.3	105.5	37.2	64.0
1962	10.24	13.59	125	17.96	n.a.	2,559.1	108.8	39.5	63.0
1963	14.93	16.95	118	24.43	63.76	2,369.1	103.8	38.0	62.6
1964	15.85	17.81	135	21.89	59.32	2,199.5	104.5	36.1	61.3
1965	10.51	11.52	111	13.34	64.89	2,439.1	101.9	36.7	63.2
1966	10.99	16.52	123	19.49	63.45	2,431.6	105.3	38.0	62.4

(a) From 1905 rainfall is the weighted average over agricultural areas, previously average of 50 selected stations.

(b) Eight months April to November inclusive.

LAND TENURE AND CULTIVATION

Year	Land Tenure			Rural Holdings	Area of Rural Holdings	Area under Crop		Area of Pastures Top-dressed	Area Under Irrigation		
	Alienated and Set Apart	Under Lease				No.	'000 Acres			Manured	Total
		Pastoral	Total								
1836-37	61										
1841-42	307						7				
1846-47	440						33				
1851-52	707	9,799					81				
1856-57	1,580	14,620					203				
1861-62	2,381	29,457					401				
1866-67	3,426	26,785					604				
1871-72	4,522	45,376					838				
1876-77	6,839	89,385					1,229				
1881-82	9,869	119,846					2,156				
1886-87	9,528	126,541					2,285				
1891-92	8,594	97,388					1,928				
1896-97	8,671	112,186					2,052				
1901-02	8,089	68,916	85,577			827	2,237				
1906-07	8,947	76,686	94,970			1,555	2,157				
1911-12	11,654	91,547	111,002	27,120	116,168	2,495	2,965				
1916-17	13,882	97,159	115,638	29,278	129,668	2,857	3,627				
1921-22	14,117	102,842	120,663	29,693	134,206	2,957	3,379		22.6		
1922-23	14,210	99,594	117,686	29,942	131,689	3,088	3,575		26.3		
1923-24	14,453	109,082	127,246	29,850	141,502	3,099	3,563		27.9		
1924-25	14,457	108,797	126,694	29,776	139,438	3,100	3,557	67	35.3		
1925-26	14,696	102,872	121,209	29,884	135,510	3,196	3,584	124	36.4		
1926-27	14,993	101,962	120,830	29,654	135,580	3,534	3,884	162	35.4		
1927-28	15,246	101,424	120,168	29,675	135,640	3,815	4,192	210	38.4		
1928-29	15,698	100,425	119,349	29,953	134,782	4,251	4,660	250	39.2		
1929-30	16,060	98,062	116,824	30,246	132,675	4,600	4,967	302	40.0		
1930-31	16,272	94,176	113,117	30,449	129,569	4,921	5,426	215	43.5		
1931-32	16,306	93,854	112,842	30,648	129,369	4,214	5,220	139	42.8		
1932-33	16,253	97,412	116,281	30,724	132,673	4,408	5,167	151	42.6		
1933-34	16,200	99,659	118,593	30,986	134,847	4,386	5,079	212	42.9		
1934-35	16,086	102,084	121,506	31,123	137,918	3,950	4,629	361	39.6		
1935-36	15,909	102,513	122,120	31,262	138,330	3,905	4,463	536	42.7		
1936-37	15,757	101,091	120,871	31,321	136,978	4,001	4,578	904	42.3		
1937-38	15,451	107,017	127,013	31,277	142,836	4,229	4,736	997	44.3		
1938-39	15,297	109,304	129,140	31,280	144,682	4,281	4,724	1,095	43.6		
1939-40	15,132	109,920	129,811	31,244	145,979	4,001	4,542	1,075	44.5		
1940-41	14,766	109,551	129,663	30,961	144,207	3,777	4,254	1,049	46.3		
1941-42	14,554	114,034	134,483	30,565	145,634	3,480	3,975	1,055	45.8		
1942-43	14,157	110,879	131,560	27,934	145,443	2,625	3,437	945	n.a.		
1943-44	14,023	110,808	131,899	27,826	144,526	1,926	2,761	705	n.a.		
1944-45	13,936	113,157	134,398	27,867	137,486	2,289	3,179	725	n.a.		
1945-46	13,914	113,617	135,010	27,635	142,505	3,036	3,824	854	42.2		
1946-47	13,973	114,162	135,602	28,040	146,173	3,377	3,884	1,112	46.1		
1947-48	14,067	114,201	135,503	27,597	142,393	3,377	3,851	1,391	42.6		
1948-49	14,142	115,324	136,548	28,110	146,723	3,279	3,757	1,741	48.2		
1949-50	14,473	115,630	137,132	27,900	146,563	3,122	3,617	1,792	49.1		
1950-51	14,528	115,672	136,956	28,248	151,731	3,252	3,676	1,859	79.1		
1951-52	14,447	115,795	137,811	28,698	151,785	3,173	3,696	2,150	58.4		
1952-53	14,557	115,843	137,722	28,860	152,689	3,139	3,581	2,322	57.1		
1953-54	14,670	118,059	140,008	29,220	150,315	3,336	3,778	2,826	62.1		
1954-55	14,791	114,505	136,340	28,092	149,379	3,470	3,895	3,142	69.5		
1955-56	14,353	117,085	139,640	28,585	149,965	3,405	3,972	3,499	71.0		
1956-57	15,206	117,295	139,727	27,936	149,931	3,400	3,979	3,677	66.1		
1957-58	15,342	115,715	138,370	27,971	152,045	3,463	3,907	4,005	81.2		
1958-59	15,447	115,111	138,304	28,105	152,312	3,692	4,148	3,716	85.1		
1959-60	15,533	121,772	145,377	28,527	155,437	3,679	4,059	3,471	100.9		
1960-61	15,681	122,258	145,752	28,711	156,456	4,326	4,966	3,300	102.0		
1961-62	15,751	122,122	145,796	28,886	156,697	4,063	4,509	3,583	108.4		
1962-63	15,864	123,123	146,807	28,922	156,897	4,415	4,932	3,750	112.8		
1963-64	15,961	122,718	146,382	28,711	158,905	4,788	5,380	3,993	117.9		
1964-65	16,065	124,043	147,661	28,754	156,954	4,775	5,290	4,714	123.1		
1965-66	16,111	126,830	150,422	28,759	159,394	4,869	5,293	5,093	128.8		

RURAL PRODUCTION

Crop Areas and Yields

Year	Cereals for Grain						Hay (a)	Orchards (b) (c)	Vineyards (b)
	Wheat		Barley		Oats				
	Area	Yield per Acre	Area	Yield per Acre	Area	Yield per Acre				Area	Area
	'000 Acres	Bush.	'000 Acres	Bush.	'000 Acres	Bush.		'000 Acres	
1841-42..	4	20.77	1	20.00	1	25.00			
1846-47..	26	20.00	3	30.00	2	20.00			0.1
1851-52..	54	12.65	5	16.49	3	21.79			0.3
1856-57..	162	25.00	8	21.18	3	20.00	23	1.0	0.8
1861-62..	311	10.98	11	15.81	2	20.24	63	1.8	3.9
1866-67..	458	14.34	12	20.13	4	22.29	111	2.2	6.4
1871-72..	693	5.73	17	9.53	4	10.85	98	2.8	5.5
1876-77..	1,084	5.40	10	10.64	3	10.65	92	3.3	4.6
1881-82..	1,769	4.57	12	11.48	3	10.66	333	4.4	4.2
1886-87 (d)	1,970	5.50	17	13.04	8	12.48	317	n.a.	5.3
1891-92..	1,552	4.15	11	9.35	13	6.40	304	8.9	12.3
1896-97..	1,693	1.66	14	7.44	40	4.72	339	11.7	18.3
1901-02..	1,743	4.60	16	15.68	35	13.54	370	16.3	20.9
1906-07..	1,686	10.36	28	17.47	57	15.72	298	18.2	22.6
1911-12..	2,191	9.29	41	17.25	108	12.51	521	23.2	24.0
1916-17..	2,778	16.46	104	16.74	152	12.13	483	28.8	29.2
1921-22..	2,384	10.46	171	19.19	125	10.37	559	32.3	41.4
1926-27..	2,768	12.84	257	18.05	152	11.26	496	31.6	50.3
1927-28..	2,941	8.18	219	13.67	197	7.00	533	31.0	50.7
1928-29..	3,446	7.79	247	18.53	207	8.40	498	30.8	51.8
1929-30..	3,646	6.40	305	15.25	278	5.63	544	30.1	52.3
1930-31..	4,181	8.34	252	15.72	218	9.52	613	29.6	52.2
1931-32..	4,071	11.81	242	18.87	206	11.08	539	29.1	52.5
1932-33..	4,067	10.43	314	19.31	174	10.27	461	29.1	52.5
1933-34..	3,822	9.26	307	17.09	265	7.88	507	28.9	52.9
1934-35..	3,188	8.61	317	17.94	367	6.57	561	29.2	53.4
1935-36..	2,989	10.58	394	16.49	300	7.94	566	29.1	54.2
1936-37..	3,058	9.39	305	13.99	415	5.70	539	29.8	56.1
1937-38..	3,162	13.73	411	21.02	332	8.91	562	29.9	57.4
1938-39..	3,080	10.28	457	16.50	267	9.00	519	28.9	58.0
1939-40..	2,735	15.02	504	19.78	349	11.64	532	29.1	58.2
1940-41..	2,560	6.97	471	10.14	473	3.87	404	29.4	58.4
1941-42..	2,326	13.12	478	24.49	291	13.04	558	29.5	58.0
1942-43..	2,009	18.18	298	20.20	263	12.81	426	29.5	58.2
1943-44..	1,534	13.49	261	19.34	224	10.22	312	25.5	57.3
1944-45..	1,623	5.70	360	8.85	334	3.94	428	26.5	56.9
1945-46..	2,165	9.72	442	17.12	370	8.60	484	27.2	57.4
1946-47..	2,519	11.08	502	16.78	252	11.01	329	28.1	58.2
1947-48..	2,375	13.70	562	27.32	309	17.47	296	28.3	58.9
1948-49..	2,063	12.67	698	17.35	287	9.23	234	29.7	59.8
1949-50..	1,896	14.95	694	18.34	261	13.25	295	26.9	60.3
1950-51..	1,848	16.74	765	21.87	271	13.02	261	28.7	62.0
1951-52..	1,613	16.92	832	20.23	387	13.95	257	29.4	61.2
1952-53..	1,544	21.97	938	27.63	369	18.05	214	28.6	60.6
1953-54..	1,528	19.90	1,122	25.40	280	15.42	262	29.8	62.1
1954-55..	1,689	18.63	1,020	18.02	340	13.27	257	30.5	60.6
1955-56..	1,609	17.96	1,042	23.61	425	17.13	326	33.0	59.9
1956-57..	1,438	21.85	1,222	27.83	427	19.47	299	34.0	57.4
1957-58..	1,331	11.20	1,212	14.48	427	8.01	291	35.3	57.4
1958-59..	1,407	22.76	1,332	28.27	481	24.93	420	37.2	56.7
1959-60..	1,549	7.70	1,290	9.19	505	4.95	245	37.4	56.9
1960-61..	1,969	23.56	1,556	27.15	512	22.41	393	37.7	56.9
1961-62..	2,229	15.19	1,271	16.75	324	13.57	209	38.5	57.8
1962-63..	2,595	14.77	1,053	17.10	416	13.88	287	40.4	58.3
1963-64..	2,802	19.26	1,123	21.67	501	18.27	358	41.7	58.7
1964-65..	2,727	19.37	1,095	24.60	444	20.23	314	43.0	58.9
1965-66..	2,745	14.56	1,098	16.86	455	12.37	299	44.0	58.7

(a) Wheaten only to 1906-07, thence all kinds.

