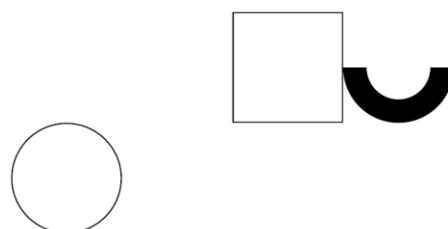
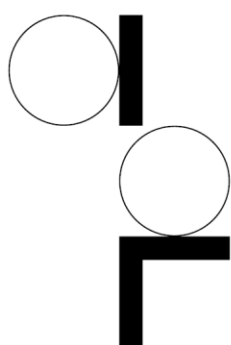
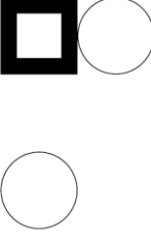
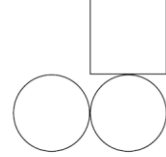


# Local Government Areas

**Product Guide**  
Version 1.0

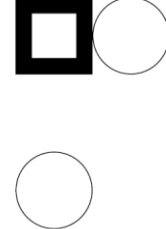




## **Disclaimer**

Geoscape Australia endeavours to ensure that the information in this document is correct at the time of publication. It does not accept responsibility for any consequences arising from the use of this information. Readers should rely on their own skill and judgement to apply the information to particular issues.

© Geoscape Australia. This work is copyright. Apart from any use permitted under the Copyright Act 1968 (Cth), no part may be reproduced, copied, scanned, stored in a retrieval system, recorded, or transmitted in any form or by any means without the prior written permission of Geoscape Australia.



# Contents

<b>Preface .....</b>	<b>4</b>
Responsible Party .....	4
Copyright and disclaimer .....	4
Privacy .....	4
<b>Product Version .....</b>	<b>5</b>
<b>Overview .....</b>	<b>5</b>
<b>Technical Description .....</b>	<b>6</b>
Linkages .....	6
Attributes .....	7
Data Model .....	7
Data Dictionary .....	8
Domain Values .....	8
Update Frequency .....	8
Data Quality .....	9
Extent/Geographic Description .....	10
Spatial Reference System .....	11
Delivery Format .....	11
Product Versioning .....	13
<b>Annex A - User Guide .....</b>	<b>14</b>
Unpacking the Local Government Areas Product .....	14
Linking Admin Boundaries to Local Government Areas .....	16



# Preface

## Responsible Party

**PSMA Australia Limited trading as Geoscape Australia**

ABN: 23 089 912 710

Unit 6, 113 Canberra Ave, GRIFFITH ACT 2603 Australia

T: +61 2 6260 9000

E: [info@geoscape.com.au](mailto:info@geoscape.com.au)

URL: [www.geoscape.com.au](http://www.geoscape.com.au)

## Copyright and disclaimer

Please see [geoscape.com.au/legal/data-copyright-and-disclaimer/](http://geoscape.com.au/legal/data-copyright-and-disclaimer/)

## Privacy

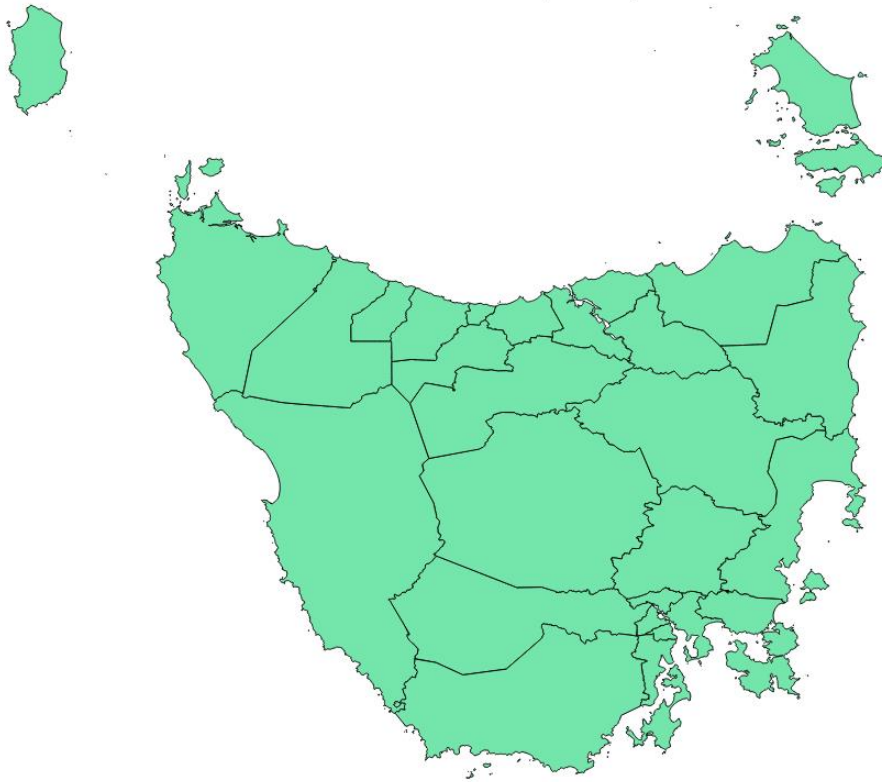
Geoscape products and services should not contain any personal names or other personal information. Geoscape undertakes reasonable data cleansing steps as part of its production processes to ensure that is the case. If you think that personal information may have inadvertently been included in Geoscape products or services, please contact [support@geoscape.com.au](mailto:support@geoscape.com.au).

