Spatial Services

NSW Foundation Spatial Data Framework

August 2023

NSW GOVERNMENT

Title: NSW Foundation Spatial Data Framework
Spatial Services | Department of Customer Service

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Acknowledgements

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Contents

1. Introduction

The third edition of the NSW Foundation Spatial Data Framework (FSDF) continues to bring together fundamentally significant and important NSW spatial data. This Framework has continued to evolve since it was formally published and endorsed by the NSW Government.

The prevailing principles of the first edition persist through to the revised NSW FSDF. The provision of a state wide FSDF ensures the seamless exchange of single source of truth spatial data.

This edition of the NSW FSDF has seen the application of the NSW Open Data Policy to many of the foundation spatial datasets defined in the framework making these important NSW Government information assets available for use across all sectors of government, industry and the community.

2. Background

The first edition of the NSW FSDF was released in August 2013. ANZLIC—the Spatial Information Council published the One ANZ Foundation Spatial Data Framework, defining foundation spatial data across Australia, which was a key driver behind the rationale to progress the NSW FSDF. The NSW ICT Strategy 2012 set the strategic direction and impetus for finalising this document to make better use of location information.

Since 2013 significant advancements have been made in the development of supporting information management policies and guidelines and strategic directions. The adoption of Creative Commons licensing by the NSW Government with the goal to open up all foundation spatial data represents a significant change since the last edition.

The NSW Open Data Policy has opened the flood gates for a greater volume of data, spatial and aspatial, to be made available than ever before. This mirrors a global trend for improved simplification, reform and transparency around data access, maintenance and distribution.

The development and implementation of the NSW Location Intelligence Strategy, the first of its kind in NSW, has heralded a new dawn in spatial in NSW. The Strategy's aim to maximise the value of location intelligence in decision making, planning and service delivery is underpinned by a solid foundation of spatial data assets held by Government. The NSW FSDF represents this foundation and will continue to be of great importance to government, industry and the community.

3. Why have a NSW Foundation Spatial Data Framework?

Spatial data is a critical component of the NSW economy and is relied upon heavily for regional issues associated with environmental management, the mitigation of natural disasters and economic growth. The NSW FSDF provides a common reference for the base and spatial (foundation) datasets that are essential for the contextualisation of information. Foundation spatial data is also a key enabler and requirement for innovation and digital service delivery. It is the delivery of state wide coverage of the best available, current, authoritative source of foundation spatial data which is standardised and quality controlled. This aligns with the principles outlined by the NSW Government's Information Management Framework.

4. What is foundation spatial data?

Foundation spatial data is defined as “the authoritative geographic information that underpins, or can add significant value to, any other information. It supports evidence-based decisions across government, industry and the community”[1].

Criteria has been developed to determine non-foundation from foundation. To be classified as foundation, the spatial data must contain one or more of the following characteristics to be deemed ‘foundation’:

- be geospatial
- essential for public safety and wellbeing
- critical for a national and state or government function
- contribute significantly to economic, social and environmental sustainability[2].

5. The twelve data themes

NSW has adopted the twelve data themes identified by ANZLIC. These are:

1. Administrative Boundaries
2. Land Parcel and Property
3. Geocoded Addressing
4. Transport
5. Positioning
6. Place Names
7. Elevation and Depth
8. Imagery
9. Water
10. Land Cover

Additional Categories:

11. Physiography
12. Features of Interest

1 ANZLIC, 2014. The Australian and New Zealand Foundation Spatial Data Framework. ANZLIC April 2014, edition 2.
2 ANZLIC, 2014. The Australian and New Zealand Foundation Spatial Data Framework. ANZLIC April 2014, edition 2.

6. Users

The users of the Framework will be government, industry, research, academia and the general public. To ensure the NSW FSDF aligns with the ANZLIC FSDF, particularly in regards to interoperability, the information management practices are being monitored to ensure alignment is achievable to enable seamless spatial datasets to be made available at a national level. This ensures that all users will be able to reference the same source of foundation spatial data for policy, business, operational, research and personal decision making purposes[3].