(b) Bearing and non-bearing.

(c) From 1949-50, private orchards and those no longer worked have been omitted.

(d) Statistics not collected and particulars estimated.

STATISTICAL SUMMARY

RURAL PRODUCTION

Livestock and Associated Produce; Farm Machinery

Year	Livestock Numbers					Wool Production '000 Lb.	Milk Production '000 Gal.	Slaughtering		Farm Machinery		
	Sheep	Cattle		Horses	Sheep and Lambs			Cattle and Calves	Tractors	Shearing Machines	Milking Machines	
		Total	Dairy Cows									Number
	'000	'000	'000	'000			'000	'000				
1841-42 ..	250	21		1								
1846-47 ..	681	57		2								
1851-52 ..	1,250	100		7								
1856-57 ..	1,962	273		22								
1861-62 ..	3,038	265		53	13,164							
1866-67 ..	3,912	124		71	19,740							
1871-72 ..	4,412	143		78	25,909							
1876-77 ..	6,133	219		107	42,445							
1881-82 ..	6,804	294		157	48,762							
1886-87 ..	6,542	285		166	50,561							
1891-92 ..	7,646	399	80	189	57,613							
1896-97 ..	6,324	337	84	180	51,936							
1901-02 ..	5,012	225	75	165	44,553							
1906-07 ..	6,625	326	98	207	48,928							
1911-12 ..	6,172	394	122	260	60,345	28,000	1,276	87				
1916-17 ..	5,091	289	114	257	37,534	30,000	686	62				
1921-22 ..	6,257	419	166	268	57,764	41,400	1,208	95				
1922-23 ..	6,305	426	170	268	58,699	42,000	1,291	123				
1923-24 ..	6,597	413	169	264	57,882	47,600	956	140				
1924-25 ..	6,359	400	145	255	62,439	45,400	933	151	882			
1925-26 ..	6,810	373	136	244	69,007	41,400	1,028	155	1,252			
1926-27 ..	7,284	340	127	234	72,365	40,400	1,091	143	1,820			420
1927-28 ..	7,542	316	118	224	78,370	37,900	1,210	142	2,503			389
1928-29 ..	7,080	263	109	206	74,616	35,700	1,263	128	2,979			370
1929-30 ..	6,186	205	104	189	67,301	34,800	1,243	118	3,730			356
1930-31 ..	5,981	219	110	184	63,479	39,000	1,309	90	3,991			367
1931-32 ..	6,609	265	128	185	67,021	50,000	1,379	81	3,992			380
1932-33 ..	7,713	313	149	190	75,728	58,500	1,279	89	4,067			391
1933-34 ..	7,941	353	164	197	79,289	54,400	1,495	104	4,072			389
1934-35 ..	7,885	346	170	199	77,791	53,400	1,591	140	4,122			378
1935-36 ..	7,946	335	174	197	81,709	59,000	1,643	154	4,292			354
1936-37 ..	7,905	328	170	201	76,604	63,700	1,697	166	4,563			409
1937-38 ..	8,904	324	165	197	86,606	69,100	1,589	167	5,312			532
1938-39 ..	9,937	319	165	196	102,888	72,500	2,007	160	5,969			684
1939-40 ..	9,941	351	173	190	105,266	77,300	2,094	151	6,154			829
1940-41 ..	10,263	377	179	182	106,647	78,800	2,164	157	6,351			1,090
1941-42 ..	10,246	399	179	171	105,124	78,900	2,070	154	n.a.			n.a.
1942-43 ..	10,371	424	185	165	108,637	78,600	2,272	171	6,705	2,976		1,659
1943-44 ..	10,360	415	188	154	115,464	78,200	2,480	189	7,064	3,297		1,963
1944-45 ..	8,474	391	187	133	106,708	72,200	3,065	175	8,044	3,770		2,206
1945-46 ..	6,787	374	176	116	73,604	79,400	2,017	148	9,211	3,978		2,349
1946-47 ..	7,959	424	187	109	93,020	93,900	1,662	146	9,456	4,306		2,839
1947-48 ..	9,055	445	197	101	116,450	92,500	1,665	148	9,664	4,932		3,238
1948-49 ..	9,366	461	203	94	114,905	91,300	2,011	189	11,271	5,817		3,665
1949-50 ..	9,477	464	203	83	121,249	89,400	2,317	201	13,709	6,846		4,198
1950-51 ..	10,167	433	184	71	125,384	83,500	2,022	218	16,128	8,134		4,590
1951-52 ..	11,470	437	176	63	135,484	86,500	1,547	216	18,184	9,054		4,909
1952-53 ..	12,037	483	183	57	158,658	84,200	2,353	187	19,750	9,733		5,418
1953-54 ..	11,838	491	192	52	145,509	85,000	2,637	220	20,842	10,302		5,876
1954-55 ..	12,817	524	199	49	155,761	90,700	2,799	233	23,110	11,452		6,363
1955-56 ..	13,585	566	195	44	173,697	90,300	2,358	227	24,345	12,134		6,920
1956-57 ..	14,984	622	195	41	188,808	89,900	2,329	252	26,012	12,690		7,208
1957-58 ..	15,237	597	191	36	185,843	80,600	3,278	283	27,288	13,280		7,344
1958-59 ..	15,634	576	188	33	186,842	82,100	3,145	287	28,532	13,778		7,537
1959-60 ..	14,025	500	170	30	198,289	78,600	3,899	238	28,965	13,973		7,575
1960-61 ..	14,952	561	170	27	177,413	87,000	2,784	174	30,674	14,317		7,589
1961-62 ..	16,415	659	183	26	206,984	95,500	3,140	201	31,788	14,532		7,707
1962-63 ..	15,737	679	190	25	207,344	95,400	3,467	254	31,671	14,595		7,553
1963-64 ..	16,402	694	185	(a)	210,500	97,500	2,996	279	33,231	14,885		7,438
1964-65 ..	17,289	697	182	(a)	215,736	102,300	3,100	275	34,164	15,172		7,328
1965-66 ..	17,993	690	176	(a)	229,633	98,400	3,474	277	33,998	15,386		7,040

(a) Not collected.

MINING AND FACTORY PRODUCTION

Year	Mining				Factories		
	Quantities of Principal Minerals Produced			Value of Production (a)	Number of Establishments	Value of Land and Buildings, Plant and Machinery	Value of Production
	Copper Ore and Concentrate	Coal	Iron Ore				
	Tons	'000 Tons	'000 Tons	\$'000		\$'000	\$'000
1846.....	6,461			285			
1851.....	7,717			622			
1856.....	11,791			825			
1861.....	11,259			920			
1866.....	23,287			1,657			
1871.....	26,522			1,347			
1876.....	28,145			1,205			
1881.....	25,462			842			
1886.....	18,417			554			
1891.....	16,627		7	551			
1896.....	4,951		—	496			
1901.....	8,605		—	1,079			
1906.....	8,208		75	1,652			
1911.....	5,922		42	900	1,314	11,159	9,148
1916.....	7,279		188	2,504	1,266	12,782	9,748
1921.....	1,532		507	2,086	1,438	17,938	14,556
1922.....	1,185		51	477	1,432	9,607	23,858
1923.....	3,523		384	1,062	1,609	10,843	26,904
1924.....	405		580	1,176	1,698	13,242	29,651
1925.....	570		587	1,342	1,711	14,412	32,144
1926.....	231		584	2,924	1,791	31,685	25,348
1927.....	201		722	3,254	1,807	33,900	27,311
1928.....	192		618	2,755	1,860	36,415	26,975
1929.....	277		848	3,270	1,844	38,633	25,137
1930.....	99		928	2,882	1,814	38,447	21,953
1931.....	22		289	1,297	1,644	37,203	15,510
1932.....	—		538	1,885	1,662	35,314	13,924
1933.....	72		721	2,456	1,710	34,733	15,709
1934.....	207		1,244	3,724	1,733	34,302	17,283
1935.....	256		1,869	5,113	1,803	34,483	19,114
1936.....	451		1,887	5,241	1,895	35,098	23,339
1937.....	340		1,866	5,244	1,916	34,528	24,543
1938.....	254		2,245	6,304	1,980	35,564	27,640
1939.....	110		2,572	7,294	2,067	36,921	27,358
1940.....	308		2,313	7,077	2,265	41,291	28,807
1941.....	605		2,240	7,074	2,230	51,744	33,832
1942.....	392	2	2,122	6,342	2,167	66,948	49,132
1943.....	102	—	2,183	6,287	2,134	70,643	56,732
1944.....	135	35	2,029	6,085	2,149	72,089	56,823
1945.....	134	41	1,520	4,917	2,182	69,665	54,530
1946.....	—	135	1,818	6,101	2,395	74,930	51,203
1947.....	—	193	2,146	7,253	2,707	74,136	62,133
1948.....	4	240	2,035	7,514	2,865	81,861	77,339
1949.....	3	345	1,448	6,236	2,927	90,019	87,443
1950.....	—	261	2,350	8,857	3,046	98,436	104,706
1951.....	2	388	2,401	9,875	3,141	100,123	135,618
1952.....	5	418	2,684	12,094	3,245	121,367	166,493
1953.....	2	448	2,591	12,406	3,339	144,029	178,378
1954.....	3	495	2,867	17,160	3,577	166,735	200,443
1955.....	—	455	3,044	(b) 41,419	3,750	188,555	222,055
1956.....	12	481	3,587	47,853	3,908	223,900	241,872
1957.....	39	609	3,389	46,352	4,063	254,380	253,532
1958.....	52	755	3,353	47,076	4,168	280,840	266,570
1959.....	66	690	3,423	49,332	4,235	302,055	279,620
1960.....	30	885	3,437	50,870	4,684	351,745	325,947
1961.....	8	1,115	3,991	58,242	5,042	401,658	340,123
1962.....	4	1,392	3,510	53,958	5,519	449,600	347,828
1963.....	16	1,512	4,242	62,431	5,766	506,571	379,142
1964.....	54	1,736	4,367	67,597	5,826	560,908	427,356
1965.....	114	2,016	4,392	67,863	5,887	645,469	498,588

(a) Value at site of production. Quarries included from 1916.

