State Boundaries

Product Description
August 2021

Geoscape

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1. Overview

1.1 Delivery Organisation - Geoscape Australia

Geoscape is the digital Australia – a comprehensive representation of our built environment. It is consistently formatted spatial data that describes the addresses, land, buildings and transport networks across Australia's complex cities, regional centres and rural communities.

Geoscape Australia is the trading name of PSMA Australia Limited, a self-funded public company owned by the governments of Australia. The organisation's first major initiative was to support the 1996 Census through the provision of Australia's first national digital basemap at street-level.

We were incorporated in 2001 and tasked with collating, transforming and delivering national spatial datasets. Our establishment reflected the desire of Australian governments to work together to establish national, location information infrastructure to advance the emerging information economy. Geoscape Australia is now a trusted source of essential national location data, with a diverse ecosystem of data partners.

The value of Geoscape data is in its richness. It enables a range of innovations and applications. To support broad use of the data, it is available through online subscription services in business-ready formats, as well as customised enterprise plans. Geoscape Australia has a network of solution partners that integrate Geoscape data into other products and services. The partner network includes traditional geospatial specialists and data engineers, as well as software developers, marketing service providers, systems integrators and consultancies.

1.2 Data Product Specification Title

State Boundaries Product Description

1.3 Reference Date

May 2020

1.4 Responsible Party

PSMA Australia Limited trading as Geoscape Australia

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1.5 Language

English

1.6 Topic Category

Boundaries for States and Territories within Australia.

1.7 Informal Description of the Data Product

State Boundaries is a national digital dataset of Australia's State and Territory boundaries. The digital State boundaries and their legal identifiers have been derived from the cadastre data from each State and Territory jurisdiction.

1.8 Distribution Format

This document is available in PDF format. For other formats and use of this document, contact Geoscape Support (support@geoscape.com.au).

1.9 Copyright and Disclaimer

Please see geoscape.com.au/legal/data-copyright-and-disclaimer/

1.10 Privacy

Geoscape products and services should not contain any personal or business names or other sensitive 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.

2. Specification Scope

2.1 Scope Identification

State Boundaries is a standalone data theme.

2.2 Extent

National spatial coverage of Australia’s State and Territory Boundaries.

3. Data Product Identification

3.1 Title

State Boundaries

3.2 Alternate Titles

Geoscape State Boundaries

3.3 Abstract

State Boundaries is a digital representation of Australia's State and Territory boundaries. This dataset provides an optimised aggregated national view of State and Territory boundary geometry and attribution. The dataset is created from multiple sources including jurisdictional data which is revised regularly and supplied in varying formats and at different levels of quality.

3.4 Purpose

State Boundaries is designed to meet the needs of organisations that require a graphical representation of State and Territory boundaries to integrate with other data in servicing their business needs.

3.5 Topic Category

Vector spatial data defined by coordinates (latitude and longitude) with associated textual (aspatial) metadata.