# Product Version

1.0

## Overview

Local Government Areas is a spatial representation of the administrative divisions that local governments are responsible for across the country. A Local Government Area (LGA) will typically have an elected council as well as a council leader (e.g. mayor, shire president). Local Government Areas aggregates the representations unique to each jurisdiction into a consistent, seamless representation of the LGA boundaries across Australia.



Local Government Areas is designed to meet the needs of organisations that require a geospatial representation of LGA boundaries at both a local and national scale. The attribution provided within Local Government Areas allows for the application of the data across a wide range of commercial, government and research uses.

Geoscape Australia welcomes your feedback on our Local Government Areas product. We also publish regular updates on the development of our products on the Geoscape website ([www.geoscape.com.au](http://www.geoscape.com.au)).

# Technical Description

Local Government Areas is created through processing LGA data sourced from Australia’s States and Territories. Source attributes are mapped and standardised to provide a coherent definition across the jurisdiction supplies, with associated geometry being cleaned and processed to output a topologically consistent layer of Australia’s LGA boundaries at a national scale. Additional attributes have been generated and integrated by Geoscape to support the jurisdictional information as well as to provide convenience in the use and representation of the dataset.

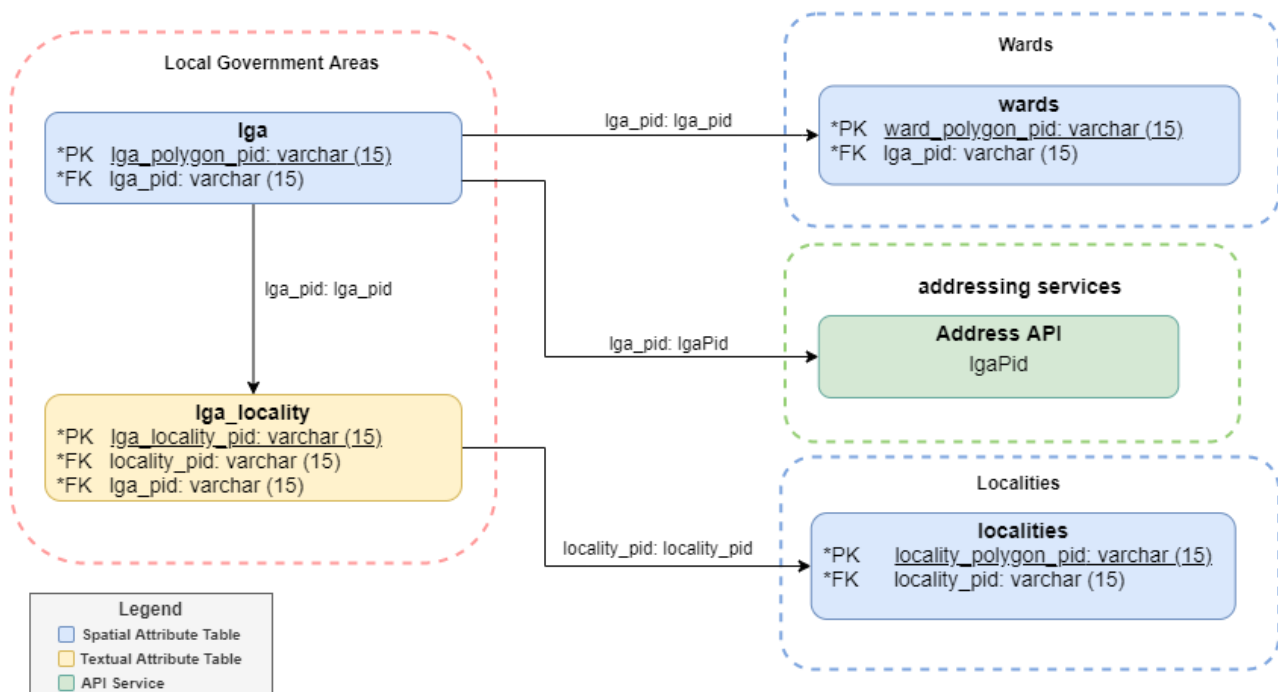
Local Government Areas is updated and released regularly and has integrated relationships with other Geoscape Products. Further information regarding attributes, quality, coverage and product release details are outlined below.