(b) Comparability affected by revaluation of iron ore.

GROSS VALUE OF RURAL PRODUCTION

Year	Agricultural				Pastoral		Dairying	Total Rural Production
	Wheat	Barley	Vine and Orchard Fruit	Total	Wool (a)	Total		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1908-09	8,486	258	1,274	14,172	3,858	5,576	1,511	22,080
1909-10	9,635	239	1,330	14,761	4,394	6,231	1,492	23,365
1910-11	8,419	174	1,572	14,186	4,514	7,087	1,715	24,004
1911-12	7,717	254	1,599	14,965	3,836	5,789	1,693	23,535
1912-13	7,703	466	1,871	15,817	4,232	6,260	1,643	24,841
1913-14	6,210	324	1,632	12,400	3,990	5,865	1,705	21,136
1914-15	2,557	247	1,155	8,203	2,878	3,462	1,601	14,342
1915-16	16,214	521	2,244	24,813	3,260	2,441	1,809	30,117
1916-17	21,729	599	1,653	27,677	4,274	11,200	2,759	42,909
1917-18	13,629	683	2,416	20,583	5,948	12,269	2,874	37,117
1918-19	12,615	1,262	2,859	22,692	7,258	11,774	3,093	39,009
1919-20	13,482	1,451	3,530	27,456	7,332	10,449	3,413	43,193
1920-21	27,407	1,681	3,811	39,963	5,874	11,248	4,666	58,287
1921-22	12,577	1,227	3,491	23,221	5,752	8,296	3,678	37,273
1922-23	14,152	1,364	3,768	26,292	8,688	11,792	3,959	44,226
1923-24	16,124	1,065	3,962	28,312	10,612	15,479	4,970	50,961
1924-25	18,572	1,648	4,399	30,636	11,952	16,276	4,305	53,609
1925-26	17,979	1,656	3,352	28,307	8,591	12,930	4,171	47,629
1926-27	19,652	1,685	4,082	30,181	8,937	12,140	3,895	48,357
1927-28	13,247	1,497	3,394	23,257	11,338	14,584	4,125	44,464
1928-29	12,845	1,737	3,909	23,880	9,308	12,472	3,810	42,375
1929-30	10,243	1,448	3,819	21,059	5,098	8,183	3,892	35,055
1930-31	8,091	893	3,241	15,708	3,608	5,801	3,121	26,335
1931-32	17,163	1,363	3,442	25,291	3,843	5,452	3,140	35,444
1932-33	13,097	1,371	3,463	20,921	4,619	5,834	3,654	32,030
1933-34	10,933	1,280	3,618	19,533	9,013	10,608	3,108	34,776
1934-35	10,318	1,553	3,882	19,965	5,309	7,706	3,091	32,489
1935-36	13,135	1,457	3,953	22,863	8,116	10,885	3,797	39,126
1936-37	14,955	1,766	4,191	26,044	8,720	12,315	4,310	44,366
1937-38	15,665	3,040	4,964	29,453	8,141	11,443	5,291	48,241
1938-39	8,580	2,046	4,056	20,008	7,802	12,327	5,171	39,613
1939-40	16,692	3,524	4,637	30,132	10,470	14,792	5,585	52,487
1940-41	8,379	2,321	4,873	20,167	10,532	14,757	6,079	43,134
1941-42	13,913	4,490	4,725	30,142	10,294	13,875	6,735	53,016
1942-43	19,399	2,709	6,481	35,423	12,359	16,917	7,917	63,091
1943-44	12,765	2,188	9,159	32,088	13,067	18,277	8,807	63,003
1944-45	6,065	1,931	6,283	23,548	11,963	17,928	8,880	54,810
1945-46	17,490	4,956	7,729	40,434	8,275	14,535	9,959	69,399
1946-47	27,685	7,598	8,283	51,209	17,092	22,602	10,950	90,106
1947-48	50,154	26,228	9,677	99,477	32,606	37,487	12,525	155,615
1948-49	32,450	10,242	10,087	64,138	40,268	47,636	13,440	131,527
1949-50	40,834	14,524	10,616	81,707	56,268	63,058	16,148	167,594
1950-51	45,587	19,803	13,720	97,871	132,494	139,895	15,500	259,627
1951-52	45,288	27,706	20,382	120,507	72,394	86,034	21,145	234,587
1952-53	57,302	42,128	19,161	139,160	97,158	109,154	23,527	279,982
1953-54	43,939	28,804	20,788	115,744	88,868	105,950	24,238	254,537
1954-55	41,591	23,243	17,426	104,914	83,204	101,059	25,037	239,022
1955-56	38,514	25,227	20,335	110,570	79,822	100,882	30,826	250,685
1956-57	44,846	34,022	23,265	129,994	114,578	138,118	29,003	305,365
1957-58	20,970	19,573	24,435	90,089	84,708	111,027	26,384	235,337
1958-59	43,791	39,889	23,984	140,858	67,595	99,135	32,103	280,007
1959-60	16,495	10,999	21,394	71,092	85,382	123,351	29,454	231,751
1960-61	68,001	37,977	24,525	161,437	70,484	94,451	30,306	294,087
1961-62	51,515	22,952	27,051	124,022	85,801	111,850	29,848	273,451
1962-63	56,285	19,152	25,857	128,417	92,514	127,386	31,968	295,043
1963-64	77,660	26,399	29,567	165,634	113,409	150,466	34,267	358,802
1964-65	74,550	30,135	36,200	178,132	94,328	135,916	37,533	360,507
1965-66	59,559	20,184	31,825	144,504	103,635	152,224	39,333	345,993

a) Shares of profits from sale of wool under war time disposal schemes excluded.

NET VALUE OF PRODUCTION

Year	Rural				Mining and Quarrying (a)	Other Primary (a)	Factories	Total Value of Production
	Agricultural	Pastoral	Dairying	Total				
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1925-26	19,374	11,497	2,988	34,648	2,684	1,537	25,348	64,218
1926-27	19,755	10,697	2,955	34,098	2,924	1,618	27,311	65,950
1927-28	13,661	12,861	3,146	30,858	3,254	1,784	26,975	62,872
1928-29	12,840	10,912	2,721	27,514	2,755	1,639	25,137	57,045
1929-30	10,521	6,795	2,988	21,189	3,270	1,685	21,953	48,098
1930-31	4,368	4,684	2,285	12,051	2,882	1,304	15,510	31,747
1931-32	16,681	4,450	2,435	24,259	1,297	1,357	13,924	40,836
1932-33	12,565	4,775	2,839	20,758	1,885	1,458	15,709	39,809
1933-34	11,820	9,122	2,278	23,768	2,456	1,445	17,283	44,951
1934-35	12,751	6,363	2,242	22,121	3,724	1,460	19,114	46,419
1935-36	14,673	9,205	2,786	27,242	4,739	1,489	23,339	56,809
1936-37	18,115	10,435	3,176	32,270	4,874	1,683	24,543	63,370
1937-38	18,320	9,713	3,782	32,501	4,941	1,758	27,640	66,849
1938-39	10,978	10,110	3,886	25,903	5,909	1,722	27,358	60,891
1939-40	19,482	12,413	4,388	37,412	6,887	1,931	28,807	75,037
1940-41	12,290	12,427	4,204	29,862	6,659	2,062	33,832	72,415
1941-42	19,314	11,559	4,276	36,181	6,595	2,495	49,132	94,402
1942-43	24,495	14,265	6,207	46,688	5,899	2,793	56,732	112,112
1943-44	22,086	15,577	6,991	47,063	5,949	2,961	56,823	112,796
1944-45	13,995	15,391	6,912	39,113	5,870	2,886	54,530	102,399
1945-46	29,935	12,396	7,652	52,640	4,756	3,417	51,203	112,017
1946-47	39,525	19,170	8,484	70,571	5,937	4,124	62,133	142,765
1947-48	83,901	33,861	9,970	131,832	7,037	4,858	77,339	221,066
1948-49	47,901	42,913	10,511	105,545	7,194	5,850	87,443	206,032
1949-50	65,579	57,116	13,637	140,976	5,882	5,814	104,706	257,378
1950-51	72,805	131,594	12,629	221,425	8,375	6,944	135,618	372,362
1951-52	93,807	77,929	17,714	193,792	9,292	8,862	166,493	378,439
1952-53	102,488	99,837	18,854	225,741	10,305	10,363	178,778	424,787
1953-54	83,399	94,847	20,514	203,296	10,075	11,598	200,443	425,412
1954-55	78,361	90,440	21,330	193,795	14,202	11,702	222,055	441,754
1955-56	82,542	89,249	26,547	202,430	(b) 37,302	12,151	241,872	493,755
1956-57	99,376	124,187	25,022	252,554	43,008	11,966	253,532	561,060
1957-58	64,635	89,726	15,651	173,506	41,249	10,287	266,570	491,612
1958-59	101,141	76,849	18,725	200,694	42,458	11,254	279,620	534,025
1959-60	48,492	100,135	18,281	170,450	44,311	10,694	325,947	551,402
1960-61	116,647	72,237	16,926	208,842	45,773	11,012	340,123	605,751
1961-62	90,933	91,256	19,826	204,484	52,623	10,911	347,828	615,847
1962-63	93,357	103,991	19,741	218,828	49,603	11,574	379,142	659,146
1963-64	125,180	125,979	21,195	274,220	57,836	12,279	427,356	772,191
1964-65	134,239	110,054	25,005	271,350	62,727	14,173	498,588	846,837
1965-66	106,308	123,757	25,165	257,808	62,727	14,824	527,477	862,836

(a) To 1934-35, local value, i.e. gross value less marketing costs.

(b) Comparability affected by revaluation of iron ore.