7. Beyond the foundation

The NSW FSDF laid the preliminary work for the creation of agency centric Spatial Data Frameworks (SDFs). SDFs encapsulate the principles set out in the NSW FSDF and the NSW Government Data and Information Custodianship Policy. They enable NSW Government agencies to identify and make available their core value spatial datasets.

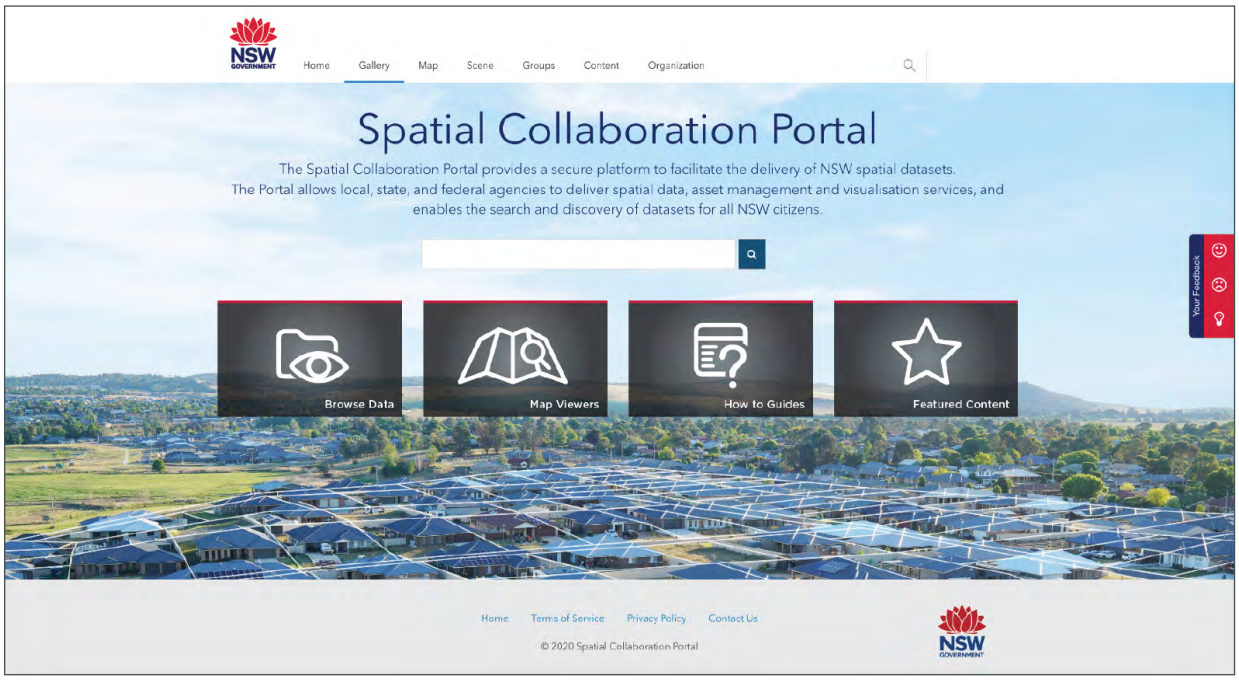
The following agency centric spatial data frameworks have been developed, or are currently being developed, to date:

- NSW Education Spatial Data Framework
- NSW Planning and Environment Spatial Data Framework
- NSW Trade and Investment Spatial Data Framework (work in progress)
- NSW Emergency Services Spatial Data Framework (work in progress).

This process ensures a consistent approach to the identification and management of government location based data aligning to the strategic directions under the NSW Location Intelligence Strategy.

3 ANZLIC, 2012. One ANZ Foundation Spatial Data Framework. ANZLIC November 2012.

8. Access and Delivery



The Spatial Collaboration Portal (SCP) was developed with several pathways, to access our data via a secure platform.

SCP holds the NSW Foundational Spatial Data Framework collection, with an enhanced self-service enabling the search and discovery of our data.