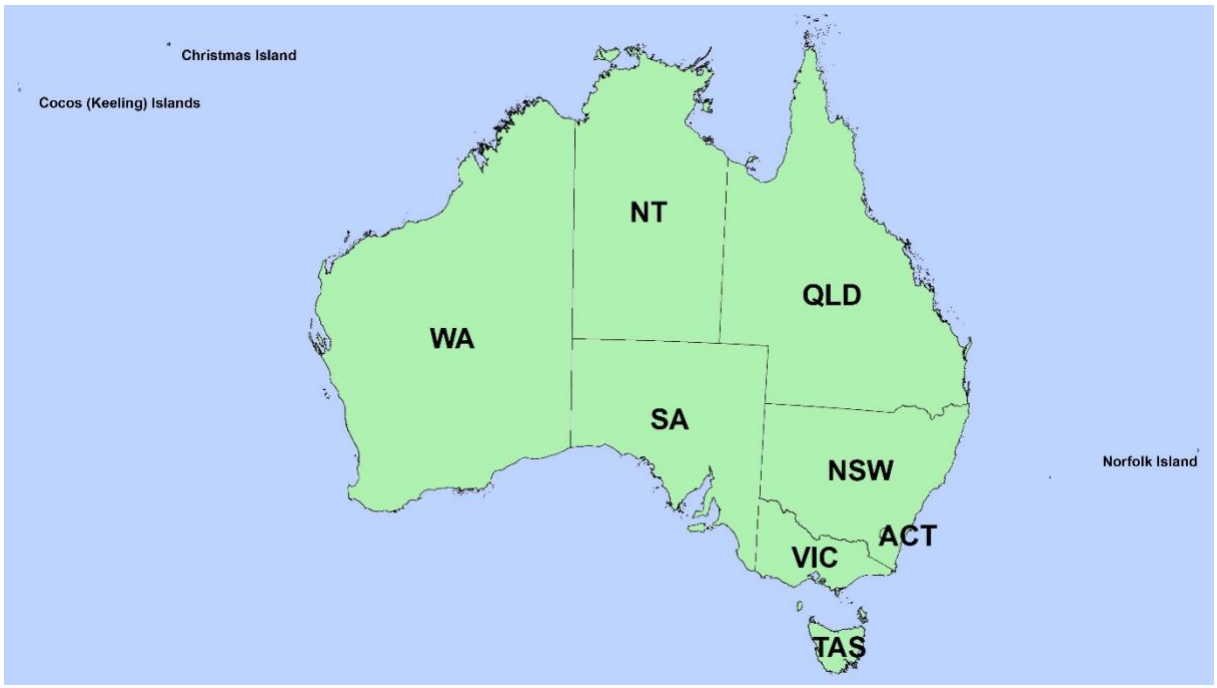
3.6 Geographic Description

The spatial coverage of State Boundaries includes Australia's land mass. 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°

The area covers the land mass of Australia, including offshore islands (Christmas Island, Cocos (Keeling) Islands, and Norfolk Island).

The spatial domain is described by the polygon:



Geographic extent name

AUSTRALIA INCLUDING EXTERNAL TERRITORIES – AUS – Australia – Australia

The States and Territories within Australia are represented by the following:

State or Territory Name	Abbreviation	Character Code
New South Wales	NSW	1 (or 01)
Victoria	VIC	2 (or 02)
Queensland	QLD	3 (or 03)
South Australia	SA	4 (or 04)
West Australia	WA	5 (or 05)
Tasmania	TAS	6 (or 06)
Northern Territory	NT	7 (or 07)
Australian Capital Territory	ACT	8 (or 08)
Other Territories	OT	9 (or 09)

Note: Geoscape has aligned Other Territories (OT) with the Australian Bureau of Statistics (ABS). It includes the Territory of Christmas Island, Territory of Cocos (Keeling) Islands, Jervis Bay Territory and more recently the inclusion of Norfolk Island. OT does not include any other external Territory.

4. Data Content and Structure

The State Boundaries dataset is a feature-based product. A data model is included (Appendix A – Data Model Diagram) with an associated data dictionary (Appendix B – Data Dictionary).

4.1 Feature-Based Data

The feature type is a spatial polygon. The table below outlines the features and their integration into related datasets.

Table 1: Feature descriptions and integration into related datasets

Entity	Description	Integration
State Boundaries	Representation of Australian State and Territory boundaries.	-

4.2 Feature-Based Application Schema (Data Model)

The State Boundaries dataset Data Model Diagram is set out Appendix A – Data Model Diagram.

4.3 Data Dictionary

4.3.1 Feature-Based Feature Catalogue

The feature catalogue in support of the application schema is provided Appendix B – Data Dictionary. Spatial attributes are added to the feature catalogue in the same manner as other attributes for completeness and conformance to the application schema.

Table 2 refers to all tables in the Feature Catalogue.

Table 2: Feature Catalogue

Column	Description
Name	The name of the column in the Integrated Database.
Data Type	The data type of the column based on the types defined in ISO 19103:2015. Parentheses capture Scale, Precision and Maximum Length, where applicable.
Description	A description of the column and what the expected contents are.
Primary Key	If 'Y' then this column must always have a unique value. (Has # entry in the data model tables).
Mandatory Field	Y = mandatory. If 'Y' (mandatory), this column is populated with data.
Foreign Key Table	Represents a table that this column is referred to.
Foreign Key Column	Represents a column in the 'Foreign Key Table' that this column is referred to by another table. (has * entry in the data model tables)
10 Character Alias	An alias for this column name - up to 10 characters maximum. Used to define the name of the column when in ESRI Shapefile format.

4.3.2 Feature-Based Content Scope

All geometry and metadata for polygons within the State Boundaries dataset.

5. Reference System

5.1 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).

5.2 Temporal Reference System

Gregorian calendar

5.3 Reference System Scope

The spatial objects and temporal attribution for the State Boundaries dataset.