TRADE
Direct Oversea Exports

Year	Value of Exports					Proportion of Total Exports Classified by Principal Countries of Destination				
	Total	Wheat and Flour	Barley	Wool	Mining	U.K.	Other British	U.S.A.	Japan	Other Foreign
	\$'000	\$'000	\$'000	\$'000	\$'000	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
1861.....	1,837	76		1,302	362	89.46	10.54			
1866.....	2,837	146		1,518	1,030	81.48	15.68	2.44		0.40
1871.....	3,630	578		1,948	744	89.62	7.79	n.a.		2.59
1876.....	5,928	2,146		2,884	658	89.58	8.06	0.07		2.29
1881.....	6,311	1,846		3,496	488	82.03	15.71	—		2.26
1886.....	5,877	420		3,508	1,126	86.90	6.00	0.04		7.06
1891.....	11,197	2,728		3,776	3,714	80.82	12.77	0.90	0.01	5.50
1896.....	8,111	222		3,038	3,878	56.39	23.25	0.28	1.38	18.70
1901.....	8,866	2,232		2,208	3,252	51.62	25.04	0.10	0.07	23.17
1906.....	13,742	4,780		3,360	3,574	51.68	17.82	0.24	—	30.26
1911.....	20,350	7,671	2	4,007	6,195	45.96	11.66	0.13	0.04	42.21
1915-16.....	12,272	3,511	19	2,824	4,747	42.92	12.37	21.15	0.00	23.56
1920-21.....	35,548	23,675	1,175	6,035	828	59.87	8.12	1.16	0.00	30.85
1921-22.....	24,494	16,280	520	7,052	2,998	45.62	20.50	2.59	1.47	29.82
1922-23.....	27,172	8,778	700	7,794	6,148	40.97	14.93	3.97	2.68	37.45
1923-24.....	33,782	13,754	564	9,290	6,564	40.98	13.05	2.46	8.01	35.50
1924-25.....	38,450	17,234	758	10,140	6,412	45.03	15.25	1.54	2.54	35.64
1925-26.....	38,900	14,825	275	8,865	10,745	51.94	11.55	1.16	6.88	28.47
1926-27.....	35,246	14,189	703	8,297	6,971	44.30	11.09	0.93	2.25	41.43
1927-28.....	36,060	10,831	464	9,788	8,991	45.87	11.43	1.80	2.23	38.67
1928-29.....	29,623	7,822	422	8,463	8,027	44.64	20.01	1.12	0.43	33.80
1929-30.....	30,019	7,734	155	4,487	9,211	58.25	9.63	1.59	3.30	27.23
1930-31.....	20,506	6,078	685	3,006	5,656	54.15	8.51	0.78	2.38	34.20
1931-32.....	24,495	11,803	826	3,243	3,283	58.75	4.49	0.63	3.34	32.79
1932-33.....	25,634	10,450	640	4,579	3,787	61.74	3.06	0.14	7.92	27.14
1933-34.....	25,372	5,463	588	7,526	5,562	66.60	4.74	0.48	5.07	23.11
1934-35.....	23,672	8,279	691	4,881	4,321	61.66	8.35	0.77	7.26	21.96
1935-36.....	30,691	9,020	707	7,561	6,860	67.44	9.81	1.11	6.66	14.98
1936-37.....	33,496	9,890	864	8,144	7,320	68.26	7.17	2.23	2.73	19.61
1937-38.....	38,114	13,848	1,493	6,576	7,909	71.37	7.94	0.99	1.01	18.69
1938-39.....	29,682	6,061	559	7,069	7,107	67.76	14.37	1.06	1.59	15.22
1939-40.....	31,916	4,971	727	10,726	6,317	75.40	9.66	0.88	1.91	12.15
1940-41.....	26,393	8,617	226	6,456	2,606	50.46	19.18	15.48	5.29	9.16
1941-42.....	29,624	3,863	338	11,596	6,220	32.02	21.26	34.14	1.01	8.23
1942-43.....	18,847	4,085	122	6,843	2,084	45.27	32.67	15.12	—	6.94
1943-44.....	31,170	10,504	410	8,509	2,313	40.36	31.47	8.61	—	19.56
1944-45.....	38,334	13,175	115	8,376	5,589	42.34	25.42	13.18	—	19.06
1945-46.....	40,307	7,407	718	14,917	6,550	25.45	26.25	26.43	0.00	21.87
1946-47.....	65,023	12,304	2,998	16,095	16,138	39.47	28.29	8.86	0.01	23.37
1947-48.....	105,805	24,507	16,030	25,608	17,460	39.01	29.61	8.51	0.00	22.87
1948-49.....	138,670	38,990	11,952	40,619	24,280	44.37	24.91	8.04	0.07	22.61
1949-50.....	126,864	23,227	10,564	49,621	23,262	42.42	23.05	7.63	2.95	23.95
1950-51.....	215,348	36,852	14,662	109,857	29,893	39.58	14.68	14.41	5.90	25.43
1951-52.....	194,501	42,155	18,035	65,806	42,995	39.36	21.77	14.65	4.60	19.62
1952-53.....	245,897	36,063	30,975	87,135	56,007	45.12	12.99	12.93	8.17	20.79
1953-54.....	220,498	30,518	24,465	78,817	54,059	41.66	16.44	10.57	6.35	24.98
1954-55.....	190,158	24,075	15,794	69,195	50,620	40.78	19.03	11.57	5.05	23.57
1955-56.....	195,332	26,266	14,069	70,063	53,972	38.70	18.12	10.71	6.71	25.76
1956-57.....	245,848	32,558	18,535	98,924	63,707	31.73	15.73	13.09	13.62	25.83
1957-58.....	199,764	24,866	17,183	73,082	50,249	31.50	17.61	9.32	11.23	30.29
1958-59.....	181,831	23,656	20,404	63,208	38,682	34.81	16.53	8.50	13.25	26.91
1959-60.....	181,652	19,028	12,251	74,830	38,085	32.08	13.98	7.91	12.91	33.07
1960-61.....	198,557	36,598	19,219	64,328	44,203	27.55	15.14	4.71	18.11	34.49
1961-62.....	243,975	47,819	23,422	83,107	51,374	25.83	14.11	8.56	14.80	36.70
1962-63.....	212,945	32,603	6,968	83,600	47,555	25.87	15.73	8.69	16.45	33.26
1963-64.....	322,159	76,337	13,828	107,396	63,489	26.63	13.74	5.99	17.59	36.05
1964-65.....	302,242	53,256	15,247	92,535	79,004	25.82	13.41	7.49	17.22	37.06
1965-66.....	296,276	45,863	7,050	94,487	80,369	22.81	15.28	10.37	18.38	32.91

TRADE

Direct Oversea Imports; Retail Sales

Year	Value of Imports		Proportion of Total Imports Classified by Principal Countries of Origin				Value of Retail Sales of Goods	
	Total	Metals, Metal Manufactures, and Machinery	U.K.	Other British	U.S.A.	Other Foreign	Motor Vehicles, etc.	Total
	\$'000	\$'000	Per Cent	Per Cent	Per Cent	Per Cent	\$m	\$m
1861.....	2,756	310	80.14	11.26	0.32	8.28		
1866.....	4,193	570	89.69	6.33	1.80	2.18		
1871.....	2,891	342	81.85	11.67	1.45	5.03		
1876.....	6,428	1,084	81.30	12.27	1.44	4.99		
1881.....	7,133	1,022	79.06	13.72	3.80	3.42		
1886.....	5,003	770	78.90	8.46	6.82	5.82		
1891.....	8,063	1,644	71.36	7.77	7.91	12.96		
1896.....	6,475	1,198	68.59	8.35	7.82	15.24		
1901.....	7,854	1,432	56.91	9.11	14.17	19.81		
1906.....	7,965	2,104	63.10	12.70	10.17	14.03		
1911.....	12,591	4,132	58.60	10.83	12.81	17.76		
1915-16.....	10,304	2,816	47.68	15.80	19.81	16.71		
1920-21.....	24,764	6,558	42.07	13.66	21.25	23.02		
1921-22.....	9,047	2,218	59.89	13.14	14.58	12.39		
1922-23.....	10,847	3,818	52.86	14.42	19.75	12.97		
1923-24.....	12,700	4,898	45.46	13.66	27.00	13.88		
1924-25.....	13,970	5,649	44.79	13.45	28.11	13.65		
1925-26.....	28,160	10,602	43.30	14.53	27.84	14.33		
1926-27.....	31,015	12,774	42.72	13.19	29.98	14.11		
1927-28.....	25,019	9,388	44.51	11.12	27.62	16.75		
1928-29.....	22,612	7,908	42.31	13.84	25.88	17.97		
1929-30.....	18,721	5,914	42.01	13.82	26.12	18.05		
1930-31.....	7,833	1,802	36.96	19.93	16.66	26.45		
1931-32.....	5,643	896	37.88	29.42	14.00	18.70		
1932-33.....	7,521	1,140	35.49	29.32	14.34	20.85		
1933-34.....	7,359	1,692	41.48	22.82	14.84	20.86		
1934-35.....	7,931	2,296	42.91	19.69	15.75	21.65		
1935-36.....	10,839	3,616	38.65	18.73	21.16	21.46		
1936-37.....	10,877	3,678	42.50	19.20	15.79	22.51		
1937-38.....	14,948	5,906	36.49	17.70	23.19	22.62		
1938-39.....	11,702	3,924	37.74	20.56	17.13	24.57		
1939-40.....	13,435	3,256	34.89	25.21	14.43	25.47		
1940-41.....	10,924	3,158	38.09	27.17	12.01	22.73		
1941-42.....	14,924	5,164	28.11	34.70	12.36	24.83		
1942-43.....	11,718	3,580	20.56	46.11	14.44	18.89		
1943-44.....	9,562	2,128	24.97	32.40	33.53	9.10		
1944-45.....	9,313	1,388	24.49	40.45	19.91	15.15		
1945-46.....	17,556	3,622	62.28	16.70	10.13	10.89		
1946-47.....	23,875	6,788	35.25	30.26	13.79	20.65		
1947-48.....	45,908	12,740	37.96	25.93	15.45	20.61		
1948-49.....	60,914	21,678	49.33	23.75	9.02	17.90		
1949-50.....	91,509	44,334	52.15	17.96	8.81	21.08		
1950-51.....	112,002	50,446	48.31	18.19	8.42	25.08		
1951-52.....	186,062	80,450	39.99	17.49	9.37	33.14		
1952-53.....	86,549	41,456	43.53	16.56	11.71	28.16	84.4	356.2
1953-54.....	102,945	47,142	50.63	19.41	8.93	21.03	97.6	392.0
1954-55.....	129,607	63,144	49.18	16.70	13.28	20.83	113.4	437.8
1955-56.....	125,504	64,656	49.17	13.94	11.70	25.18	123.6	471.4
1956-57.....	90,813	40,536	44.01	19.12	12.26	24.54	124.8	487.0
1957-58.....	94,205	40,792	46.37	19.32	11.91	22.33	125.4	492.6
1958-59.....	90,693	40,534	42.08	20.27	11.50	26.08	138.0	525.2
1959-60.....	91,593	57,962	43.89	15.83	12.15	28.06	160.2	596.8
1960-61.....	142,764	72,570	32.66	19.65	17.61	30.01	156.1	605.0
1961-62.....	103,386	46,774	31.95	18.91	21.87	27.17	143.1	594.7
1962-63.....	139,826	71,820	31.83	16.63	22.92	28.62	180.2	659.5
1963-64.....	179,651	94,302	24.75	13.62	30.63	31.00	210.1	732.6
1964-65.....	204,856	108,243	23.72	14.21	29.11	32.96	234.0	802.8
1965-66.....	198,156	103,032	23.32	14.33	27.25	35.10	213.0	808.1

