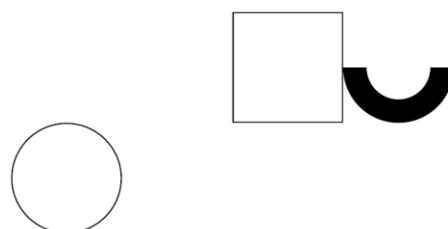
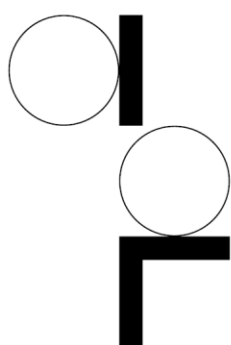
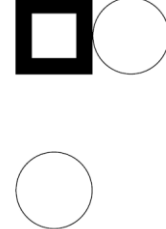
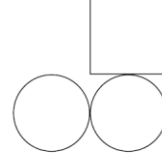


Localities

Product Guide
Version 1.0

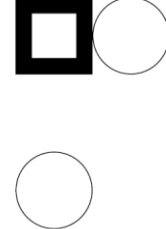




Disclaimer

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

Preface	4
Responsible Party	4
Copyright and disclaimer	4
Privacy	4
Product Version	5
Overview	5
Technical Description	6
Linkages	6
Attributes	7
Data Model	7
Data Dictionary	7
Domain Values	8
Update Frequency	8
Data Quality	9
Extent/Geographic Description	10
Spatial Reference System	11
Delivery Format	11
Product Versioning	13
Annex A - User Guide	14
Unpacking the Localities Product	14
Linking Admin Boundaries to Localities	16
Differentiating Gazetted Localities from Districts in the ACT	17



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

URL: www.geoscape.com.au

Copyright and disclaimer

Please see 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.

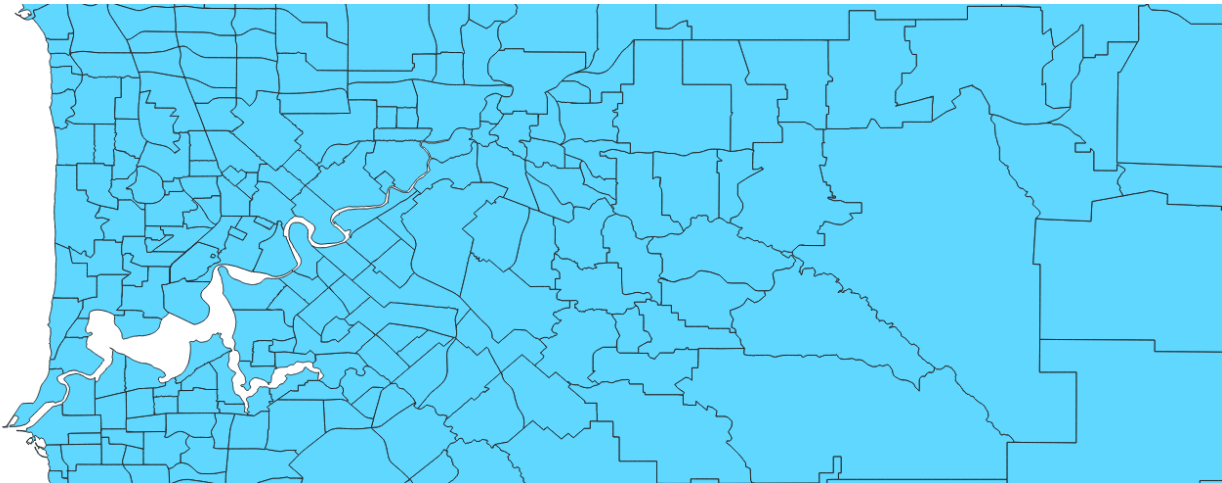
Product Version

1.0

Overview

Localities is a spatial representation of suburbs (urban) and localities (rural) defined by the State and Territory governments of Australia. They represent distinct communities across the country. Localities aggregates the representations unique to each jurisdiction into a consistent, seamless representation of suburb and locality boundaries across Australia.

Localities are integral for addressing and postal distribution purposes.



Localities is designed to meet the needs of organisations that require a geospatial representation of suburb and locality boundaries at both a local and national scale. The attribution provided within Localities allows for the application of the data across a wide range of commercial, government and research uses. Localities can also be used to identify the creation of new suburbs.

Geoscape Australia welcomes your feedback on our Localities product. We also publish regular updates on the development of our products on the Geoscape website (www.geoscape.com.au).

Technical Description

Localities is created through processing suburb and locality 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 suburb and locality 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.

