

2014 Locality to 2014 Non-ABS Structures Local Government Area (LGA) Coding Index

Background

The Locality Coding Index was developed to replace the 'Localities Index' within the National Localities Index (NLI) which was discontinued in 2007 (the 2007 edition was the final release of the NLI).

Since 2008 the Locality Coding Index was built from localities in the Geocoded National Address File (G-NAF) plus PSMA Australia localities along with a list of Localities/Aliases maintained by the ABS. G-NAF was then used as a weighting factor to determine which Statistical Local Area (SLA) / ABS approximated Local Government Area (LGA) boundary would be associated with a given Locality/Postcode/State combination.

In 2011 the ABS introduced a new statistical geography, the Australian Statistical Geography Standard (ASGS). In the ASGS, the Statistical Area Level 2 (SA2) is the equivalent region to the old Australian Standard Geographical Classification (ASGC) SLAs. The SA2s however, have no association with the LGAs, therefore there were no 'Locality to LGA Coding Indexes' for the ASGS approximated LGAs until now.

This 'Locality to LGA Coding Index' utilises a methodology discussed in this documentation to allocate the localities to the 2014 LGAs.

Description

The 'Locality to LGA Coding Index' is a text based list of Localities with the 2014 edition approximated LGAs that is associated with them. The objective of this coding index is to aid the linking of data geocoded to Suburb/Locality to the 2014 edition of the Non ABS Structures LGA. In cases where users have unit record data that does not contain whole addresses, but does contain suburb/locality and Australia Post postcode information, an association with the LGA level of the Non ABS Structures can be obtained. In this instance the postcode is important as Locality names are not necessarily unique, even within a State/Territory – the postcode aids in identifying the correct Locality.

The index functions by searching for a Locality/Postcode/State combination to see which LGA is associated with that locality. In cases where a Locality/Postcode/State combination covers more than one LGA the boundary with the greater population is chosen as the associated LGA. Care should be taken when applying coding indexes, as the transformed areas may not be wholly within their associated LGA region. Coding indexes do not apportion data – they assign whole areas to the most appropriate region within the approximated LGA geography. As a general rule, small areas can be assigned more accurately than large areas.

Format

The 'Locality to LGA Coding Index' is provided as a delimited text file. Commas are used as the delimiter and double quotes are used to identify text.

Format of the 'Locality to LGA Coding Index':

```
"LOCALITY_ID","LOCALITY_NAME","LOCALITY_TYPE","POSTCODE","STATE","LGA_CODE","LGA_NAME","RATIO","PERCENT"

"ACT107","ACTON","GAZETTED LOCALITY","2601","ACT","89399","Unincorporated ACT","1.0","100.0"

"ACT107","ANU","ALIAS LOCALITY","2601","ACT","89399","Unincorporated ACT","1.0","100.0"

"ACT107","AUSTRALIAN NATIONAL UNIVERSITY","ALIAS LOCALITY","2601","ACT","89399","Unincorporated ACT","1.0","100.0"

"ACT107","SPINNAKER ISLAND","ALIAS LOCALITY","2601","ACT","89399","Unincorporated ACT","1.0","100.0"

"ACT107","SPRINGBANK ISLAND","ALIAS LOCALITY","2601","ACT","89399","Unincorporated ACT","1.0","100.0"

"ABS195","ACTON PARK","EXTRA LOCALITY","2601","ACT","89399","Unincorporated ACT","1","100"

"ACT104","AINSLIE","GAZETTED LOCALITY","2602","ACT","89399","Unincorporated ACT","1.0","100.0"

"ACT104","CANBERRA CENTRAL","ALIAS LOCALITY","2602","ACT","89399","Unincorporated ACT","1.0","100.0"
```

Source Data

The source of localities and Aliases for the 'Locality to LGA Coding Index' are detailed below:

Localities are sourced from:

- PSMA Australia Gazetted Localities
- ABS Extra Localities

Aliases are sourced from:

- PSMA Australia Aliases
- ABS Aliases

The attributes for the 'Locality to LGA Coding Index' are as follows:

Data Item	Source	Description
LOCALITY_ID	August 2014 PSMA edition of Gazetted Localities and common aliases. ABS Extra Localities and ABS Aliases file.	ID associated with the locality, also indicates the different datasets that the locality is sourced from.
LOCALITY_NAME	August 2014 PSMA edition of Gazetted Localities and common aliases. ABS Extra Localities and ABS Aliases file.	The Name of the gazetted locality, alias or extra locality.
LOCALITY_TYPE	August 2014 PSMA edition of Gazetted Localities and common aliases. ABS Extra Localities and ABS Aliases file.	Informs the client whether the locality is: Gazetted Locality, Alias Locality or Extra Locality.
POSTCODE	Several sources are used to derive postcodes.	The Australia Post Postcode associated with each gazetted locality, alias or extra locality.
STATE	2011 ASGS	State/Territory Abbreviation

LGA_CODE	2014 Non-ABS Structure LGA	Code for the ABS Mesh Block approximated Local Government Area (LGA) from the Non ABS Structures of the ASGS.
LGA_NAME	2014 Non-ABS Structure LGA	Name for the ABS Mesh Block approximated Local Government Area (LGA) from the Non ABS Structures of the ASGS.
RATIO	Created during the association process in FME.	Describes the Ratio of the 'FROM' region that is being donated to the 'TO' region. The Ratio is a figure between 0 and 1. This field gives the client an indication as to how good the association between the localities and the LGA is.
PERCENT	Created during the association process in FME.	Describes the Percentage of the 'FROM' region that is being donated to the 'TO' region. The Percentage is the Ratio multiplied by 100. This field gives the client an indication as to how good the association between the localities and the LGA is.

