National Roads

1.6

Geoscape

19 January 26

Contents

Standard

This document is based on the AS/NZS ISO 19131:2008 Geographic information – Data product specifications standard.

Disclaimer

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

National Roads Product Description

1.3 Data Scope

National Roads is a digital representation of the road network of Australia. National Roads contains linear features to describe surfaces that have been improved to enable vehicular, pedestrian and bicycle transportation on land and ferry routes that enable vehicles to cross water bodies. National Roads does not include railways, tramways, driveways or passenger ferry routes.

1.4 Reference Date

December 2024

1.5 Responsible Party

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1.6 Language

English

1.7 Topic Category

Linear spatial representation of roads and related characteristics across Australia.

1.8 Informal Description of the Data Product

National Roads is a national digital dataset which represents the road network across all States and Territories of Australia. National Roads is the linear vector representation of a road attributed with its characteristics. National Roads also provides a spatial relationship between Road features and Locality boundaries via the Street Locality Line table, which enables linkage to the Geocoded National Address File (G-NAF). The linkage to G-NAF facilitates a mapping of an address held in G-NAF to National Roads enabling uses where road geometry and address are important. Users should note that the update frequency for the roads and street_locality_line tables are different. The roads table is updated on a monthly schedule, while street_locality_line is updated quarterly in line with the G-NAF release. This difference can cause small discrepancies to arise when releases are not synchronised.

1.9 Distribution Format

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

1.10 Copyright and disclaimer

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

1.11 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.

Specification Scope

2.1 Scope Identification

National Roads is a data theme containing two layers: roads and street_locality_line.

2.2 Extent

National spatial coverage of Roads for Australia.

Data Product Identification

3.1 Title

National Roads

3.2 Alternate Titles

Geoscape National Roads

3.3 Abstract

National Roads is a digital representation of roads for Australia. This dataset provides an optimised aggregated national view of road 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

The purpose of National Roads is to provide a single national digital representation of Australian roads with detailed attribution to enable clients to undertake activities including visualisation, analysis and logistics planning at both a national and local scale.

3.5 Topic Category

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

3.6 Geographic Description

The spatial coverage of National Roads includes Australia's land mass. The Bounding Box for this data is as follows:

- North bounding latitude: -9˚
- South bounding latitude: -44˚
- East bounding longitude: 160˚

- West bounding longitude: 96˚

The area covers the land mass of Australia, including offshore islands. Norfolk Island is currently not included.

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

Table 1: State names and abbreviations.

State or Territory Name	Abbreviation
New South Wales	NSW
Victoria	VIC
Queensland	QLD
South Australia	SA
Western Australia	WA
Tasmania	TAS
Northern Territory	NT
Australian Capital Territory	ACT

Other Territories of Australia are mapped to a State as described below:

- WA: Territory of Christmas Island, Territory of Cocos (Keeling) Islands
- NSW: Jervis Bay Territory

Data Content and Structure

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

4.1 Feature-Based Data

The feature type of a road is a spatial vector line. The table below outlines the features and their integration into related datasets.

Table 1: Feature descriptions and integration into related datasets.

Entity	Description	Integration
Roads	A real-world road will have one or more linear spatial representations within the National Roads dataset.	A road does not integrate with other Geoscape products. A road has the State or Territory abbreviation of the jurisdiction its linear geometry predominantly intersects.
Street Locality Line	A spatial representation of the relationship between National Roads features and Locality boundaries. The geometry of Street Locality Line is generated from National Roads but may only partially correspond to a National Roads record depending on its intersection with a Locality boundary. It is common for records with a null street_loc_pid to not have a matching record in the G-NAF street_locality table and these records are retained because they represent the road segment's relationship to a Locality. A Street Locality Line record can relate to one, many or zero G-NAF addresses.	The table enables linkage to the street_locality table in the G-NAF product via the street_locality_pid attribute enabling linkage to G-NAF addresses.

4.2 Feature-Based Application Schema (Data Model)

The National Roads dataset Data Model Diagram is set out in Appendix A - National Roads 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 in Appendix B - National Roads 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 3 refers to all tables in the Feature Catalogue.

4.3.2 Feature-Based Content Scope

All geometry and metadata for lines within the National Roads dataset.

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 National Roads dataset.