6. Data Quality

6.1 Positional Accuracy

Positional accuracy is an assessment of the closeness of the location of the spatial objects in relation to their true positions on the earth's surface.

The positional accuracy includes:

- a horizontal accuracy assessment
- a vertical accuracy assessment

The horizontal and vertical positional accuracy are the assessed accuracy after all transformations have been carried out.

Relative spatial accuracy of State Boundaries reflects that of the jurisdictional source data.

6.2 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

6.3 Attribute accuracy

Attribute accuracy is an assessment of the reliability of values assigned to features in the dataset in relation to their true 'real world' values.

Key attributes (name and the unique identifier) have a high degree of accuracy in the order of 99.09%. Other attributes derived from the processing of supplied data may have a lower degree of accuracy but less than previously released data. All attribute accuracies are dependent on the data accuracy supplied to Geoscape Australia.

For this product, feature and attribute accuracy is a measure of the degree to which the features and attribute values of spatial objects agree with the information on the source material. The allowable error in attribute accuracy was previously up to 5%.

A precise attribute accuracy assessment may not always be possible. In these cases an intuitive estimate of the expected attribute accuracy or the likely maximum error based on previous experience is acceptable.

6.4 Logical consistency

Logical consistency is a measure of the degree to which data complies with the technical specification. The allowable error in logical consistency previously ranged from 3% to 5%. The test procedures are a mixture of software scripts and onscreen, visual checks.

The data structure has been tested for conformance with the data model. The following have been tested and confirmed to conform:

- File names
- Attribute names
- Attribute lengths
- Attribute types
- Attribute domains
- Attribute order in file
- Object type
- Compulsory attributes populated

6.5 Topological consistency

Topological consistency is the measure of how features spatially relate to other features within and across themes. Topological inconsistencies are identified using a combination of automated rules and visual analysis. Where topological inconsistencies are identified they are notified back to the supplier organisation for remediation at the source. Some minor topological inconsistencies are corrected during product processing using automated rules. The level of topological consistency is dependent on the data supplied to Geoscape.

State Boundaries has been processed to assure all polygons are stored as single part features to improve compatibility with a range of software applications. Due to this there can be a duplication of PIDs (e.g. STATE_ PID) within State Boundaries where there are multiple polygons represented by a single PID.

6.6 Completeness

Completeness is an assessment of the extent and range of the dataset in regard to completeness of coverage, completeness of classification and completeness of verification.

Attribute completeness

All attributes for each object are populated according to the data model, noting that some attributes are not mandatory.

Temporal accuracy for each layer is applicable to its most current release.

Quality scope

Polygon geometry accuracy and attribute accuracy for all included areas.

7. Data Capture

The digital State Boundaries have been supplied by the various State and Territory governments of Australia.

8. Data Updates and Maintenance

8.1 Update frequency

Geoscape Australia releases updates to datasets on either a monthly, quarterly, or as required frequency. State Boundaries is updated as required with any updates delivered in the months of February, May, August and November when applied. As required means datasets are updated when significant change is provided by the jurisdictions for inclusion into the product.

8.2 Maintenance scope

Geoscape Australia's data maintenance occurs for existing objects with changed geometry and/or attributes, as well as data for new objects within the release period.

9. Delivery Format

9.1 Components

State Boundaries is a vector data product and is made available for each state or territory in the formats listed below. The Australian Government releases State Boundaries on data.gov.au in ESRI Shape and MapInfo TAB formats.

MapInfo

Format Name

TAB – MapInfo Professional

Specification

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

TAB files support geospatial standards such as Open GIS, the OGC, ISO, W3C and others.

Language

English

Shape

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

10. Geoscape Partner Network

The value of Geoscape's products is in the richness of the partner networks who have specialist skills and knowledge to provide business-ready solutions. Our network includes traditional geospatial specialists, data engineers, software developers, marketing service providers, system integrators, independent software vendors, research organisations and consultancies.