Please visit the SCP via the following link: portal.spatial.nsw.gov.au

Some SCP features are:

- APIs are available for our dataset.
- Exporting an authoritative source of spatial data.
- Spatial Map Viewer
- NSW Elevation Data Service.
- The Historical Imagery Viewer
- The NSW Map Viewer
- NSW Land values and property sale map
- How to Guides

9. Appendix: NSW Foundation Spatial Data Framework Data Custodian Records

The following spatial datasets document the formal custodian arrangements for whole of government foundation spatial data.

9.1 Administrative Boundaries theme

NSW Foundation Spatial Data Framework: Theme profile

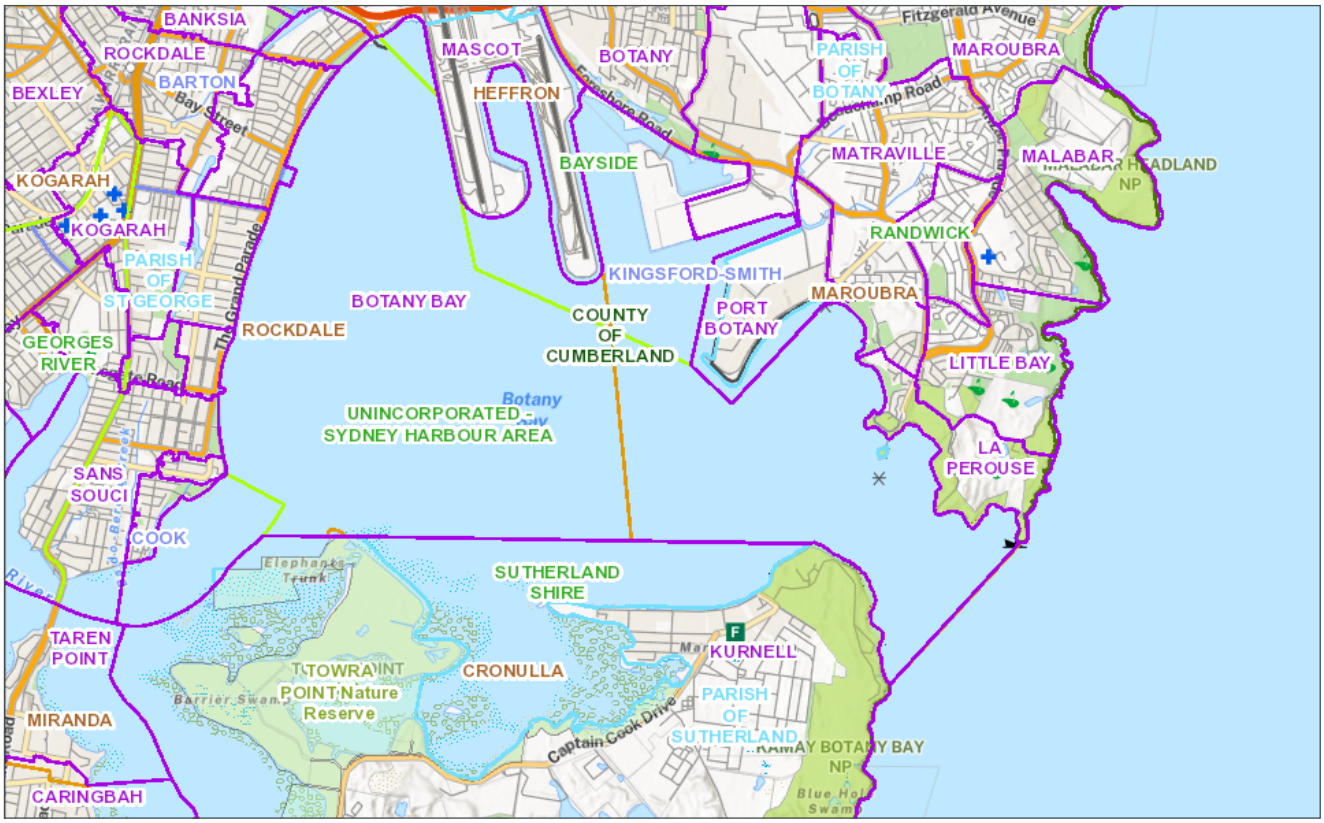


Image depicts a sample of the NSW Administrative Boundaries Database 2018 © DCS Spatial Services 2023 (Displayed: Federal Electoral Boundaries consisting of Local Government Area, Suburb, Parish, State Electoral Boundaries)