Further information on the Non ABS Structures of the ASGS and the 2014 Mesh Block approximated LGA digital boundaries can be found in the following product:

[Australian Statistical Geography Standard \(ASGS\): Volume 3 – Non ABS Structures, July 2014 \(cat no. 1270.0.55.003\)](#)

The Process

The 'Locality to LGA Coding Index' is built using an FME script process. The FME script is based on the FME script that is used to build the population weighted Mesh Block (MB) grid based correspondences. This method is essentially a series of grid points that represent the underlying geographical distribution of the weighting unit, which in this case is the MB total population. Each grid point is assigned a value based on this weighting. The next step in this process is to determine the proportion that the locality, as the FROM unit, is donating to the respective LGA TO units. The proportion is calculated by dividing the population found in each of the TO regions by the total population of the FROM region. Further information on the generation of correspondences can be found in the following publication:

[Australian Statistical Geography Standard \(ASGS\): Correspondences, July 2011 \(cat no. 1270.0.55.006\)](#)

However, unlike the population weighted grid based correspondences, instead of outputting all ratios for statistical boundaries covering a given Locality/State/Postcode combination, only the locality with the largest ratio of population for the given statistical boundary is output. This means where a locality is covered by two or more LGAs the locality has been allocated to the LGA where most of its population are located according to the underlying grid. This ensures a specific gazetted

locality/alias/extra locality entry is represented only once in the file and is allocated wholly to a specific LGA.

The ratio and percentage have remained in the file to allow clients to evaluate how close a match the locality is to the LGA. It provides the client with an indication as to how good the association between the specific locality and the LGA is. The higher the ratio/percentage the better the match between locality and LGA, and the more confident you can be in the quality of the association.

Working with the 'Locality to LGA Coding Index'

The 'Locality to LGA Coding Index' is a comma delimited ASCII text file (.txt) which has been designed to be easily loaded into a wide variety of computer systems and database software. All the fields (columns) within this file are delimited with a comma and all the data items are surrounded by double quotes. The double quotes allow software packages (such as Microsoft Excel) to identify the data items as text. This is important when dealing with Postcodes that can be associated with leading zeros.

The ABS recommends that all ABS statistical geography codes should be stored as text. This prevents the application of numerical operators to the classification codes.

Loading the 'Locality to LGA Coding Index' with Microsoft Excel 2010/2011

The 'Locality to LGA Coding Index' can be read into Microsoft Excel, but to force Microsoft Excel 2010/2011 to format fields as text rather than numeric the imported file needs to be processed by the 'Text Import Wizard'.

Step 1

Open 'Text Import Wizard' by using the File | Open option. In the associated Open dialogue box choose the Text Files (*.prn, *.txt, *.csv) option.

This will start the first step of the 'Text Import Wizard'. Select the 'Delimited' option and click the 'Next' button.

Text Import Wizard - Step 1 of 3

The Text Wizard has determined that your data is Delimited.
If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

☒ **Delimited** - Characters such as commas or tabs separate each field.

☐ Fixed width - Fields are aligned in columns with spaces between each field.

Start import at row: File origin:

Preview of file M:\Work\Locality_Index\LOCALITY_LGA_2013_QUOTE.TXT.

1	"LOCALITY_ID", "LOCALITY_NAME", "LOCALITY_TYPE", "POSTCODE", "STATE", "LGA_CO
2	"ACT107", "ACTON", "GAZETTED LOCALITY", "2601", "ACT", "89399", "Unincorporated
3	"ACT107", "ANU", "ALIAS LOCALITY", "2601", "ACT", "89399", "Unincorporated ACT
4	"ACT107", "AUSTRALIAN NATIONAL UNIVERSITY", "ALIAS LOCALITY", "2601", "ACT", "
5	"ACT107", "SPINNAKER ISLAND", "ALIAS LOCALITY", "2601", "ACT", "89399", "Uninc

Buttons: Cancel, < Back, Next >, Finish

Step 2

Select the 'Comma' option from the list of delimiters and make sure the double quote is selected as the 'Text qualifier'. Click the 'Next' button.