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. Relative spatial accuracy of National Roads reflects that of the jurisdictional source data. The accuracy is +/- 2 metres in urban areas and +/- 10 metres in rural and remote areas. Localised deviations from these accuracy metrics does occur and improvement programs are being undertaken to provide wide scale consistent data accuracy.

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 Road Geometry Validity

Road geometry is validated to ensure road lines are valid in the definition of their linear representation and free of self-intersection. Issues being detected and resolved include spikes, bow ties, duplicate vertices, null geometries, multipart geometries, self-closing lines and self-contacting lines.

6.4 Road Network Connectivity

National Roads is a product sourced predominantly from State and Territory scale datasets. The aggregation of isolated road networks into a single national network is focussed on providing the maximum consistency in road geometry and attribution across borders as well as ensuring the connectivity of roads at State/Territory borders.

6.4.1 State/Territory Borders

All roads at inland borders of States and Territories are manually reviewed for connectivity. Where disconnects in the road network were discovered and reference data exists to inform updates, then edits are applied to maintain connectivity.

6.4.2 Network Topology

Topology corrections are applied to the entire road network. These corrections resolve issues introduced that impact the connectivity of the network and subsequently the networks applicability to any routing or journey planning activity. The specific issues detected and resolved through the topology rules are:

- Undershoot: An undershoot occurs where a Roads segment is disconnected at one end from the road network and that road end is within 1 metre of another road end. Where these occur, the road is extended to connect to the nearest road within one metre.
- Overshoot: An overshoot occurs where a road geometry crosses another road geometry and ends within 1m of the other road feature. In these instances, the roads are split at the intersection and are then assessed for small roads < 1m that only connect to the network at one end, these small roads are removed.
- Duplicate roads: Where two roads have the same geometric representation and are attributed as the same road then one of these roads is removed.
- Small Isolated Geometry: Where a road has a length less than 100m and is not connected to the road network at either end then this road is not included within the National Roads dataset.
- Overlap: When a road has part of its geometry overlapping another road geometry this overlap is resolved. Where the road continues along the linear representation of another road this overlapping segment is removed from one road. Where a road is snapped to a vertex on an adjoining road not at the end but then overlaps the adjoining road to connect to the end then this snapping location is removed to resolve the overlap.

Data Capture

7.1 National Roads Data Sourcing

National Roads provides a single national digital view of road centrelines across the entirety of Australia. National Roads is continuously built through sourcing a broad range of datasets from many organisations. This data is quality assured, standardised, integrated and topology-corrected before publication. National Roads centrelines are primarily sourced from State and Territory governments and form the basis for the National Roads network. Roads additional to the State and Territory provisions are digitised or integrated where reliable sources of road centrelines are identified that improves the quality and/or consistency of National Roads. For attribution of National Roads data sources refer to this webpage: geoscape.com.au/legal/data-copyright-and-disclaimer/

7.2 National Roads Data Attribute Population

7.2.1 Data Population

Where a valid value cannot be populated for an attribute of National Roads the attribute will be set as a NULL value.

7.2.2 State and Territory borders

The connectivity of all National Roads has been reviewed around State and Territory borders and corrected where issues in connectivity were discovered.

7.2.3 Routes

A road can have a State route and/or a National route assigned to it. These are represented as attributes of a road.

7.2.4 Road Naming

Roads have attributes providing their road name, type and suffix both in uppercase and in title case to enable labelling. Attributes road_name, road_type and road_suffix are all provided in uppercase. Attributes road_name_label, road_type_label and road_suffix_label are all provided in title case.

Table 1: Title case examples.

Upper case road name	Title case road name label
COBRA-DAIRY CREEK	Cobra-Dairy Creek
EUCHRE VALLEY NATURE	Euchre Valley Nature
FAULKNERS NORTH	Faulkners North
GARDNER AND HOLMAN	Gardner and Holman
GORRIE/DRY	Gorrie/Dry
DICK MCKENZIE	Dick McKenzie
DON MCINTOSH	Don McIntosh
O'CONNOR	O'Connor
O'DEA	O'Dea

7.2.5 Road Direction

Allowed flow of traffic is provided in the attribute one_way. This attribute highlights where a road allows only one-way direction of travel or two-way direction of travel. The direction in which a vehicle can travel along a one-way road is provided in the attribute travel_direction. This attribute indicates whether a road is trafficable with or against the direction of digitisation.