TRANSPORT AND COMMUNICATION

Public Transport

Year	Railways			Trams and Buses		Civil Aviation		Shipping (Entering S.A.)
	Passengers Carried	Goods Carried	Revenue	Passengers Carried	Revenue	Passengers Carried	Freight Carried	
	'000	'000 Tons	\$'000	'000	\$'000	'000	Short Tons	'000 Net Tons
1841.....								18
1846.....								25
1851.....								75
1856.....	248	32	44					114
1861.....	310	145	185					103
1866.....	425	171	236					169
1871.....	394	228	235					187
1876.....	1,400	387	402					347
1881.....	2,902	683	837					641
1886.....	3,962	779	1,098					771
1891.....	5,296	1,427	2,448					1,288
1896.....	5,436	1,057	1,973					1,661
1901.....	8,864	1,628	2,473					1,967
1906.....	10,715	1,732	2,700					2,785
1911.....	16,620	2,731	4,030	34,013	480			3,625
1916.....	20,513	2,397	3,931	43,372	649			2,566
1921.....	23,788	2,682	5,884	55,324	1,111			2,887
1922.....	23,316	2,828	3,297	56,787	1,161			3,524
1923.....	24,475	3,284	3,711	59,648	1,226			4,385
1924.....	25,178	3,565	3,929	61,738	1,277			4,591
1925.....	25,647	3,611	4,013	63,153	1,281			4,574
1926.....	25,752	3,563	8,524	66,207	1,322			4,526
1927.....	25,985	3,687	8,289	67,570	1,350			5,123
1928.....	20,881	3,418	7,999	68,546	1,391			4,873
1929.....	17,886	2,762	7,237	66,578	1,355			4,640
1930.....	17,862	2,669	6,597	59,853	1,513			5,024
1931.....	15,453	2,175	5,201	52,756	1,444			4,166
1932.....	15,608	2,430	5,514	48,467	1,319			4,139
1933.....	16,074	2,401	5,489	48,154	1,287			4,375
1934.....	16,325	2,155	5,142	47,021	1,256			4,387
1935.....	16,660	2,347	5,339	48,118	1,279			4,974
1936.....	17,431	2,482	5,781	50,625	1,347			5,318
1937.....	17,777	2,400	6,043	52,082	1,399			5,292
1938.....	17,632	2,897	6,598	51,674	1,385			5,711
1939.....	17,529	2,661	6,267	52,906	1,422		108	5,761
1940.....	17,642	2,700	6,367	52,928	1,429	n.a.	n.a.	4,629
1941.....	20,360	2,770	7,060	56,518	1,537	n.a.	n.a.	3,047
1942.....	28,513	3,128	9,928	69,132	1,891	n.a.	n.a.	2,447
1943.....	30,864	3,460	11,665	85,133	2,309	n.a.	n.a.	1,589
1944.....	27,356	3,673	12,004	91,312	2,445	n.a.	n.a.	1,814
1945.....	24,820	3,502	10,969	95,035	2,563	n.a.	n.a.	1,868
1946.....	23,119	2,997	9,794	90,239	2,469	n.a.	n.a.	1,733
1947.....	19,827	3,093	9,243	91,238	2,594	160	2,048	3,086
1948.....	19,067	3,396	10,219	89,661	2,661	230	3,966	3,651
1949.....	18,210	3,544	11,770	82,939	3,084	263	5,573	4,365
1950.....	17,385	3,425	(a)13,098	77,999	2,535	266	6,941	5,217
1951.....	17,178	3,519	14,715	78,141	3,238	298	8,363	5,283
1952.....	18,269	4,966	19,022	75,436	3,684	323	7,745	5,529
1953.....	17,565	4,172	24,976	66,571	(b) 4,232	295	9,028	5,900
1954.....	17,605	4,457	25,848	66,972	4,145	272	11,457	6,108
1955.....	16,849	4,497	26,522	66,446	4,267	310	12,514	6,123
1956.....	16,434	4,436	26,662	63,515	4,668	329	12,539	6,282
1957.....	17,406	4,518	28,132	62,190	4,578	334	12,003	6,360
1958.....	17,564	4,166	27,033	60,083	4,988	337	10,143	6,569
1959.....	16,805	4,227	26,179	59,613	5,056	402	9,802	6,744
1960.....	17,038	4,059	25,652	58,168	5,641	463	9,990	6,745
1961.....	15,574	4,537	27,883	56,155	5,515	449	9,254	7,613
1962.....	15,176	4,638	27,984	55,093	5,430	446	8,591	7,646
1963.....	14,922	4,530	27,826	58,039	5,436	493	9,035	7,886
1964.....	15,227	5,213	29,673	58,571	5,473	548	9,621	9,486
1965.....	15,196	5,132	29,960	56,434	5,899	672	10,688	9,697
1966.....	15,511	4,823	29,137	53,112	6,050	769	11,962	9,517

(a) Excludes Treasury grant from 1950.

(b) Excludes Government grant from 1953.

TRANSPORT AND COMMUNICATION

Private Transport and Communication

Year	Motor Vehicles on Register			Drivers' and Riders' Licences in Force	Tele- phone Services in Operation	Radio Licences Existing	Post Office Revenue		
	Cars and Station Waggon	Cycles and Scooters	Total				Postal, Etc.	Tele- graph (a)	Tele- phone
	Number	Number	Number				\$'000	\$'000	\$'000
1851							14		
1856							18		
1861							33	15	
1866							56	24	
1871							58	22	
1876							114	64	
1881							166	123	
1886							214	160	
1891							227	201	
1896							250	242	
1901					1,831		282	263	
1906					2,510		342	182	61
1911					6,086		490	233	93
1916					10,184		484	277	212
1921	13,178	7,269	21,407		15,984		792	420	468
1922	15,308	7,456	23,948	21,632	17,402		864	418	536
1923	21,661	9,082	33,125	33,230	19,306		910	416	614
1924	n.a.	n.a.	n.a.	48,363	23,155	1,182	834	422	684
1925	33,390	9,531	48,822	n.a.	29,541	3,118	814	410	770
1926	42,540	11,811	62,540	79,659	33,547	12,105	867	402	903
1927	50,603	12,532	74,096	88,695	37,132	15,904	929	446	1,026
1928	54,892	12,321	79,637	92,198	40,407	20,247	809	351	1,249
1929	58,227	13,609	85,472	82,973	42,186	23,927	876	360	1,249
1930	(b)50,391	(b) 9,872	(b)72,590	94,381	42,868	25,651	871	340	1,266
1931	45,140	10,045	67,324	106,053	39,552	32,075	879	282	1,168
1932	46,558	9,736	68,932	81,300	37,815	43,268	871	273	1,060
1933	46,413	10,455	71,065	89,507	37,339	55,639	913	318	1,064
1934	48,939	10,470	76,676	96,916	37,713	72,337	935	323	1,076
1935	49,496	10,741	77,394	93,258	38,652	81,629	954	337	1,119
1936	53,728	11,110	84,253	92,227	39,911	93,881	1,017	327	1,197
1937	56,101	10,802	88,631	135,320	41,467	105,045	1,048	355	1,280
1938	60,537	10,213	95,735	137,627	43,307	115,571	1,099	375	1,370
1939	59,345	9,492	94,577	138,089	45,224	120,584	1,113	399	1,419
1940	58,184	9,215	91,898	129,950	46,767	127,995	1,140	423	1,515
1941	54,528	7,262	86,172	122,280	47,962	136,457	1,252	458	1,522
1942	53,558	5,882	82,023	106,455	48,747	144,209	1,588	553	1,732
1943	56,608	6,329	86,651	113,556	49,152	153,356	1,858	819	1,957
1944	59,271	7,139	91,316	105,951	50,161	155,046	2,049	816	2,024
1945	61,372	8,793	97,124	117,310	51,266	157,604	2,093	831	2,029
1946	64,370	11,418	107,238	137,979	53,126	164,497	1,921	815	2,170
1947	67,449	13,029	115,226	149,304	56,449	180,371	1,999	875	2,345
1948	75,741	15,353	127,458	159,814	60,249	196,336	2,190	946	2,507
1949	84,331	18,506	143,539	172,063	64,008	211,436	2,345	1,049	2,761
1950	97,501	20,427	163,888	192,469	69,907	226,723	2,546	1,169	3,536
1951	108,941	23,441	183,553	215,157	74,457	243,019	2,938	1,550	4,271
1952	120,523	23,982	200,449	232,119	80,919	(c)207,527	3,872	1,818	5,598
1953	129,663	23,383	214,270	252,216	86,977	210,808	4,086	1,191	6,070
1954	139,704	22,541	226,866	265,727	93,104	218,745	4,311	1,112	6,728
1955	150,597	21,322	236,233	281,091	100,171	221,118	4,670	1,028	7,266
1956	159,821	20,614	246,587	299,158	107,649	228,625	5,033	1,075	8,067
1957	168,591	19,490	255,609	315,044	114,390	234,120	5,579	1,358	8,993
1958	179,216	18,836	266,563	328,833	122,311	238,916	5,877	1,385	9,950
1959	187,052	16,732	270,934	340,973	131,060	247,468	6,247	1,421	10,524
1960	(d)216,906	(d)17,487	(d)312,161	369,584	138,019	249,148	7,359	1,487	12,703
1961	226,876	16,564	319,422	393,869	144,502	249,475	7,729	1,643	14,544
1962	241,637	15,207	332,734	397,803	152,785	249,673	7,761	1,434	15,604
1963	259,904	13,967	350,590	414,656	162,012	256,741	8,322	1,582	16,508
1964	279,685	12,595	370,762	439,061	173,314	266,027	8,709	1,852	19,181
1965	295,936	11,274	385,026	447,983	182,249	269,040	9,312	2,187	23,038
1966	313,758	12,238	413,569	464,778	192,922	281,747	9,759	2,398	24,757

(a) Includes telephone to 1901, and radio to 1948 (licence fees then excluded from Post Office revenue).

(b) Vehicles in actual use on roads from 1930.

(c) All receivers at the one address covered by one licence from 1952.

(d) New series commenced in 1960.