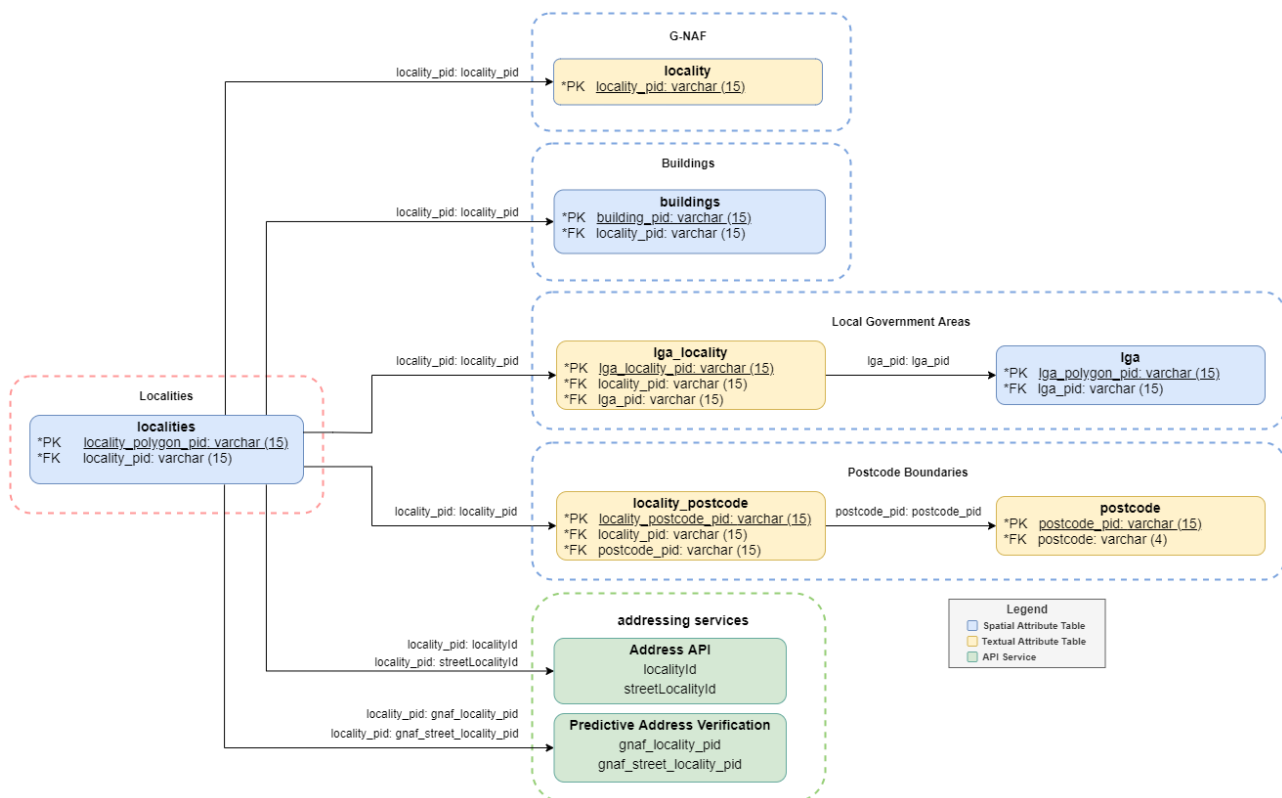
Localities is updated and released regularly and has integrated relationships with other Geoscape Products. Further information regarding attributes, quality, coverage and product release details are outlined below.

Linkages

This product is integrated with the following Geoscape products:

- G-NAF
- Buildings
- Local Government Areas
- Postcode Boundaries
- Addressing Services

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



Attributes

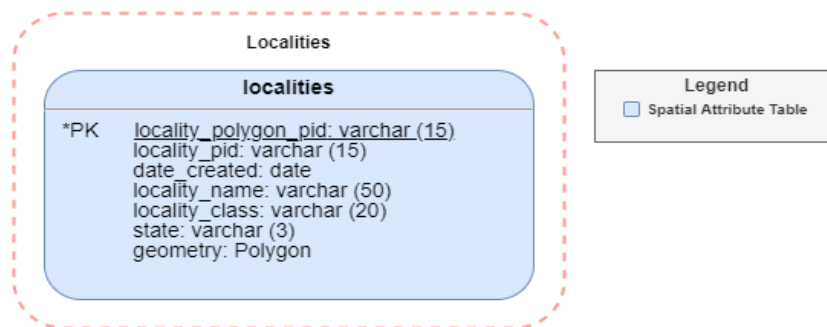
Locality Name

The Locality Name attribute provides the name of the suburb or locality in Title Case (e.g. 'Belmont North', 'O'Bil Bil', 'McLoughlins Beach'). Geoscape has provided these names with reference to jurisdictional definitions. Where there are localities with the same name within a state that represent different localities, the assigned locality_pid differentiates the records.