7.2.6 Subtypes

Bridges and tunnels are identified within the subtype attribute. Identification of the vertical relationship between two crossing roads is not currently available within the product and will be considered as a future enhancement. Where two roads cross and are considered to form a real-world junction the roads segments are split at this location.

7.2.7 Roundabouts

Roads identified with a subtype of ROUNDABOUT will not be populated with a road name, type or suffix. Each roundabout is represented by the centre line of the road segments representing the real-world roundabout. Connector segments are not provided within National Roads.

7.2.8 Speed

The speed at which a vehicle can travel along a road is provided in the speed attribute. This attribute provides the posted speed limit in kilometres per hour for a section of road. Speed has not been applied to the following road hierarchies:

- ACCESS ROAD
- VEHICLE TRACK

Speed has not been applied where the subtype is TUNNEL.

7.2.9 Date Created

The date created attribute of a road is based upon the original record creation date from the custodian of that record where this is available. Where the date of record creation is not available this date will reflect the first date when this record was supplied to Geoscape and processed for inclusion into National Roads.

Data Updates and Maintenance

8.1 Data Maintenance

National Roads data is sourced and processed continuously, any changes to attribution or geometry for a road feature are applied to the National Roads product. These include:

- When a new road feature is supplied and it passes National Roads validation rules then a new feature is created within the National Roads dataset.
- When a road feature is supplied that is considered to be an existing road within the National Roads dataset and it passes National Roads validation rules, then if the supply contains changes to the road feature these are applied and the date_modified of the feature updated. If there is no change between the supplied road feature and the National Roads feature no changes are applied.
- When a supplier for a road no longer provides the road or indicates the road has been removed then the corresponding road feature is retired from the National Roads dataset.

8.2 Data Releases

National Roads is released monthly through the Online Data Delivery System.

8.3 Product Versioning

National Roads 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 National Roads 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, National Roads versioning will not increment with every data update, published releases will have a name e.g. 'June 2020' and will reference a version of the National Roads product e.g. '1.1'.

Delivery Format

9.1 Components

National Roads is a vector data product and is made available in a national supply for those formats that can store the size of data and maintain the data's spatial precision. Vector data formats and the availability of a national file for each format is detailed in the below table.

9.1.1 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:
https://www.esri.com/library/whitepapers/pdfs/shapefile.pdf

Language:
English

9.1.2 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

9.1.3 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: https://desktop.arcgis.com/en/desktop/latest/manage-data/administer-file-gdbs/file-geodatabases.htm

Language:
English

9.1.4 GeoJSON

Format Name:
GeoJSON

Specification:
This format includes files with the following extensions: *.geojson
GeoJSON specification: tools.ietf.org/html/rfc7946

Language:
English

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”.

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

9.1.5 Geopackage

Format name
Geopackage

Specification
This format includes files with the following extensions: *.gpkg
OGC Geopackage Standards. Follow this link: https://www.geopackage.org/

Language
English

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 integrator, independent software vendors, research organisations and consultancies.