Text Import Wizard - Step 2 of 3

This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

Delimiters

☐ Tab

☐ Semicolon

☒ **Comma**

☐ Space

☐ Other:

☐ Treat consecutive delimiters as one

Text qualifier:

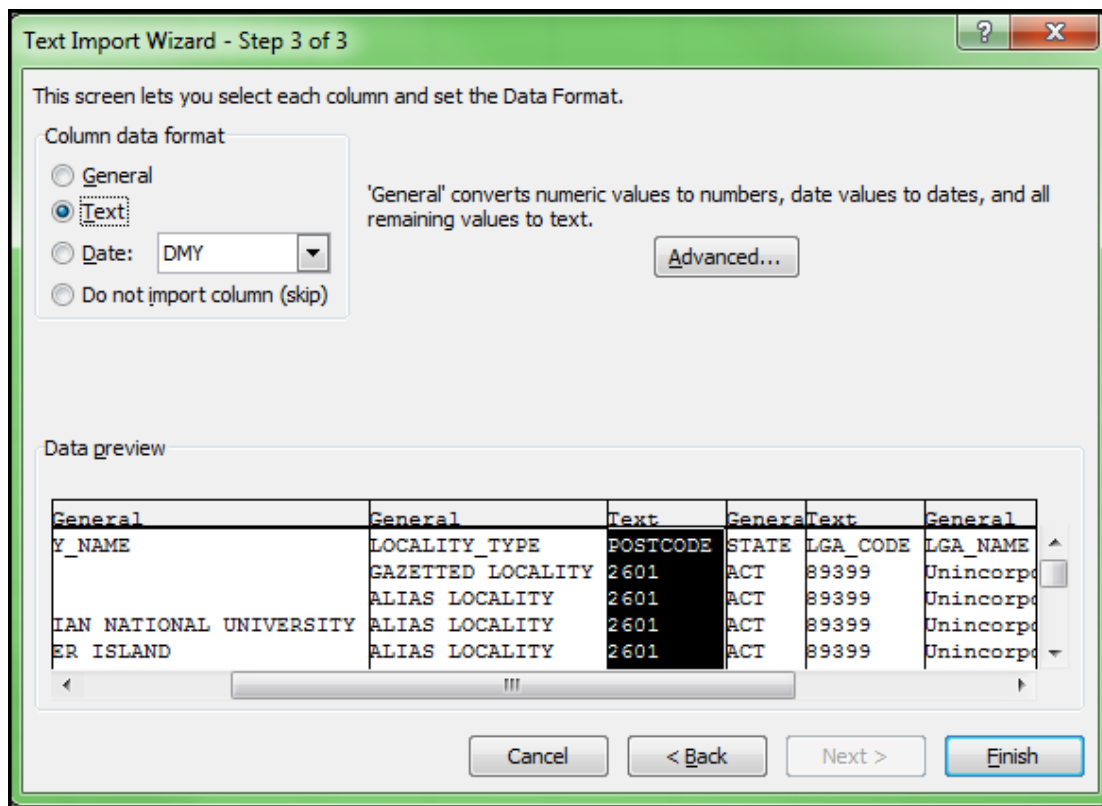
Data preview

LOCALITY_ID	LOCALITY_NAME	LOCALITY_TYPE	POSTCODE	STATE
ACT107	ACTON	GAZETTED LOCALITY	2601	ACT
ACT107	ANU	ALIAS LOCALITY	2601	ACT
ACT107	AUSTRALIAN NATIONAL UNIVERSITY	ALIAS LOCALITY	2601	ACT
ACT107	SPINNAKER ISLAND	ALIAS LOCALITY	2601	ACT

Buttons: Cancel, < Back, Next >, Finish

Step 3

Select the column holding the POSTCODE in the 'Data preview' frame and change the 'Column data format' from 'General' to 'Text'. Repeat this for the LGA_CODE column. Click the 'Finish' button.



Once loaded the POSTCODE and LGA_CODE should be stored as text. This is indicated by the green triangle in the top right hand corner of the storage cell.

	A	B	C	D	E	F	G	H	I
1	LOCALITY_ID	LOCALITY_NAME	LOCALITY_TYPE	POSTCODE	STATE	LGA_CODE	LGA_NAME	RATIO	PERCENT
2	ACT107	ACTON	GAZETTED LOCALITY	2601	ACT	89399	Unincorporated ACT	1	100
3	ACT107	ANU	ALIAS LOCALITY	2601	ACT	89399	Unincorporated ACT	1	100
4	ACT107	AUSTRALIAN NATIONAL UNIVERSITY	ALIAS LOCALITY	2601	ACT	89399	Unincorporated ACT	1	100
5	ACT107	SPINNAKER ISLAND	ALIAS LOCALITY	2601	ACT	89399	Unincorporated ACT	1	100
6	ACT107	SPRINGBANK ISLAND	ALIAS LOCALITY	2601	ACT	89399	Unincorporated ACT	1	100
7	ABS195	ACTON PARK	EXTRA LOCALITY	2601	ACT	89399	Unincorporated ACT	1	100
8	ACT104	AINSLIE	GAZETTED LOCALITY	2602	ACT	89399	Unincorporated ACT	1	100

Save the formatted Excel file to your computer.