Locality Class

The Locality Class attribute describes whether the suburb/locality is a Gazetted Locality (provided for all States and Territories) or a District (included in the ACT only). Districts describe regions within the ACT (e.g. Tuggeranong, Belconnen, Gungahlin) that can contain Gazetted Localities (suburbs) but also cover areas that are not covered by the Gazetted Localities. Districts are included for coverage and addressing purposes.

Data Model



Data Dictionary

Attribute Name	Data Type	Description	Primary Key	Mandatory Field	10 Character Alias
locality_polygon_pid	character string (15)	Unique persistent identifier for the locality polygon.	Yes	Yes	LC_PLY_PID
locality_pid	character string (15)	Persistent identifier for the locality feature.	No	Yes	LOC_PID
date_created	date	The date the record is first introduced to the Geoscape product.	No	Yes	DT_CREATE
locality_name	character string (50)	Name of the suburb or locality.	No	Yes	LOC_NAME
locality_class	character string (20)	Describes the class of locality.	No	Yes	LOC_CLASS
state	character string (3)	The abbreviated name of the State or Territory that the locality spatially resides within.	No	Yes	STATE
geometry	Polygon (2D)	The geometry of the polygon.	No	Yes	GEOMETRY

Domain Values

locality_class

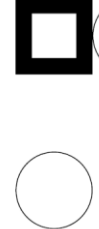
Domain Value	Description
Gazetted Locality	Gazetted localities have been officially recognised (gazetted) by the State or Territory Authority.
District	<p>The Australian Capital Territory is divided into geographic areas known as Districts. Districts are further divided by deposited plans into Divisions (suburbs).</p> <p>There are areas in the ACT where Divisions and Districts overlap, as well as areas only covered by Districts. Divisions have been classified as gazetted localities as they represent suburbs. Districts have been assigned their own classification of 'District'.</p>

state

Domain Value	Description
ACT	The data is located within the Australian Capital Territory.
NSW	The data is located within the state of New South Wales.
NT	The data is located within the Northern Territory.
OT	The data is located within the Other Territories classification. Other Territories covers the external Australian territories of Cocos (Keeling) Islands, Christmas Island, Jervis Bay and Norfolk Island.
QLD	The data is located within the state of Queensland.
SA	The data is located within the state of South Australia.
TAS	The data is located within the state of Tasmania.
VIC	The data is located within the state of Victoria.
WA	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 locality boundary information from multiple jurisdictional sources. Each jurisdiction has a range of collection methodologies to capture the digital representation of the locality 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 locality 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 with the same locality_class 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.

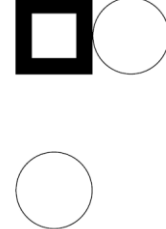
Polygon orientation conforms to the following specifications:

- 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

Localities 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 locality_pid for some localities 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.

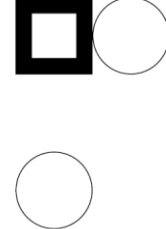
The Bounding Box for this data is as follows:

- North bounding latitude: -8°
- South bounding latitude: -45°
- East bounding longitude: 168°
- West bounding longitude: 96°



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

State	Specific Area	Coverage
ACT		Complete coverage
NSW		Complete coverage
NT		Complete coverage
OT	Christmas and Cocos (Keeling) Islands	Complete coverage
	Jervis Bay	Complete coverage
	Norfolk Island	Complete coverage
QLD		Complete coverage Additional coverage of coastal sea areas
SA		Complete coverage
TAS		Complete coverage
VIC		Complete coverage.
WA		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

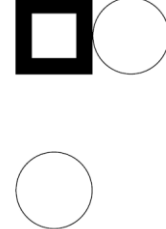
File Geodatabase – ESRI™

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"

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

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

Language

English

MapInfo TAB

Format name

TAB – MapInfo Professional™

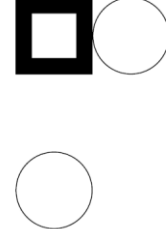
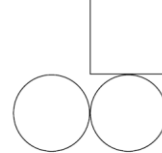
Specification

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 Localities Product

The Localities product is supplied in the following structure:

Folder Structure

National/state product zip file

Structure	Example
<product>_<release>_AUSTRALIA_<projection>_<format>_<version>.zip	Localities_AUG21_AUSTRALIA_GDA94_SHP_100.zip
<product>_<release>_<state>_<projection>_<format>_<version>.zip	Localities_AUG21_ACT_GDA94_SHP_100.zip