Name	Administrative Boundaries theme
Description	The Administrative Boundaries theme is a collection of legislative, regulatory, political, maritime and general administrative boundaries sourced from local and state boundary datasets.
Datasets	Parish County Suburb Local Government Area State Electoral District State Border Australian Bureau of Statistics Geographical Standard Boundaries

Purpose	The Administrative Boundaries theme is used to show administrative areas that represent: • voting districts • redistributions • zoning • socio-economic analysis • regional planning • service distribution • local and state government boundaries. In addition, Administrative Boundaries can also be used for analysis and look at trends over time. Administrative boundary data in combination with geo-coded address data, demographic information and agency specific business information underpins the ability to perform high quality spatial analysis. The use of this data in combination with other data includes: • evidence-based development and assessment of government policy • providing the ability to undertake spatial accounting • regional analysis for government, health, education, business and a range of other purposes • support for emergency management • market catchment analysis, micromarketing, customer analysis and market segmentation • emergency management.
Status	Update frequencies vary for each dataset. Individual current status can be found under each Spatial data profile.
Standards	Metadata for the relevant DCS Spatial Services datasets complies with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and 19139.
Version	Version 0.7

9.1.1 Dataset/ product title: Parish

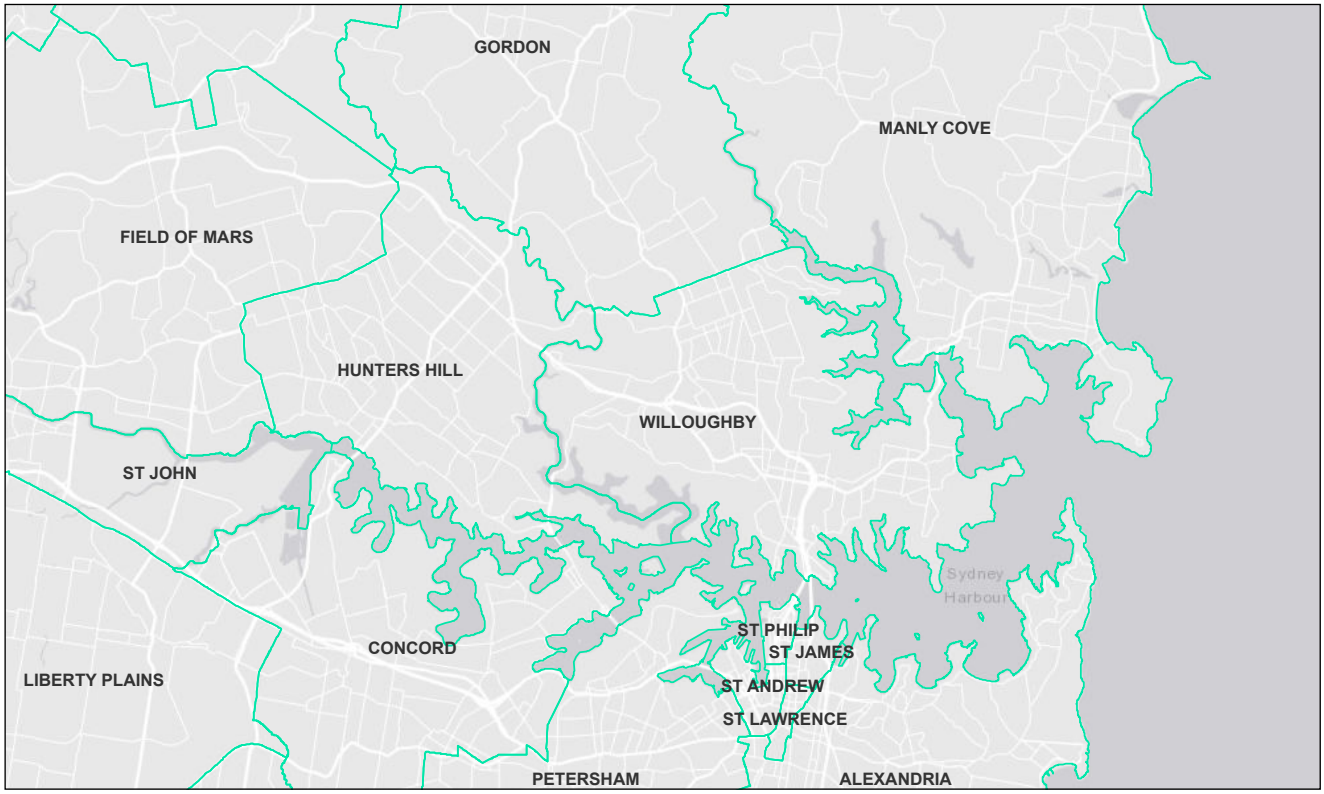


Image depicts a sample of the Parish dataset © DCS Spatial Services 2023

Dataset/product description	Parish depicts the boundaries of 7,377 areas formed by the division of 141 counties. It is a polygon feature class within the NSW Digital Cadastral Database (DCDB). Parishes are divided into separately disposable parcels called 'portions', these being the common basic units of land disposed of by the Crown. Other basic units are allotments in Government Towns and Villages.
Dataset uses	Administrative boundaries data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning.