geoscape.com.au/partners/

Contact Geoscape

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

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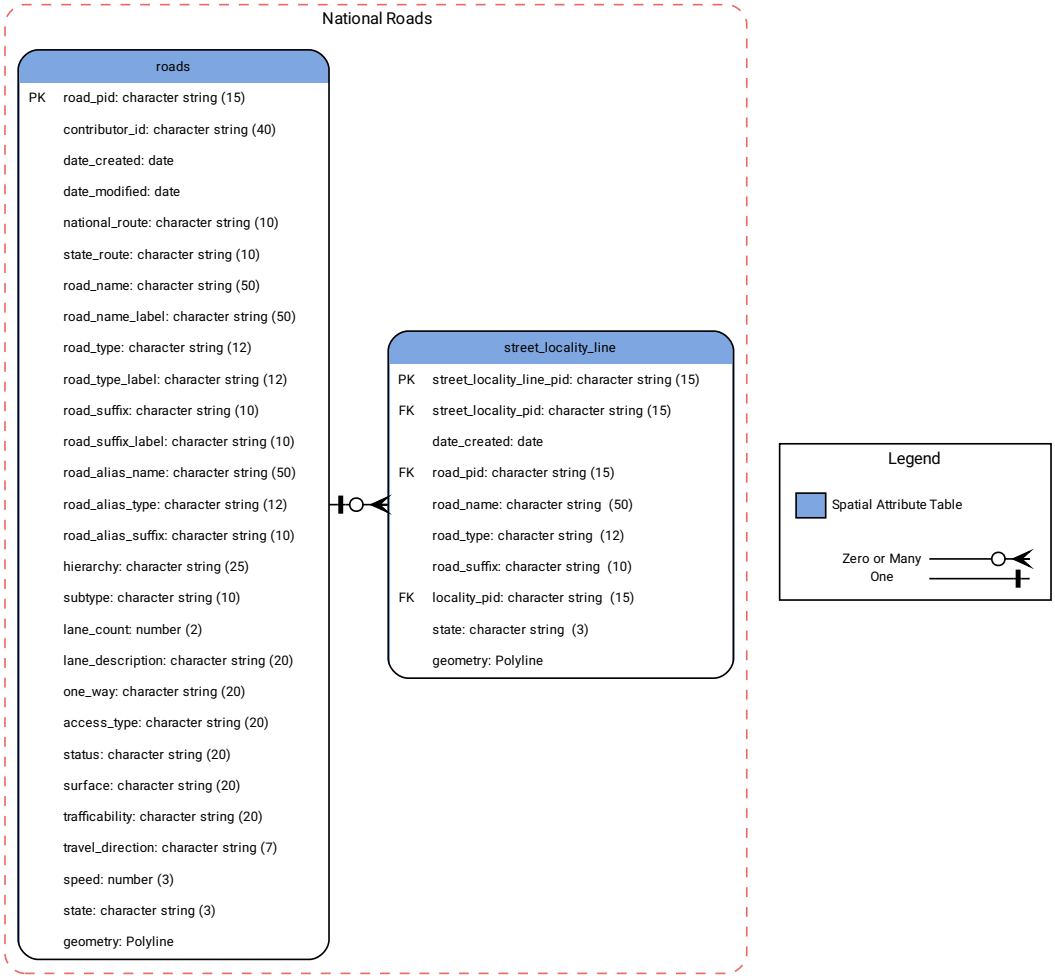
Appendix

12.1 Appendix A: National Roads Data Model Diagram



12.2 Appendix B: National Roads Data Dictionary

Table 1: National Roads

Name	Data Type	Description	Primary Key	Mandatory Field	10 Character alias
road_pid	character string (15)	Persistent identifier for a Roads feature	yes	yes	ROAD_PID
contributor_id	character string (40)	The contributor's identifier for a Roads segment	no	no	CONTRIB_ID
date_created	date (dd-mm-yyyy)	Date this record was created in the data custodian's system. Where this date is not available, then the first date on which the feature was processed for inclusion within Roads.	no	yes	DT_CREATE
date_modified	date (dd-mm-yyyy)	Date this record was last updated	no	no	DT_MOD
national_route	character string (10)	A route number to identify a route of National significance (e.g. C30)	no	no	NAT_ROUTE
state_route	character string (10)	A route number to identify a route of State significance (e.g. A20)	no	no	STA_ROUTE
road_name	character string (50)	Name of the road (e.g. SMITH AND JOHN)	no	no	RD_NAME
road_name_label	character string (50)	Title Case of road_name (e.g. Smith and John)	no	no	RD_NAM_LAB
road_type	character string (12)	Type of road (e.g. ROAD, STREET, CIRCUIT, LANE)	no	no	RD_TYPE
road_type_label	character string (12)	Title Case of road_type (e.g. Road, Street)	no	no	RD_TYP_LAB
road_suffix	character string (10)	Suffix of road (e.g. WEST)	no	no	RD_SUFFIX
road_suffix_label	character string (10)	Title Case of road_suffix (e.g. West)	no	no	RD_SUF_LAB
road_alias_name	character string (50)	A secondary name of the road	no	no	RD_AL_NAM
road_alias_type	character string (12)	A secondary type of the road	no	no	RD_AL_TYPE
road_alias_suffix	character string (10)	A secondary suffix of the road	no	no	RD_AL_SUF
hierarchy	character string (25)	Hierarchy of the road (e.g. NATIONAL OR STATE HIGHWAY)	no	no	HIERARCHY
subtype	character string (10)	Physical type of a road (e.g. ROUNDABOUT)	no	no	SUBTYPE
lane_count	number (2)	Number of physical lanes represented as a total count	no	no	LANE_COUNT
lane_description	character string (20)	Description of the physical lane count of a road	no	no	LANE_DESC
one_way	character string (20)	Indicates if the road supports one-way or two-way traffic direction	no	no	ONE_WAY
access_type	character string (20)	Accessibility of road (e.g. PRIVATE)	no	no	ACCESS_TYP
status	character string (20)	Lifecycle stage of a road (e.g. OPERATIONAL)	no	no	STATUS
surface	character string (20)	Surface of the road (e.g. SEALED)	no	no	SURFACE
trafficability	character string (20)	Indicates the minimum type of vehicle advised to traverse the road (e.g. 2WD)	no	no	TRFFCBL
travel_direction	character string (7)	Direction a vehicle is allowed to travel	no	no	TRADIR
speed	number (3)	Posted speed limit for the section of road to which it is attributed	no	no	SPEED
state	character string (3)	Indicates the State or Territory abbreviation of the jurisdiction its linear geometry predominantly intersects (e.g. NSW)	no	yes	STATE
geometry	polyline	Geometry of road	no	yes	GEOMETRY