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11. Contact Geoscape

Contact us to provide feedback on the State Boundaries product or for further information on accessing Geoscape Data:

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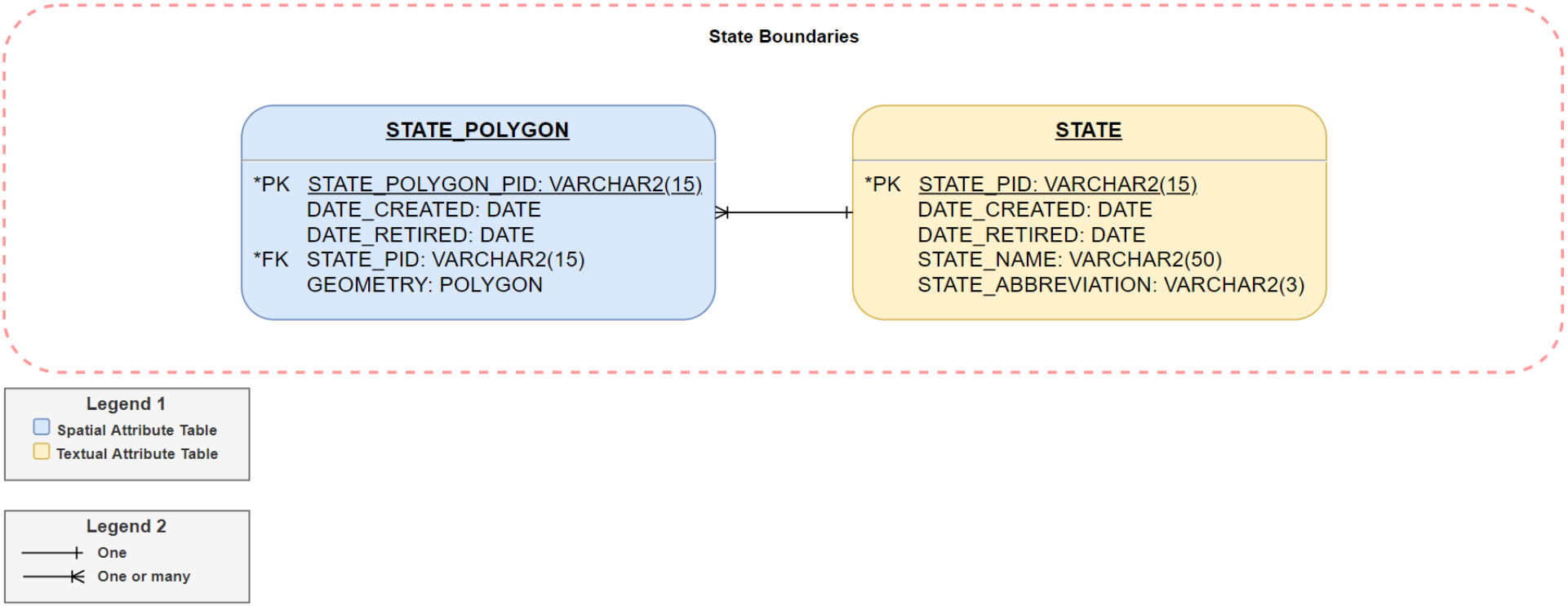
Appendix A - Data Model Diagram



Appendix B - Data Dictionary

State Boundaries

Table 1: STATE

Name	Data Type	Description	Prim Key	Man	F K T	F K Col	10 Char Alias
STATE_PID	varchar2(15)	The Persistent Identifier is unique to the real world feature this record represents.	Y	Y	-	-	STATE_PID
DATE_CREATED	date	Date this record was created.	N	Y	-	-	DT_CREATE
DATE_RETIRED	date	Date this record was retired.	N	N	-	-	DT_RETIRE
STATE_NAME	varchar2(50)	Feature name. All in uppercase. e.g. TASMANIA.	N	Y	-	-	STATE_NAME
STATE_ABBREVIATION	varchar2(3)	State abbreviation.	N	Y	-	-	ST_ABBREV

Table 2: STATE_POLYGON

Name	Data Type	Description	Prim Key	Man	F K T	F K Col	10 Char Alias
STATE_POLYGON_PID	varchar2(15)	The Persistent Identifier is unique to the real world feature this record represents.	Y	Y	-	-	ST_PLY_PID

Name	Data Type	Description	Prim Key	Man	F K T	F K Col	10 Char Alias
DATE_CREATED	date	Date this record was created.	N	Y	-	-	DT_CREATE
DATE_RETIRED	date	Date this record was retired.	N	N	-	-	DT_RETIRE
STATE_PID	varchar2(15)	State Persistent Identifier.	N	Y	STATE	STATE_PID	STATE_PID
GEOMETRY	polygon	Polygon geometry.	N	Y	-	-	GEOMETRY