PUBLIC FINANCE

Year	State Government					State Taxation	Local Government Revenue		
	Total Revenue	Expenditure		Public Debt			From Rates	Government Grants	Total
		From Revenue	From Loan (Net)	Total	Per Head				
	\$'000	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	
1841	51	180							
1846	95	77							
1851	445	367				202			
1856	960	1,160				326	54	114	
1861	1,117	966		1,733	13.30	282	46	114	
1866	1,900	2,130		1,551	9.20	478	60	162	
1871	1,556	1,519		4,335	23.00	498	80	194	
1876	2,640	2,647		7,674	34.20	920	118	286	
1881	4,344	4,108		22,394	78.30	1,168	188	488	
1886	4,558	4,767	2,800	36,680	118.60	1,603	208	502	
1891	5,464	5,207	968	43,315	135.80	1,655	276	702	
1896	5,043	5,019	886	48,433	137.60	1,600	264	652	
1901	5,648	5,693	845	52,129	146.40	1,203	302	738	
1906	5,612	5,437	900	60,165	165.80	735	348	740	
1911	8,363	7,929	3,752	(a)56,065	136.50	1,092	481	1,004	
1916	8,714	9,483	4,371	79,049	179.40	1,403	652	1,150	
1921	14,303	15,087	9,351	104,725	210.70	3,244	986	1,936	
1926	20,948	20,922	12,860	160,521	290.10	5,428	1,640	3,441	
1927	21,570	23,669	12,149	173,121	306.40	5,771	1,804	3,930	
1928	22,694	23,244	9,865	181,225	317.20	7,473	1,908	4,151	
1929	21,682	23,544	7,056	183,307	323.80	7,536	1,976	4,206	
1930	21,102	24,354	4,977	186,838	326.00	6,976	1,942	3,836	
1931	21,452	25,079	6,581	199,055	345.70	6,800	1,672	2,612	
1932	20,964	23,091	568	203,198	351.50	6,153	1,584	2,627	
1933	20,321	22,339	7,038	207,415	357.00	5,467	1,572	2,798	
1934	20,376	22,064	3,361	210,839	361.40	5,818	1,574	2,659	
1935	22,003	21,931	1,131	210,699	360.10	6,449	1,210	2,194	
1936	22,819	22,521	2,502	211,397	359.70	6,409	1,665	2,824	
1937	23,479	23,200	1,653	213,188	361.80	7,081	1,674	3,078	
1938	24,922	24,669	1,230	214,901	362.40	7,844	1,745	3,232	
1939	24,607	25,402	843	217,774	365.00	8,232	1,779	3,424	
1940	25,511	25,837	1,253	218,688	365.00	9,127	1,835	3,347	
1941	25,849	26,015	2,548	219,599	365.30	8,683	1,851	3,170	
1942	30,004	27,425	263	218,380	359.00	(b)9,484	1,909	3,017	
1943	30,385	29,919	Cr. 1,640	216,858	353.70	3,091	1,953	2,75	
1944	31,090	31,059	Cr. 896	216,610	349.60	3,262	1,924	2,99	
1945	32,226	32,226	Cr. 83	217,742	347.00	3,724	1,935	3,66	
1946	32,687	32,687	3,419	221,498	348.80	4,036	2,040	451	
1947	34,385	34,506	4,423	228,260	353.20	4,286	2,271	697	
1948	37,686	38,312	4,963	237,704	359.50	4,573	2,610	923	
1949	43,690	44,259	9,281	249,440	367.20	5,740	2,967	1,106	
1950	58,721	59,100	17,339	266,349	375.40	6,591	3,248	1,496	
1951	67,344	66,885	33,871	296,776	405.20	8,104	3,830	1,963	
1952	85,276	85,098	52,875	346,872	459.40	9,586	4,686	2,578	
1953	98,203	98,153	40,885	389,706	502.30	9,983	5,761	2,306	
1954	104,751	101,132	39,879	429,446	538.80	13,073	6,524	3,867	
1955	103,768	108,236	42,912	472,925	577.10	15,092	7,041	3,836	
1956	118,805	121,665	42,666	512,179	603.60	16,150	8,162	4,381	
1957	131,522	131,619	43,793	552,880	633.20	18,620	9,563	4,733	
1958	141,285	142,083	37,153	593,628	662.00	19,541	10,333	4,848	
1959	145,360	147,414	41,442	635,404	690.00	20,435	11,060	4,948	
1960	160,555	161,177	43,432	678,210	717.50	22,297	11,971	5,478	
1961	172,559	170,182	44,739	722,038	744.90	23,425	13,076	(c) 3,524	
1962	186,405	185,392	43,773	763,399	775.10	25,150	14,887	2,984	
1963	195,168	194,589	42,047	807,044	800.80	26,940	15,943	3,215	
1964	211,006	207,755	44,218	853,553	825.00	29,825	16,968	4,317	
1965	222,181	224,803	53,100	902,823	848.70	36,327	18,826	3,804	
1966	236,816	243,650	55,089	955,128	875.70	38,755			

(a) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth Government.

(b) Uniform taxation in force.

(c) Excludes reimbursement for work done on behalf of Highways and Local Government Department from 1961.

PRIVATE FINANCE

Year	Banking			Life Insurance		General Insurance Revenue	Membership of—		
	Cheque Paying Banks		Savings Bank Deposits	Value of New Policies Issued	Value of all Policies in Existence		Co-operative Societies	Friendly Societies	Building Societies
	Advances	Deposits							
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	Number	Number	Number
1846		183							
1851		426	29						
1856		1,419	106						
1861	2,864	1,480	243						
1866	6,240	2,803	499						
1871	5,715	3,043	982						
1876	9,449	6,632	1,703						
1881	13,483	9,885	2,499						
1886	19,226	9,924	3,306						
1891	16,297	15,550	4,316						
1896	9,470	15,343	5,673						
1901	8,546	13,437	7,591						
1906	10,612	15,598	9,534						
1911	16,970	22,257	14,872				10,248		9,572
1916	20,325	27,264	20,070				13,270	65,540	8,962
1921	27,296	44,199	32,635	6,000	40,272	1,305	28,762	70,155	10,621
1926	31,672	51,574	43,558	9,341	60,244	2,045	41,539	77,791	17,011
1927	38,159	53,555	47,202	9,666	63,689	2,285	42,386	78,422	18,003
1928	38,612	52,572	49,883	9,800	67,108	2,246	44,000	78,284	19,208
1929	46,161	46,045	50,457	9,297	69,469	2,216	45,176	77,785	19,161
1930	47,412	44,869	48,024	8,132	68,312	2,007	45,346	76,363	16,663
1931	44,119	44,956	42,844	6,266	65,016	1,627	45,791	(a)	14,081
1932	41,232	48,503	43,134	7,060	64,905	1,640	47,189	72,133	11,869
1933	42,198	49,571	45,031	7,556	66,083	1,652	42,614	71,275	10,814
1934	42,524	51,633	46,875	7,847	67,785	1,651	42,746	70,881	9,715
1935	44,285	51,269	48,370	9,160	71,130	1,698	44,800	71,043	9,617
1936	43,760	52,399	50,617	10,791	75,984	1,859	45,592	71,658	9,257
1937	41,957	57,751	53,012	12,511	82,328	2,127	49,456	73,131	9,418
1938	44,244	58,720	54,487	12,070	87,769	2,434	52,064	74,703	10,364
1939	45,019	58,680	54,794	11,434	92,583	2,527	53,320	74,486	10,569
1940	41,697	61,792	53,127	10,090	96,387	2,584	53,943	75,481	10,532
1941	39,547	64,182	55,019	11,416	101,825	2,643	n.a.	76,357	n.a.
1942	36,082	73,975	61,232	9,812	106,429	2,802	n.a.	77,233	n.a.
1943	32,574	86,491	77,126	10,783	112,590	2,706	n.a.	78,600	n.a.
1944	31,328	100,201	97,184	13,417	121,736	2,604	n.a.	79,530	n.a.
1945	31,970	108,498	113,991	14,816	130,764	2,602	64,924	80,403	16,894
1946	31,560	93,397	131,729	22,805	147,230	2,705	70,620	80,419	18,665
1947	39,674	99,653	135,800	24,935	165,025	3,372	80,150	79,827	19,774
1948	39,585	119,859	147,226	26,555	183,753	4,371	84,470	78,246	20,815
1949	41,387	142,558	162,351	29,003	204,289	5,755	87,733	76,761	22,017
1950	50,412	159,136	175,390	33,076	227,616	7,312	92,066	75,168	22,646
1951	62,109	206,743	195,698	44,899	261,931	9,298	92,424	71,591	22,782
1952	89,163	214,630	207,452	48,475	298,494	12,370	96,134	67,563	23,016
1953	79,574	247,260	227,750	51,671	335,457	14,593	100,323	63,922	23,801
1954	95,968	250,802	245,898	59,540	377,093	16,165	107,069	61,345	23,814
1955	106,740	250,795	263,384	70,458	426,881	18,321	109,667	59,149	24,397
1956	108,515	241,044	271,512	75,301	477,554	20,590	114,018	57,216	24,266
1957	105,618	266,897	284,802	89,470	539,120	23,835	109,636	55,499	(b)
1958	125,971	262,700	297,716	94,137	599,723	24,656	(b)	54,181	24,321
1959	124,924	272,599	314,304	111,440	676,406	26,223	112,844	53,114	24,665
1960	149,172	265,498	331,996	131,951	756,581	27,975	116,645	52,239	24,847
1961	147,348	269,848	333,486	143,628	841,563	32,363	111,031	51,551	24,835
1962	161,508	281,496	361,980	157,636	937,635	33,740	116,405	51,198	24,854
1963	181,162	290,892	416,156	165,183	1,034,471	37,499	108,283	50,765	24,260
1964	199,816	328,484	475,804	197,790	1,161,922	41,759	113,224	50,946	25,348
1965	239,123	352,411	519,268	215,946	1,294,378	45,432	115,828	51,258	26,188
1966	271,132	371,362	558,857			50,121	120,042	51,109	26,957

(a) Membership at 30th June from 1932, previously 31st December.

(b) Balance dates of societies do not coincide; from this year figures are aggregates of members at balance dates within the year ended 30th June.

APPENDIX B

PRINCIPAL EVENTS

CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

- 1836**—Ships carrying migrants began arriving in South Australia, the first migrants landing at Kangaroo Island on 20th July. The first South Australian newspaper was published in London. The colony's first school was opened on Kangaroo Island. The Surveyor-General, Col. Light, arrived in November and commenced the survey of Adelaide. Governor Hindmarsh arrived in H.M.S. *Buffalo* and proclaimed South Australia a Province on 28th December.
- 1837**—Col. Light completed the survey of Adelaide and designed the city's present layout. The first Adelaide land allotments were made. The first newspaper was published in South Australia. The South Australian Supreme Court was established. The first hospital was opened in North Terrace, Adelaide.
- 1838**—The first mobs of cattle arrived overland from New South Wales and the first overland drive of sheep was made later in the year. The first export from South Australia, a small clip of wool, was dispatched. The first German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.
- 1839**—Col. Light died at Thebarton and was buried in Light Square. The first road in South Australia was built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce was founded.
- 1840**—Eyre started his overland journey to Western Australia. The Municipality of Adelaide was incorporated, the first in Australia. McLaren Wharf, Port Adelaide, was opened by Governor Gawler.