Table 2: Street Locality Line

Name	Data Type	Description	Primary Key	Mandatory Field	10 Character alias
street_locality_line_pid	character string (15)	Persistent identifier for a street_locality_line feature.	yes	yes	SL_LNE_PID
street_locality_pid	character string (15)	Foreign key relationship to G-NAF street_locality table.	no	no	ST_LOC_PID
date_created	date (dd-mm-yyyy)	The date on which the feature was processed for inclusion within street_locality_line.	no	yes	DT_CREATE
road_pid	character string (15)	Persistent identifier for a Roads feature.	no	yes	ROAD_PID
road_name	character string (50)	Name of the road (e.g. SMITH AND JOHN)	no	no	RD_NAME
road_type	character string (12)	Type of road (e.g. ROAD, STREET, CIRCUIT, LANE)	no	no	RD_TYPE
road_suffix	character string (10)	Suffix of road (e.g. WEST)	no	no	RD_SUFFIX
locality_pid	character string (15)	The persistent identifier of the locality associated with the road feature.	no	yes	LOC_PID
state	character string (3)	Indicates the state that supplied the road record (e.g. NSW).	no	yes	STATE
geometry	Polyline	Geometry of street_locality_line feature.	no	yes	GEOMETRY

Table 3: Road Types

road_type/ road_alias_type	road_type_label	road_type/ road_alias_type	road_type_label	road_type/ road_alias_type	road_type_label
ACCESS	Access	EXTENSION	Extension	PRECINCT	Precinct
ACRE	Acre	FAIRWAY	Fairway	PROMENADE	Promenade
AIRWALK	Airwalk	FIREBREAK	Firebreak	PURSUIT	Pursuit
ALLEY	Alley	FIRELINE	Fireline	QUAD	Quad
ALLEYWAY	Alleyway	FIRETRACK	Firetrack	QUADRANT	Quadrant
AMBLE	Amble	FIRETRAIL	Firetrail	QUAY	Quay
APPROACH	Approach	FLAT	Flat	QUAYS	Quays
ARCADE	Arcade	FLATS	Flats	RAMBLE	Ramble
ARTERIAL	Arterial	FOLLOW	Follow	RAMP	Ramp
ARTERY	Artery	FOOTWAY	Footway	RANGE	Range
AVENUE	Avenue	FORD	Ford	REACH	Reach
BANAN	Banan	FORESHORE	Foreshore	REEF	Reef
BANK	Bank	FORK	Fork	RESERVE	Reserve
BAY	Bay	FORMATION	Formation	REST	Rest
BEACH	Beach	FREEWAY	Freeway	RETREAT	Retreat
BEND	Bend	FRONT	Front	RETURN	Return
BIDI	Bidi				
BOARDWALK	Boardwalk	FRONTAGE	Frontage	RIDE	Ride
BOULEVARD	Boulevard	GAP	Gap	RIDGE	Ridge
BOULEVARDE	Boulevarde	GARDEN	Garden	RIGHT OF WAY	Right Of Way
BOWL	Bowl	GARDENS	Gardens	RING	Ring
BRACE	Brace	GATE	Gate	RISE	Rise
BRAE	Brae	GATEWAY	Gateway	RISING	Rising
BRANCH	Branch	GLADE	Glade	RIVER	River
BREAK	Break	GLEN	Glen	ROAD	Road
BRETT	Brett	GRANGE	Grange	ROADS	Roads
BRIDGE	Bridge	GREEN	Green	ROADWAY	Roadway
BROADWALK	Broadwalk	GROVE	Grove	ROTARY	Rotary
BROADWAY	Broadway	GULLY	Gully	ROUND	Round
BROW	Brow	HARBOUR	Harbour	ROUTE	Route
BULL	Bull	HAVEN	Haven	ROW	Row