Document folder structure

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

Layer folder structure

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

Folder Structure example

National Coverage

- ▼ Localities_AUG21_AUSTRALIA_GDA94_GDB_100.zip
 - ▼ Localities
 - Documents
 - ▼ Localities August 2021
 - Standard

State Coverage

- ▼ Localities_AUG21_ACT_GDA94_GDB_100.zip
 - ▼ Localities
 - Documents
 - ▼ Localities August 2021
 - Standard

File Names

The layer file names will have the following structure:

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

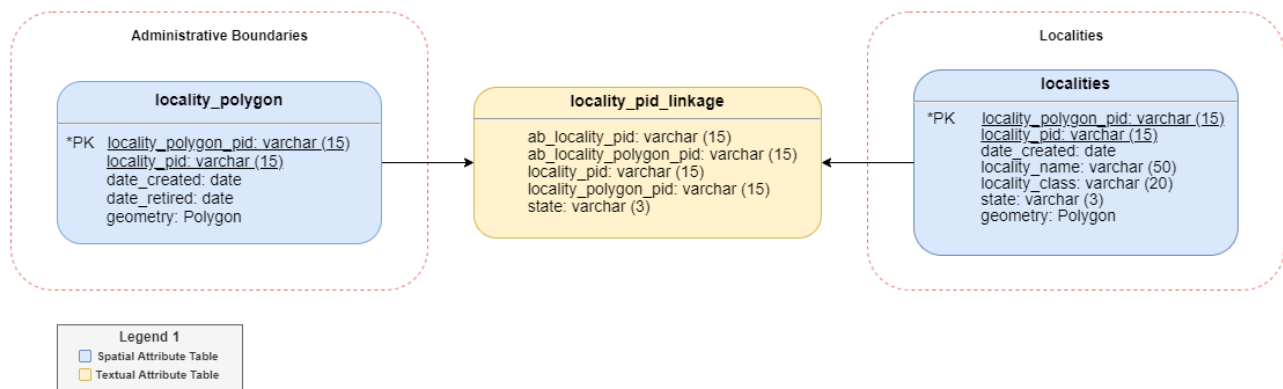
Linking Admin Boundaries to Localities

A linkage table has been included to facilitate the transition between the Administrative Boundaries Locality theme and the new Localities product. This table enables the link between the locality_polygon features in Administrative Boundaries to their corresponding Localities feature where possible.

The link was created through spatial intersection between Administrative Boundaries Locality polygons and Localities polygons, where only relationships with matching locality names, locality class and state are retained.

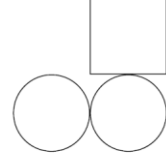
In the ACT, Districts are only linked to Districts, and Divisions are only linked to Divisions.

In the locality_pid_linkage table, the 'ab_' prefixed values refer to the Administrative Boundaries identifiers, while the un-prefixed values of 'locality_pid' and 'locality_polygon_pid' relate to the new Localities product.



If a locality does not have a record in the linkage table, a link between Administrative Boundaries and Localities could not be created. This occurred where:

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



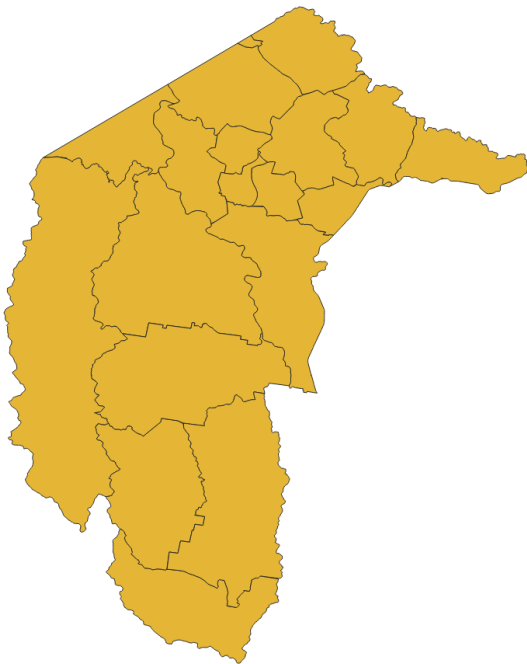
Differentiating Gazetted Localities from Districts in the ACT

The Australian Capital Territory is divided into geographic areas known as Districts. Districts are further divided by deposited plans into Divisions (suburbs).

There are areas in the ACT where Divisions and Districts overlap, as well as areas only covered by Districts. Divisions have been classified with a locality class of 'Gazetted Locality' as they represent suburbs. Districts have been assigned their own classification of 'District'.

Districts and Divisions can be differentiated by selecting locality_class values of 'District' or 'Gazetted Locality' respectively.

District (District)



Division (Gazetted Locality)

