

# Product Brief

## Concordances

### Introduction

The Australian Bureau of Statistics (ABS) has developed several concordance products that enable users to convert data for one type of geographic area to another.

There are two types of concordances that the ABS produces, a population based concordance and an area based concordance.

The area based concordance expresses the percentage of the “From” area contained within the “To” area. . The population weighted concordance expresses the percentage of the “From” area’s population contained within the “To” area.

### The Population Based concordance

Each area being concorded is made up of one or more Census Collection Districts (CDs). A CD is the smallest geographical unit used for the collection and dissemination of Population Census data. CDs cover the whole of Geographic Australia without gaps or overlaps.

The population ratio is calculated by summing the populations of the CDs within a “From Area” and expressing this as a percentage based on the populations of the CDs within the “To Area” total population. These concordances are available for census editions of the ASGC.

### The Area Based concordance

The area based concordance is based on the area of the “From” area contained in the “To” Area. This is calculated by a simple GIS method.

In the area based concordance there may be situations where the boundaries do not align perfectly and a very, very small percentage of one area is contained in another. In these cases if the percentage calculated is below 0.001 percent then the figure is set to zero (0), similarly if the percentage is greater than 99.999 percent the value is set to 1.0.

### The Difference between the two

This means that while 50% of a particular “From Area” may be allocated to the “To Area” in an area based concordance there may be 75% of the population residing in the sector being allocated.

## File Format

The file naming convention is :

Character	Meaning
1	“C” for Concordance
2	“A” for Area Based Concordance “P” for Population Based Concordance
3-6	Year of To Area
7-9	Type of To Area eg, “SLA” **
10	“ _ ”
11-14	Year of From Area
15-17	Type of From Area eg, “SLA” **

\*\* in some cases the Area type is two characters, eg “MB”, adjust character count appropriately

For Example

CA2006SLA\_2006MB.txt is the text file containing the information concurring 2006 Mesh blocks to 2006 SLAs based on the area concordance principal.

The “From Area” and “To Area” naming convention is “Mathematically based”

“To Area” = “From Area” multiplied by ratio

105051100 = 123456565 \* 0.505

105051200 = 123456565 \* 0.595

This concordance file is a comma-delimited text file.

Field Name***	Type
To area Code	Character
To area Name	Character
From Area Code	Character
From Area Name	Character
Ratio	Number
Percentage	Number

\*\*\* Field Names will vary from file to file but are consistent in nature. The field name is constructed from the area type and date. For example the code field from the 2006 SLA file will have the name “SLA\_2006\_Code”, whereas a Postal Area Name field from the 2001 Postal Area file will have the name “POA\_2001\_Name”. It is important to note the placement/ positioning convention as it is similar to the file naming convention

Percentage – figure expressed as a percentage ranges from 100 to 0

Ratio – figures expresses as part of 1 – actual figures can be up to 10 decimal places and are expressed in mathematical terms - 4.77810788750317e-04 which is 0.000477810788750317

“SLA\_2006\_Code”, “SLA\_2006\_Name”, “CD\_2001\_CODE”, “CD\_2001\_Name”, “Ratio”, “Percent”

“155200300”, “Balranald (A)”, “1010101”, “1010101”, 1.00, 100.00

“155200300”, “Balranald (A)”, “1010102”, “1010102”, 1.00, 100.00  
“155200300”, “Balranald (A)”, “1010103”, “1010103”, 1.00, 100.00  
“155200300”, “Balranald (A)”, “1010104”, “1010104”, 1.00, 100.00

Or

“SLA\_2006\_Code”, “SLA\_2006\_Name”, “SLA\_2005\_Code”, “SLA\_2005\_Name”, “Ratio”, “Percent”  
“105051100”, “Botany Bay (C)”, 105051100, “Botany Bay (C)”, 0.9795, 97.95  
“105051100”, “Botany Bay (C)”, 105055200, “Marrickville (A)”, 1.4989195026137e-04, 0.01  
“105051100”, “Botany Bay (C)”, 105106550, “Randwick (C)”, 4.77810788750317e-04, 0.04

The “From Area” and “To Area” naming convention is “Mathematically based”

“To Area” = “From Area” multiplied by ratio  
 $105051100 = 105055200 * 0.9795$   
 $105051100 = 105055200 * 0.0001$   
 $105051200 = 105106550 * 0.0004$

## Contact

For enquiries contact the ABS Geography Section, see details below.

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**Geography Section**  
Email: [geography@abs.gov.au](mailto:geography@abs.gov.au)

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## Related Information

Treatment of Zero Population Regions

In some cases when using the population based concordance the “From Area” may contain zero population. In these cases the “From Area” the ratio is based on an area split.