BUSWAY	Busway	HEATH	Heath	ROWE	Rowe
BYPASS	Bypass	HEIGHTS	Heights	RUE	Rue
BYWAY	Byway	HIGHROAD	Highroad	RUN	Run
CAUSEWAY	Causeway	HIGHWAY	Highway	SERVICEWAY	Serviceway
CENTRE	Centre	HIKE	Hike	SHUNT	Shunt
CENTREWAY	Centreway	HILL	Hill	SKYLINE	Skyline
CHASE	Chase	HILLS	Hills	SLOPE	Slope
CIRCLE	Circle	HOLLOW	Hollow	SOUTH	South
CIRCLET	Circlet	HUB	Hub	SPUR	Spur
CIRCUIT	Circuit	INLET	Inlet	SQUARE	Square
CIRCUS	Circus	INTERCHANGE	Interchange	STEPS	Steps
CLOSE	Close	ISLAND	Island	STRAIGHT	Straight
CLUSTER	Cluster	JUNCTION	Junction	STRAIT	Strait
COLONNADE	Colonnade	KEY	Key	STRAND	Strand
COMMON	Common	KEYS	Keys	STREET	Street
COMMONS	Commons	KNOLL	Knoll	STRIP	Strip
CONCORD	Concord	LADDER	Ladder	SUBWAY	Subway
CONCOURSE	Concourse	LANDING	Landing	TARN	Tarn
CONNECTION	Connection	LANE	Lane	TERRACE	Terrace
COPSE	Copse	LANEWAY	Laneway	THOROUGHFARE	Thoroughfare
CORNER	Corner	LEAD	Lead	THROUGHWAY	Throughway
CORSO	Corso	LEADER	Leader	TOLLWAY	Tollway
COURSE	Course	LINE	Line	TOP	Top
COURT	Court	LINK	Link	TOR	Tor
COURTYARD	Courtyard	LOOKOUT	Lookout	TRACK	Track
COVE	Cove	LOOP	Loop	TRAIL	Trail
CRESCENT	Crescent	LYNNE	Lynne	TRAMWAY	Tramway
CREST	Crest	MALL	Mall	TRAVERSE	Traverse
CRIEF	Crief	MANOR	Manor	TRIANGLE	Triangle
CROOK	Crook	MART	Mart	TRUNKWAY	Trunkway
CROSS	Cross	MAZE	Maze	TUNNEL	Tunnel
CROSSING	Crossing	MEAD	Mead	TURN	Turn
CRUISEWAY	Cruiseway	MEANDER	Meander	TWIST	Twist
CUL-DE-SAC	Cul-De-Sac	MEW	Mew	UNDERPASS	Underpass
CUT	Cut	MEWS	Mews	VALE	Vale
CUTTING	Cutting	MILE	Mile	VALLEY	Valley

continues on next page

Table 3 – continued from previous page

road_type/ road_alias_type	road_type_label	road_type/ road_alias_type	road_type_label	road_type/ road_alias_type	road_type_label
DALE	Dale	MOTORWAY	Motorway	VERGE	Verge
DASH	Dash	NOOK	Nook	VIADUCT	Viaduct
DELL	Dell	NORTH	North	VIEW	View
DENE	Dene	OUTLET	Outlet	VIEWS	Views
DEVIATION	Deviation	OUTLOOK	Outlook	VILLA	Villa
DIP	Dip	OVAL	Oval	VILLAGE	Village
DISTRIBUTOR	Distributor	PALMS	Palms	VILLAS	Villas
DIVIDE	Divide	PARADE	Parade	VISTA	Vista
DOCK	Dock	PARADISE	Paradise	VUE	Vue
DOMAIN	Domain	PARK	Park	WADE	Wade
DOWN	Down	PARKWAY	Parkway	WALK	Walk
DOWNS	Downs	PART	Part	WALKWAY	Walkway
DRIVE	Drive	PASS	Pass	WATERS	Waters
DRIVEWAY	Driveway	PASSAGE	Passage	WATERWAY	Waterway
EASEMENT	Easement	PATH	Path	WAY	Way
EAST	East	PATHWAY	Pathway	WEST	West
EDGE	Edge	PENINSULA	Peninsula	WHARF	Wharf
ELBOW	Elbow	PIAZZA	Piazza	WOOD	Wood
END	End	PLACE	Place	WOODS	Woods
ENTRANCE	Entrance	PLAZA	Plaza	WYND	Wynd
ESPLANADE	Esplanade	POCKET	Pocket	YARD	Yard
ESTATE	Estate	POINT	Point		
EXPRESSWAY	Expressway	PORT	Port		