## Linkages

This product is integrated with the following Geoscape products:

- Localities
- Wards
- Addressing Service

The joins used to link to these products are shown below, with attributes used in the joins described.



# Attributes

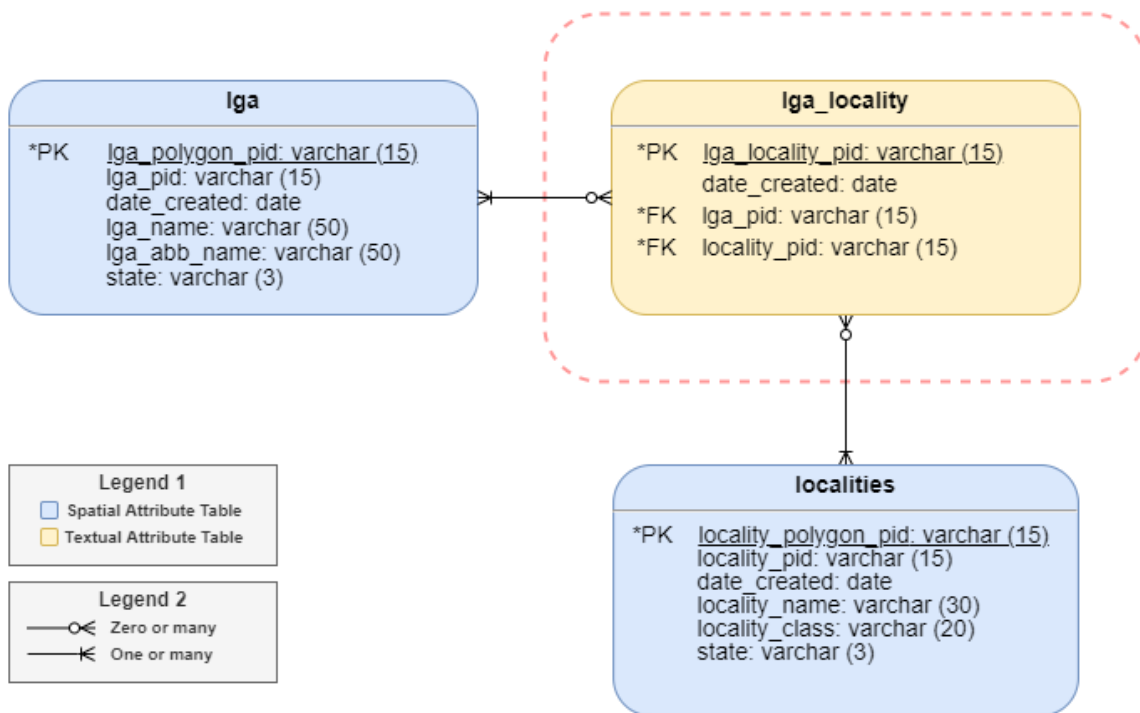
## LGA Name

The LGA Name attribute provides the name of the Local Government Area in Title Case (e.g. 'Warren Shire Council', 'Bega Valley Shire Council', 'Randwick City Council'). Geoscape has provided these names with reference to jurisdictional definitions.

## LGA Abbreviated Name

The LGA abbreviated name attribute provides the abbreviated name of the Local Government Area in Title Case (e.g. 'Warren', 'Bega Valley', 'Randwick'). Geoscape has provided these names with reference to jurisdictional definitions.