- 1841—The first South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.
- 1842—The registration of births, deaths and marriages was commenced. Portions of South Australia were divided for the first time into counties. Copper was discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonization Commissioners was abolished by the British Government.
- 1843—The stripper was invented by Ridley. A flour mill was built at Hindmarsh.
- 1844—The first Colonial Census was held, and showed a population of 17,366.
- 1845—Copper was discovered at Burra. Sturt explored the north-eastern part of the State. Gold was found for the first time in South Australia, near Montacute. Assisted migration resumed.
- 1846—The first pastoral leases were granted.
- 1847—The first winery in the Barossa Valley commenced operation. St Peter's College was established.
- 1848—Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.
- 1849—The Central Board of Main Roads was established.
- 1850—An Act granting representative government to South Australia was passed by the British Parliament.
- 1851—The Central Board of Education was set up.
- 1852—The first overland gold escort arrived in Adelaide.
- 1853—W. R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the Murray.
- 1854—State's first railway (horse-drawn) built from Goolwa to Port Elliot.
- 1855—The first South Australian postage stamps were issued.
- 1856—The first telegraph line was opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government was proclaimed; it provided for Parliament to consist of two Houses—a Legislative Council and a House of Assembly. The first steam railway from Adelaide to Port Adelaide was constructed. The population of the State passed 100,000.
- 1857—A railway to Smithfield and Gawler was opened.
- 1858—The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operation. First telegraph line to Melbourne opened.
- 1859—A jetty over 1,200 feet in length was constructed at Glenelg. Copper was discovered at Wallaroo.
- 1860—Water was supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861—Copper was discovered at Moonta. Water was laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary was shifted west to coincide with the boundary of Western Australia.
- 1862—Stuart reached Chamber's Bay on the coast of the Northern Territory.

- 1863**—The administration of the Northern Territory was taken over by South Australia. The shops of Adelaide were lit for the first time with gas.
- 1865**—Annual leases of pastoral lands were sold by auction for the first time. The Bank of Adelaide was founded.
- 1866**—Camels were introduced by Sir Thomas Elder for the purposes of exploration. The Adelaide Town Hall was opened.
- 1867**—South Australia was visited by Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869**—The foundation stone of St Peters Cathedral was laid. Prince Alfred College was opened. Adelaide Chamber of Manufactures was founded.
- 1870**—The construction of the transcontinental telegraph from Port Darwin was commenced. John Forrest and party made the first of two journeys of exploration from Perth.
- 1872**—The transcontinental telegraph from Port Darwin was completed and the first direct telegram from London arrived.
- 1873**—The eight-hour working day was adopted. The first Health Act, establishing a Central Board of Health, was passed.
- 1874**—The University of Adelaide was founded.
- 1875**—The State Education Act was passed. The first Forestry Board was established.
- 1876**—Telegraph communication with New Zealand was established. The Smith brothers invented the "stump jump" plough. South Australia became the first State to give legal recognition to trade unions.
- 1877**—The overland telegraph line from Port Augusta to Eucla was completed and the first telegram from Perth was transmitted. The Adelaide Bridge was completed.
- 1878**—The provisions of the Education Act relating to compulsory school attendance were brought into force in the Adelaide school district. The first tramway in any Australian city commenced carrying passengers to Kensington and North Adelaide. It was horse-drawn.
- 1879**—The foundation stone of the Adelaide University was laid. First bridge across River Murray in South Australia opened at Murray Bridge. The State's population passed 250,000.
- 1881**—First reclamation of swamp areas of River Murray. The Art Gallery was opened by His Royal Highness Prince Albert Victor. The construction of the weir which created the Torrens Lake was completed.
- 1882**—Establishment of Fire Brigades Board.
- 1883**—The Telephone Exchange commenced operations.
- 1884**—The Largs Bay Fort was opened. The Adelaide Trades and Labor Council, the first delegates' society, was inaugurated.
- 1885**—The Broken Hill silver mines were opened. Roseworthy Agricultural College was founded. A column was erected on the Mount Lofty summit as a prominent landmark for mariners.
- 1887**—An Act authorizing payment to members of Parliament was passed. The Renmark Irrigation Colony was established. The first express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.

- 1888—The totalizator was legally authorized by an Act of Parliament.
- 1889—The School of Mines and Industries was opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.
- 1890—The first South Australian built locomotive was completed.
- 1892—Education was made free to the compulsory age and standard.
- 1894—An Act granting the franchise to women was passed by Parliament. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896—The State Bank of South Australia was opened. Women voted for the first time at the general election. The Happy Valley Reservoir was opened. One of Adelaide's most severe droughts commenced, and continued for several years.
- 1899—The second referendum concerning the establishment of Federation was held. In South Australia, 65,990 electors voted for federation and 17,053 against. The first military contingent left South Australia for the Boer War.
- 1900—Adelaide was for the first time lit with electric light. The Commonwealth of Australia Constitution Act received the Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from the 1st January 1901. The Conservatorium of Music was opened. The first Workmen's Compensation Act was passed.
- 1901—The early closing of shops was introduced. The first Commonwealth Parliament was elected. The Duke and Duchess of York arrived in the *Ophir*. The Commonwealth Customs Act came into force. The Electric Light Works was opened. Iron Knob was connected to Whyalla by railway.
- 1902—Flinders column, at Mount Lofty, was dedicated to the public by the Governor, Lord Tennyson.
- 1905—First kindergarten in South Australia was opened.
- 1906—The military cadet system was inaugurated.
- 1907—High schools were established in a number of country centres. The Municipal Tramways Trust was incorporated. The first Commonwealth basic wage judgement—the "Harvester" award—was made.
- 1908—Penny Savings Banks bank accounts for children were established. The Outer Harbor was opened. The Adelaide High School was established.
- 1909—The Adelaide Electric Tramways commenced operations. The payment of old age pensions by the Commonwealth was commenced.
- 1910—The payment of invalid pensions by the Commonwealth was commenced. The first recorded monoplane flight in Australia was made by F. C. Custance at Bolivar.
- 1911—"Penny Postage" to all parts of the British Empire was introduced. The Federal Defence Act came into operation. The administration of the Northern Territory was transferred to the Commonwealth.
- 1913—Medical inspection of school children was introduced. The Commonwealth Bank was formally opened. The Metropolitan Abattoirs was established.

- 1914**—The South Australian quota of the first military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.
- 1915**—The prices of commodities were fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women were appointed as justices of the peace for the first time. The first shipment was made of iron ore from Whyalla to the steelworks in Newcastle. The first women police were appointed. Opal was discovered at Coober Pedy.
- 1916**—A referendum proposing compulsory military service abroad was defeated. The first Public Service Commissioner was appointed. The first State living wage with general application was declared.
- 1917**—German private schools in South Australia were closed. The East-West transcontinental railway was completed and the first train ran to Perth.
- 1918**—Wool clip was purchased by the British Government at a flat rate of 13c per lb.
- 1919**—Captain Butler flew across Gulf St Vincent from Adelaide to Minlaton to carry the first mail by air in South Australia. The Soldier Settlement Bill was passed by the South Australian Parliament. The first Lord Mayor of Adelaide was elected.
- 1920**—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. A Peace Exhibition was held at the Jubilee Exhibition Buildings. The Prince of Wales visited South Australia.
- 1921**—The State's population passed 500,000.
- 1922**—The first lock on the River Murray was completed and opened at Blanchetown.
- 1923**—The Government approved an extensive re-organization of the railway system.
- 1924**—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney was inaugurated. The Waite Agricultural Research Institute was established. First radio stations commenced broadcasting.
- 1925**—The Show Grounds at Wayville were opened. The first Commonwealth election at which voting was compulsory took place. The foundation stone of Adelaide Teachers Training College was laid.
- 1926**—The South Australian barley exhibit won all prizes at the Brewers' Exhibition in London. The State Bank opened for general banking business. The construction of a 3ft. 6in. gauge railway from Oodnadatta to Alice Springs was approved. The State petrol tax was declared invalid following a Commonwealth writ against the State.
- 1927**—The extension of the North-South railway was commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.
- 1929**—The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training was abolished and replaced by a voluntary system. The electric tram service to Glenelg was commenced.

- 1930**—All officers of the South Australian Public Service over the age of 65 years were compulsorily retired. The State Finance Committee was appointed. The South Australian basic wage was reduced by 18c to \$1.25 per day. The Unemployed Relief Council was appointed. The Transport Control Board was appointed.
- 1931**—The City Bridge was opened. The Financial Plan formulated at the Premiers' Conference was adopted and the Financial Emergency Act was passed. The Commonwealth basic wage was reduced by 10% for 12 months but was to be adjusted in accordance with a retail price index. The State basic wage was reduced from \$1.25 to \$1.05 per day. The basic wage for females was reduced, first from \$3.95 to \$3.50 and later to \$3.15.
- 1932**—The boundaries and names of a number of local government areas were changed while others were abolished following the report of a commission.
- 1933**—Wool auction values for the season rose 6c to 12c per lb. The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board were appointed.
- 1934**—Water restrictions were in force from May until the following January.
- 1935**—The Nomenclature Act of 1935 restored the former German names to a number of towns whose names had been changed in 1917.
- 1936**—The centenary year of the State's foundation was celebrated. A contract was signed for the completion of Parliament House and the foundation stone was laid by the Governor, Sir Winston Dugan.
- 1937**—The South Australian Housing Trust was appointed. A new Commonwealth basic wage of \$7.40 per week which incorporated a "prosperity" loading was declared. The first trolleybus service was inaugurated. The Mount Bold reservoir with a capacity of 6,662 million gallons was filled, almost doubling Adelaide's water storage. Schools were closed and other precautions were taken as a result of an epidemic of poliomyelitis.
- 1938**—The first dwelling to be built by the South Australian Housing Trust was completed.
- 1939**—The State's worst heat wave and disastrous bush fires were experienced during the first two months of the year. A record high temperature of 117.7°F was recorded in Adelaide. The new Parliament House was opened by His Excellency the Governor-General, Lord Gowrie.
- 1940**—The Goolwa Barrage was completed at a cost of \$1,400,000. The Birkenhead Bridge was opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.
- 1941**—Scriptural instruction in State schools was commenced. The first naval vessel built in South Australia was launched. The first blast furnace to be built at Whyalla went into operation. Child endowment payments were inaugurated. Pay-roll tax was commenced.
- 1942**—Daylight saving of one hour was introduced for almost three months. Wages and prices were pegged and profits and interest rates were restricted. Racing and bookmaking were prohibited. Rationing of tea, liquors and clothing was commenced. Widows' pensions were instituted. The uniform Income Tax Act came into force. The first coal was obtained from Leigh Creek.