Table 4: Road Suffix

road_suffix/ road_alias_suffix	road_suffix_label
CENTRAL	Central
DEVIATION	Deviation
EAST	East
EXTENSION	Extension
INNER	Inner
LOWER	Lower
MALL	Mall
NORTH	North
NORTH EAST	North East
NORTH WEST	North West
OFF	Off
ON	On
OUTER	Outer
OVERPASS	Overpass
SOUTH	South
SOUTH EAST	South East
SOUTH WEST	South West
UPPER	Upper
WEST	West

Table 5: Hierarchy

Domain Value	Domain Value Description
NATIONAL OR STATE HIGHWAY	Roads which are of importance in a national sense, and/or are major interstate through route, principal connector roads between capitals, major regions, key towns, commercial centres or inter-transport hubs.
ARTERIAL ROAD	Well maintained and widely used roads which are major connectors for national highways or state highways, major centres, key towns, or have major tourist importance or which main function is to form the principal avenue of communication for metropolitan traffic movements.
SUB-ARTERIAL ROAD	Acts as connector between highways and/or arterial roads, or as an alternative for arterial roads, or a principal avenue for massive traffic movements.
COLLECTOR ROAD	Provides for traffic movement between sub-arterial and local roads or to distribute traffic to local street systems.
LOCAL ROAD	Local area roads, often in residential areas. Includes service roads that may share the same name as higher order roads.
ACCESS ROAD	Road designed to provide access to the rear of, into or within a property but may not necessarily be part of the public road network. Would be applied to urban service lanes, driveways or and tracks.
VEHICLE TRACK	Unimproved roads which are generally restricted to a single lane with occasional passing opportunities. These roads are influenced by seasonal and weather conditions restricting access to particular vehicle types.
BUSWAY	A road which has been dedicated as a rapid bus-only transit way. This does not include roads which have bus-only lanes.
FERRY	A route which requires a ferry to traverse a body of water. These can be both passenger and vehicular transport.
FOOTPATH	Features that are intended for use of pedestrians.
CYCLEPATH	Features that are intended for bicycle transportation.

Table 6: Subtype

Domain Values	Description
ROAD	Default value. Road with ability to be addressed if required. Would include emergency crossovers.
ROUNDABOUT	Road segment part of an intersection designed to allow smooth integration but also slow traffic. It must be circular or elliptical in design, have one-way flow, and would generally not have addresses on it.
RAMP	An access ramp to or from one road to another, to allow smooth integration of traffic. Travel flow is in one direction only, Ramps are always sealed and mostly have a single lane.
TUNNEL	An underground passage utilised by vehicular traffic to travel between point a and b quickly.
FIRE TRAIL	Primarily utilised by management vehicles and emergency services. May be open to access by the public.
BRIDGE	Structure erected over a depression or obstacle to carry traffic.
FERRY	The feature represents a ferry route.
PATHWAY	Default value for Hierarchies of FOOTPATH or CYCLEPATH. Classification of a FOOTPATH or CYCLEPATH Hierarchy that is not classified as any of the other subtypes (e.g. BRIDGE or TUNNEL)

Table 7: Lane Description

Domain Values	Description
ONE	Road has one lane in each permitted traffic direction or is a single lane road.
TWO OR MORE	Road has two or more lanes in at least one permitted traffic direction.

Table 8: One Way

Domain Values	Description
ONE WAY	Allows for traffic in one direction only.
TWO WAY	Allows for traffic in two directions.

Table 9: Access Type

Domain Values	Description
PUBLIC	Is open to the general public.
PRIVATE	May be blocked by a fence or gate.
MANAGEMENT ONLY	For management purposes only and therefore may be blocked by a fence or gate.