# Data Model



## Data Dictionary

Attribute	Data Type	Description	Primary Key	Mandatory Field	10 Character Alias
<b>lga_polygon_pid</b>	Character String (15)	Unique persistent identifier for the LGA polygon.	Y	Y	LG_PLY_PID
<b>lga_pid</b>	Character String (15)	Persistent identifier for the LGA.	N	Y	LGA_PID
<b>date_created</b>	Date	The date the record is first introduced to the Geoscape product.	N	Y	DT_CREATE
<b>lga_name</b>	Character String (50)	The name of the LGA.	N	Y	LGA_NAME
<b>lga_abb_name</b>	Character String (50)	The abbreviated LGA name.	N	Y	ABB_NAME
<b>state</b>	Character String (3)	The abbreviated name of the State or Territory that the LGA spatially resides within.	N	Y	STATE
<b>geometry</b>	Polygon (2D)	The geometry of the polygon.	N	Y	GEOMETRY

## Domain Values

### state

Domain Value	Description
<b>NSW</b>	The data is located within the state of New South Wales.
<b>NT</b>	The data is located within the Northern Territory.
<b>OT</b>	The data is located within the Other Territories classification. Other Territories covers the external Australian territories of Cocos (Keeling) Islands and Christmas Island.
<b>QLD</b>	The data is located within the state of Queensland.
<b>SA</b>	The data is located within the state of South Australia.
<b>TAS</b>	The data is located within the state of Tasmania.
<b>VIC</b>	The data is located within the state of Victoria.
<b>WA</b>	The data is located within the state of Western Australia.

## Update Frequency

This product is continuously updated and released with the most up to date data available on a quarterly schedule in the months of February, May, August and November.



## Data Quality

### Positional Accuracy

This product has been created by combining LGA boundary information from multiple jurisdictional sources. Each jurisdiction has a range of collection methodologies to capture the digital representation of the LGA boundary. The varying approaches to maintaining the boundaries will contribute to the dataset's overall accuracy. As the jurisdiction capture programs improve or otherwise change LGA boundaries, we incorporate these changes as an update into the product and the positional accuracy is maintained. Geoscape makes minor changes only where they are required to create valid features described in Geometry Validity.

### Coordinates Referencing the GDA2020 Datum

Spatial features referencing the GDA2020 datum are produced using a coordinate transformation from the GDA94 datum using the following parameters.

- shift\_x = 0.06155,
- shift\_y = -0.01087,
- shift\_z = -0.04019,
- rotate\_x = -0.0394924,
- rotate\_y = -0.0327221,
- rotate\_z = -0.0328979,
- scale\_adjust = -0.009994

### Geometry Validity

The geometry is validated to ensure polygons are a valid representation and free of self-intersection. Issues being detected and resolved include spikes, bow ties, duplicate vertices, null geometries, multipart geometries and self-contacts. Gaps and overlaps are resolved for polygons within each State or Territory. Gaps and overlaps between State or Territory boundaries are not resolved. Where valid holes are present in the jurisdictional data, such as lakes or rivers, these holes are retained.

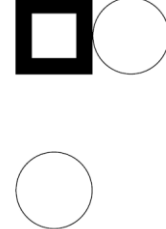
Polygon orientation conforms to the following specifications:

- OGC Simple Feature Access Specification v1.2.1 [Section - 6.1.11.1]
- The GeoJSON Specification RFC7946 [Section 3.1.6 dot point 4]

This means the polygon outer boundary will be counter clockwise and the inner boundary will be clockwise for file formats that support the above standards.

### Further Comments

Local Government Areas has been processed to assure all polygons are stored as single part features to improve compatibility with a range of software applications. As a result, there can be a duplication of the lga\_pid for some local government areas that are represented by multiple, separate, polygons.



## Extent/Geographic Description

The spatial coverage of this dataset includes Australia's land mass and surrounding offshore islands.

The Bounding Box for this data is as follows:

- North bounding latitude:  $-8^{\circ}$
- South bounding latitude:  $-45^{\circ}$
- East bounding longitude:  $168^{\circ}$
- West bounding longitude:  $96^{\circ}$



A detailed description of the coverage for each State and Territory is provided in the table below.