- 1943**—Price stabilization legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing was resumed but betting shops remained closed.
- 1944**—The rationing of meat began. The Morgan-Whyalla pipeline was officially opened. The first State election with compulsory voting took place. Water restrictions, including a ban on the use of water sprinklers, were imposed. First output of Leigh Creek coal for electricity generation.
- 1945**—Unemployment and sickness benefits came into operation. Restrictions were imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946**—Commonwealth munition factories were taken over by various private firms. The payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity were again imposed. The South Australian Electricity Trust took over the property and functions of the Adelaide Electric Supply Co. Many foundries closed down for approximately six months because of an industrial dispute. A strike by gas workers took place.
- 1947**—The fruit fly was detected in metropolitan orchards and efforts were made to eliminate it by stripping gardens and orchards. Sugar rationing was abolished. Conciliation commissioners were appointed following an amendment to the Commonwealth Conciliation and Arbitration Act. Severe restrictions were imposed on imports from North America.
- 1948**—Restrictions on the use of gas and electricity were imposed on a number of occasions during the year because of the shortage of coal. The preparation of the Woomera rocket range commenced. The number of hours constituting a working week was reduced to 40 by an Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. A referendum on Commonwealth price control was defeated. The free medicine scheme came into operation. Clothing and meat rationing were abolished. The control of prices was handed to the States by the Commonwealth. Full-scale production of the "Holden" car commenced.
- 1949**—Petrol rationing by the Commonwealth was declared illegal but was resumed later in the year under a State Act. An Australia wide strike lasting nearly 7 weeks took place in the black coal industry. A water pipeline to the Woomera rocket range was completed. The Commonwealth and South Australian Governments ratified an agreement for the standardization of railway gauges.
- 1950**—Petrol, butter and tea rationing were discontinued. The Commonwealth free drugs scheme came into operation. A railways strike lasting nearly 4 weeks took place. The basic wage was increased by \$2 per week. Water restrictions were imposed in December and remained in force until June 1951.
- 1951**—Serious bush fires occurred in January. Wool prices reached a record high level. The distribution of free milk to school children was introduced. The employees of the Adelaide abattoirs were dismissed following an industrial dispute but work was resumed approximately four weeks later.

- 1952**—The hospital benefits scheme came into operation. Price control on clothing was removed in South Australia. Severe import restrictions were gazetted. Installations for the bulk handling of grain were opened at Ardrossan. The Port Pirie smelters were closed from December until February 1953 as a result of an industrial dispute. Compulsory Chest X-rays were introduced.
- 1953**—The remaining controls on building were removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage were discontinued. The size of the State Cabinet was increased from 6 to 8 Ministers.
- 1954**—A severe earthquake occurred in Adelaide on 1st March. Queen Elizabeth Hospital at Woodville was officially named by Her Majesty Queen Elizabeth II during her visit to South Australia. The Port Augusta power station was opened. The construction of dwellings in Elizabeth was commenced. The Radium Hill mines and treatment works were officially opened. Water from the River Murray was pumped into metropolitan reservoirs through the Mannum pipeline.
- 1955**—The Adelaide Airport at West Beach was opened. The Mannum-Adelaide pipeline was officially opened. The sulphuric acid plant at Port Adelaide commenced operations. Uranium treatment at Port Pirie also commenced. Damage was caused by a plague of grasshoppers. The South Australian Co-operative Bulk Handling Co. took over the bulk handling silo. The new satellite town at Elizabeth was officially opened.
- 1956**—The River Murray was flooded for several months and caused considerable damage in irrigation and reclaimed areas. The Town Planning Committee was appointed. A pyrites plant at Nairne was opened. Charges for beds in public wards at the Royal Adelaide Hospital were made for the first time. An atomic device was exploded at Maralinga. Start of poliomyelitis vaccination programme using Salk vaccine.
- 1957**—The centenary of responsible government in South Australia was celebrated. Long service leave legislation was passed by the South Australian Parliament.
- 1958**—Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.
- 1959**—Drilling commenced at State's deep oil exploration well at Innamincka. Master plan for beautification of Adelaide's parklands commenced. South Australia ceased to be a claimant State for special grants from Commonwealth Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford reached a record term as Premier in a British country. Record low rainfall for Adelaide (11.32 inches during year). Aborigines became eligible for age, invalid and widows' pensions.
- 1960**—Closing of banks on Saturday mornings. First Adelaide Festival of Arts held (March 12-26). Discovery of high grade limesand deposits near Coffin Bay. Opening of Thomas Playford power station at Port Augusta. Addition of removable spillway gates to South Para reservoir increased storage capacity to 11,300 million gallons.

- 1961**—First United Kingdom Trade Commissioner appointed to South Australia. Compulsory driving tests introduced. The trailer ship *Troubridge* made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem. Production ceased at Radium Hill uranium mine. Post trading replaced call system at stock exchange.
- 1962**—Tanker *P. J. Adams* of 32,000 tons—the largest ship built in Australia to this time—launched at Whyalla. Deliveries of bulk wheat from farms exceeded the quantity of bagged grain for the first time. Myponga reservoir completed and linked to Happy Valley reservoir. Duplication of Morgan-Whyalla pipeline commenced. Storage capacity of Mount Bold reservoir increased to 10,440 million gallons. World record price of \$26,250 paid for a Merino ram at Adelaide Royal Show. Conduct of public examinations at candidates' own schools approved.
- 1963**—Population of the State passed 1,000,000 mark. Port Stanvac oil refinery "on stream". School leaving age increased to 15 years. Three weeks' annual leave for employees governed by State awards and determinations introduced. Ratifying legislation passed for construction of Chowilla dam. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well.
- 1964**—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. Construction of new blast furnace at Whyalla commenced. Bridge over River Murray at Blanchetown opened. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (92 m.p.h.) and all-time low barometric reading (29.09 inches) registered at Adelaide on 12th July. New world land speed record set by Donald Campbell on Lake Eyre. New motor body building and assembly plant officially opened at Tonsley Park.
- 1965**—Tenders called for first on-site construction work for Chowilla dam. Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First tenders let for Torrens Island power structure. First woman judge in Australia appointed to Supreme Court of South Australia. The size of the State Cabinet was increased from 8 to 9 Ministers.
- 1966**—Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Queen Elizabeth, the Queen Mother. Second major natural gas strike in Gidgealpa area. New outlet tunnel 9,000ft. long from Happy Valley Reservoir completed. ELDO rocket Europa-1 launched at Woomera. Adelaide Central Market opened after rebuilding. Industrial Commission of S.A. replaced the S.A. Board of Industry. Contract let for 700ft. diversion tunnel at site of Kangaroo Creek dam. Legislation enacted to permit registration of medical practitioners trained outside of South Australia. The 55,000 ton bulk ore carrier *Bogong* launched at Whyalla.
- 1967**—Introduction of alpha-numero number-plates for motor vehicles. Approval obtained for loans totalling \$35 million to build a natural gas pipeline from Moomba-Gidgealpa to Adelaide. Totalizator Agency Board operated in South Australia for first time. First books moved into new State Library building. First South Australian lottery drawn.

APPENDIX C

RECENT INFORMATION

In this section details are given of some important developments which have occurred recently.

More up-to-date statistics than those shown in this volume are regularly incorporated in various statistical publications as they become available. A List of Publications is set out on page 575.

PART 1—NATURAL ENVIRONMENT

Weather Conditions in South Australia (page 19)—Following heavy rains in December 1966, below average falls, which have been experienced in most areas, have given rise to widespread dry conditions throughout the State.

PART 6—SOCIAL ENVIRONMENT

Social Welfare (Pages 207-208)—In the Federal Budget presented by the Treasurer, Mr McMahon, on 15th August 1967, it was proposed to increase child endowment payments in respect of the fourth and subsequent children.

The proposed weekly payments, to operate from October 1967, are as follows: \$1.75 for the fourth child (increase of 25c), \$2 for the fifth child and rising by 25c for each subsequent child.

Full-Blood Aboriginals (Page 222)—Preliminary results of the Census of 30th June 1966, released on 11th August 1967, showed that there were 2,931 full-blood Aboriginals (1,578 males and 1,353 females) in South Australia compared with 2,147 (1,181 males and 966 females) at 30th June 1961.

PART 7—LABOUR

Commonwealth Basic Wage (page 253)—On 5th June 1967 the Full Bench of the Commonwealth Arbitration Commission handed down its decision in the National Wage Case and announced "the elimination of basic wages and margins and the introduction of total wages".

An increase of \$1 per week was awarded to all adult employees (significant in that the same increase was awarded to both adult females and adult males) to operate from the beginning of the first pay-period commencing on or after 1st July 1967.

The State living wage, which has been the same as the basic wage for South Australia since February 1950, was increased to the same level as the total wage for South Australia, the increase to operate from the same date as the new total wage.

From July 1967 the State living wage is \$33.30 for males and \$25.20 for females.

PART 8—PHYSICAL DEVELOPMENT

River Murray Agreement (page 278)—Early in August 1967, the River Murray Commission announced the deferment of the Chowilla Dam project while investigations are made in relation to the cost structure and certain technical problems which have recently arisen.

The investigations are expected to take approximately six months with a further eighteen months required for study of the findings before a final decision is made regarding the future of the project.

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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS
SOUTH AUSTRALIAN PUBLICATIONS

Publication	Price		Latest Issue at 5th Oct., 1967	Month of Issue
	Ex- cluding Postage	In- cluding Postage (a)		
	\$	\$		
PRINTED—				
<i>Annual—</i>				
South Australian Year Book	1.00	1.29	1966	May, 1966
Statistical Register of South Australia—				
Part I—Social	0.40	0.49	1964-65	June, 1967
Part II—Demography	0.40	0.53	1964-65	Aug., 1967
Part III—Finance	0.40	0.49	1964-65	June, 1967
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Part VI—Transport and Communication	0.40	0.49	1964-65	May, 1967
Part VII—Statistical Summary	0.40	0.49	1964-65	Sept., 1967
Bound Volume	3.00	3.53	1963-64	Nov., 1966
Pocket Year Book of South Australia ..	(b)	(b)	1966	Dec., 1966
<i>Quarterly—</i>				
Quarterly Abstract of South Australian Statistics	0.25 (c)	0.34	June, 1967	June, 1967
DUPLICATED—				
<i>Annual—</i>				
Cereal Harvest Estimate	Free		1966-67	Jan., 1967
Cereals	Free		1965-66	Oct., 1966
Rural Production	Free		1965-66	Nov., 1966
Livestock	Free		1965-66	Sept., 1966
Machinery on Rural Holdings	Free		1965-66	Jan., 1967
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Vintage Estimate	Free		1966-67	June., 1967
Wine and Spirits	Free		1965-66	Dec., 1966
Factories	Free		1965-66	June, 1967
General Insurance	Free		1965-66	Feb., 1967
Oversea Trade	Free		1966-67	Sept., 1967
Births, Deaths and Marriages	Free		1966	Apr., 1967
Divorce	Free		1966	Aug., 1967
Industrial Accidents	Free		1965-66	Dec., 1966
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Oversea Trade	Free		Mar. Qr., 1967	June, 1967
<i>Monthly—</i>				
Monthly Summary of Statistics	Free		Sept., 1967	Sept., 1967
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Chicken Hatchings and Poultry Slaugh- terings	Free		Aug., 1967	Oct., 1967

(a) Price including postage within Australia.

(b) Single copies free; for additional copies a charge of 15c each may be made.

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