Table 10: Status

Domain Values	Description
OPERATIONAL	Can be used for transport.
UNDER CONSTRUCTION	Currently being built.
PROPOSED	Not yet built and may still be awaiting approval.
CLOSED	No longer used for traffic. Can include historical roads that are no longer maintained.

Table 11: Surface

Domain Values	Description
SEALED	The road has a constructed surface e.g. brick, concrete, asphalt.
UNSEALED	The surface does not have a constructed surface.

Table 12: Trafficability

Domain Values	Description
2WD	The minimum vehicle requirement recommended is a 2-wheel drive capable vehicle.
4WD	The minimum vehicle requirement recommended is a 4-wheel drive capable vehicle.

Table 13: Travel Direction

Domain Values	Description
FROM TO	Traffic with the direction of digitisation.
TO FROM	Traffic against the direction of digitisation.
BOTH	Traffic can travel either direction.

Table 14: State

Domain Values	Description
ACT	Australian Capital Territory
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia

12.3 Appendix C: Metadata

Direct Download `roads.xml`.

12.3.1 National Roads Metadata Statement

Metadata for the Metadata

Metadata Identifier: b1f8e2a4-7c3d-4e6a-9f2d-8d4b1a6c9e32

Time:

- Create Date: 2022-02-02T01:56:57.785613Z
- Revision Date: 2025-06-18T06:30:35.152518Z

Responsible Party:

- Individual: Michael Dixon
- Organisation: Geoscape Australia
- Position: Chief Data Officer
- Telephone: +61 2 6260 9000
- Delivery point: Unit 6, 113 Canberra Ave Griffith ACT 2603 Australia

Access, Use, Security:

Standard: ISO 19115-3

Language: English

Resource Metadata

Title: National Roads

Abstract: Roads is a national digital dataset that provides an optimised, aggregated view of Australia's road geometry and attribution, created from multiple sources (including jurisdictional data) that are revised regularly and supplied in varying formats and quality.

Purpose: The purpose of Roads is to provide a single national digital representation of Australian roads with detailed attribution to support visualisation, analysis and logistics planning at both national and local scales.

Responsible Party:

- Organisation: Geoscape
- Telephone: +61 2 6260 9000
- Delivery point: Unit 6, 113 Canberra Ave Griffith ACT 2603 Australia

Access, Use, Security:

- Legal Constraints: Geoscape Australia and its authorised partners license this dataset. Users must comply with the applicable licence terms and the Geoscape Copyright Notice and Disclaimer, available at geoscape.com.au/data-copyright-disclaimer/.
- Security Constraints: None. This dataset is not subject to any security classification.
- Use Limitations: Refer to the product guide available via docs.geoscape.com.au for data quality and related information.
- Releasability: This dataset must not be distributed except in accordance with the terms of the licence under which it was accessed.

Extents

- West/Min X: 96.00
- East/Max X: 160.00
- South/Min Y: -44.00
- North/Max Y: -9.00

Reference System:

- GDA2020 (EPSG:7844)
- GDA94 (EPSG:4283)
- Australian Height Datum (EPSG:5111)

Keywords:

- National Roads
- Roads
- Roads datasets
- Roads file

Distribution:

This dataset is available from Geoscape Australia.

Format/s:

- ESRI Shapefile
- Mapinfo TAB
- GeoJSON
- ESRI File Geodatabase
- OGC GeoPackage

Status: completed

Lineage:

Statement:

National Roads is continuously built by sourcing road centreline data from a broad range of organisations, with State and Territory governments providing the primary inputs that form the basis of the national road network. Incoming datasets are quality assured, standardised, integrated and topology-corrected before publication, and Geoscape may also digitise or integrate additional centrelines where reliable sources improve national quality and consistency. As part of production, attribute population follows defined rules (with unknowns left as NULL), and connectivity around State/Territory borders is reviewed and corrected where issues are identified. Ongoing maintenance applies validated supply changes by creating new features, updating existing features (and date_modified) when differences are present, or retiring features when suppliers remove or stop providing them; the product is then released monthly via the online delivery system.

Additional Documentation

- Title: National Roads Product Description
- Alternate Title: National Roads Product Guide
- Edition: 3.3
- Presentation Format: documentDigital
- Linkage: https://docs.geoscape.com.au/projects/roads_description/en/stable/index.html
- Name: Roads Product Description
- Description: Product Description of the current version of the National Roads Product.
- Function: information

Maintenace and Update Frequency: monthly