State	Specific Area	Coverage
<b>ACT</b>		No coverage
<b>NSW</b>		Complete coverage
<b>NT</b>		Complete coverage
<b>OT</b>	Christmas and Cocos (Keeling) Islands	Complete coverage
	Jervis Bay	No coverage
	Norfolk Island	No coverage
<b>QLD</b>		Complete coverage Additional coverage of coastal sea areas
<b>SA</b>		Complete coverage
<b>TAS</b>		Complete coverage
<b>VIC</b>		Complete coverage.
<b>WA</b>		Complete coverage.



## Spatial Reference System

### GDA94

Horizontal Datum: The Geocentric Datum of Australia 1994 (GDA94) is the target horizontal datum.

Coordinate System: Geographic Coordinate System Geocentric Datum of Australia 1994 (GDA94).

### GDA2020

Horizontal Datum: The Geocentric Datum of Australia 2020 (GDA2020) is the target horizontal datum.

Coordinate System: Geographic Coordinate System Geocentric Datum of Australia 2020 (GDA2020).

## Delivery Format

The data is provided at a National and a State/Territory level, depending on the file format selected. The data is made available in the File Geodatabase, GeoJSON, ESRI Shapefile and MapInfo TAB formats described below.

Format	National	State/Territory
File Geodatabase	Yes	Yes
GeoJSON	Yes	Yes
ESRI Shapefile	Yes	Yes
MapInfo TAB	Yes	Yes

### File Geodatabase

Format name

File Geodatabase – ESRI™

Specification

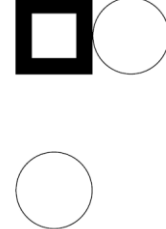
This format includes files with the following extensions: \*.gdb

ESRI File Geodatabase Technical Description. Follow this link:

<http://desktop.arcgis.com/en/desktop/latest/manage-data/administer-file-gdbs/file-geodatabases.htm>

Language

English



## GeoJSON

Format name

GeoJSON

Specification

This format includes files with the following extensions: \*.geojson

GeoJSON specification: <https://tools.ietf.org/html/rfc7946>

*NOTE: The GeoJSON specification states that the coordinate reference system for all GeoJSON coordinates is:*

*"a geographic coordinate reference system, using the World Geodetic System 1984 (WGS 84) datum, with longitude and latitude units of decimal degrees"*

*Local Government Areas will be provided with coordinates using the datum selected for download (GDA94/GDA2020) with longitude and latitude units of decimal degrees.*

Language

English

## JSON

Format name

JSON

Specification

This format includes files with the following extensions: \*.json

JSON specification: <https://www.json.org/json-en.html>

Language

English

## ESRI Shapefile

Format name

Shape – ESRI™

Specification

This format includes files with the following extensions: \*.shp, \*.shx, \*.dbf

ESRI Shapefile Technical Description, an ESRI White Paper, July 1998. Follow this link: [www.esri.com/library/whitepapers/pdfs/shapefile.pdf](http://www.esri.com/library/whitepapers/pdfs/shapefile.pdf)

Language

English

## MapInfo TAB

Format name

TAB – MapInfo Professional™

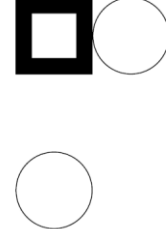
Specification

This format includes files with the following extensions: \*.tab, \*.dat, \*.id, \*.map

The MapInfo TAB format is a popular geospatial vector data format for geographic information systems software. It is developed and regulated by MapInfo as a proprietary format. TAB files support geospatial standards such as Open GIS, the OGC, ISO, W3C and others.

Language

English



## Product Versioning

The product versioning is managed through incrementing when there is a change to the product schema or a significant change in data population, these are described further below:

- A schema change can affect a major or minor increment to the versioning. Additive changes (changes that won't break customers' ability to work with the data) will be incremented with a minor version increment, an example is the addition of a new attribute. Removal of attributes or changing the structure of the schema will enact a major change to identify that this requires the attention of all customers and partners.
- Where a significant geography of Australia either has a new population of data for an attribute or is populated from a much higher quality source a minor increment will be applied to the product version.

Therefore, the product's versioning will not increment with every data update. Published releases will have a name (e.g. 'August 2021') and will reference a version of the product (e.g. '1.0').

# Annex A - User Guide

## Unpacking the Local Government Areas Product

The Local Government Areas product is supplied in the following structure:

### Folder Structure

#### *National/State product zip file*

Structure	Example
<product>_<release>_AUSTRALIA_<projection>_<format>_<version>.zip	LocalGovernmentAreas_AUG21_AUSTRALIA_GDA94_SHP_100.zip
<product>_<release>_<state>_<projection>_<format>_<version>.zip	LocalGovernmentAreas_AUG21_ACT_GDA94_SHP_100.zip

#### *Document folder structure*

Folder Level	Structure	Example
1	<product>\	LGAs\
	Contents.txt	Contents.txt
2	Documents\	Documents\
3	<product> Product Guide <version>.pdf	Local Government Areas Product Guide v1.0.pdf
	<product> Release Report - <release month>_<release year>.pdf	Local Government Areas Release Report – August 2021.pdf

#### *Layer folder structure*

Folder Level	Structure	Example
1	<product>\	Local Government Areas\
	Contents.txt	Contents.txt
2	<product> <release month> <release year>\	Local Government Areas August 2021\
3	Standard\	Standard\
4	<file(s)>	See File Names below

### Folder Structure example

National Coverage

- ▼ LocalGovernmentAreas\_AUG21\_AUSTRALIA\_GDA94\_GDB\_100.zip
  - ▼ LGAs
    - Documents
  - ▼ Local Government Areas August 2021
    - Standard

State Coverage

- ▼ LocalGovernmentAreas\_AUG21\_ACT\_GDA94\_GDB\_100.zip
  - ▼ LGAs
    - Documents
  - ▼ Local Government Areas August 2021
    - Standard

### File Names

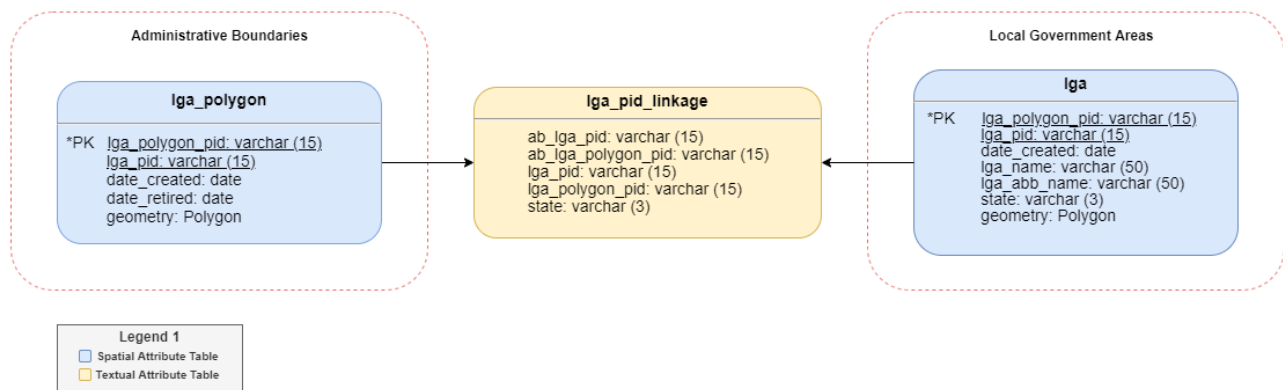
The data layer file names will have the following structure:

	File Name Structure	Example
National	<product>. extension(s)	lga.gdb
State	<state >_<product>.<extension(s)>	act_lga.dbf act_lga.prj act_lga.shp act_lga.shx act_lga_locality.dbf

## Linking Admin Boundaries to Local Government Areas

A linkage table has been included to facilitate the transition between the Administrative Boundaries LGA theme and the new Local Government Areas product. This table enables the link between the lga\_polygon features in Administrative Boundaries to their corresponding Local Government Areas feature where possible.

The link was created through spatial intersection between Administrative Boundaries LGA polygons and Local Government Areas polygons, where only relationships with matching LGA names and state are retained. In the lga\_pid\_linkage table, the 'ab\_' prefixed values refer to the Administrative Boundaries identifiers, while the un-prefixed values of 'lga\_pid' and 'lga\_polygon\_pid' relate to the new Local Government Areas product.



If an LGA does not have a record in the linkage table, a link between Administrative Boundaries and Local Government Areas could not be created. This occurred where:

- There was no match between an intersecting Administrative Boundaries polygon and a Local Government Areas polygon with the same LGA name. This may occur if:
  - A new Local Government Areas polygon was created at the location with a different name
  - A polygon that existed in Administrative Boundaries no longer exists in Local Government Areas
  - A new polygon exists in Local Government Areas that does not intersect any Administrative Boundaries polygon (e.g. new island polygon)