Current status	The Parish is a historical layer and the information was gathered from original paper maps which were held by DCS Spatial Services. They can however be updated (if necessary) after a manual title inspection. The Parish dataset is up to date and complete state wide. Coincidence with the cadastral fabric is maintained where required and the spatial accuracy of the Parish dataset reflects that of the cadastral fabric. The attributes 'create date' and 'modified date' provide information on the features' temporal accuracy. There is no overall accuracy reported in the database. Any changes that occur to the dataset should have a reference in the authority of reference feature class in the DCDB.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Parish Boundary
Updates	The dataset is complete. Updates are rare.
Custodian agency and contact	Name: Crown Lands Address: PO Box 2185 Dangar NSW 2309
Aggregator(s)	Name: Crown Lands Address: PO Box 2185 Dangar NSW 2309
Distributor(s)	Name: Crown Lands Address: PO Box 2185 Dangar NSW 2309

9.1.2 Dataset/product title: County

Image depicts a sample of the County dataset © DCS Spatial Services 2023

Dataset/product description	County depicts the boundaries of 141 divisions of the State of New South Wales created for management and disposal of Crown Lands. It is a polygon feature class within the NSW Digital Cadastral Database (DCDB).
Dataset uses	Land and property data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning.
Current status	County is a historical layer and the information was gathered from original paper maps which were held by DCS Spatial Services. It can however be updated (if necessary) after a manual title inspection. The County dataset is up to date and complete state wide. Coincidence with the cadastral fabric is maintained where required and the spatial accuracy of the County dataset reflects that of the cadastral fabric. The attributes 'create date' and 'modified date' provide information on the features' temporal accuracy. There is no overall accuracy reported in the database. Any changes that occur to the dataset should have a reference in the authority of reference feature class in the DCDB.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Administrative Boundaries Theme-County
Updates	The dataset is complete. Updates are rare
Custodian agency and contact	Name: Crown Lands Address: PO Box 2185 Dangar NSW 2309
Aggregator(s)	Name: Crown Lands Address: PO Box 2185 Dangar NSW 2309
Distributor(s)	Name: Crown Lands Address: PO Box 2185 Dangar NSW 2309

9.1.3 Dataset/product title: Suburb

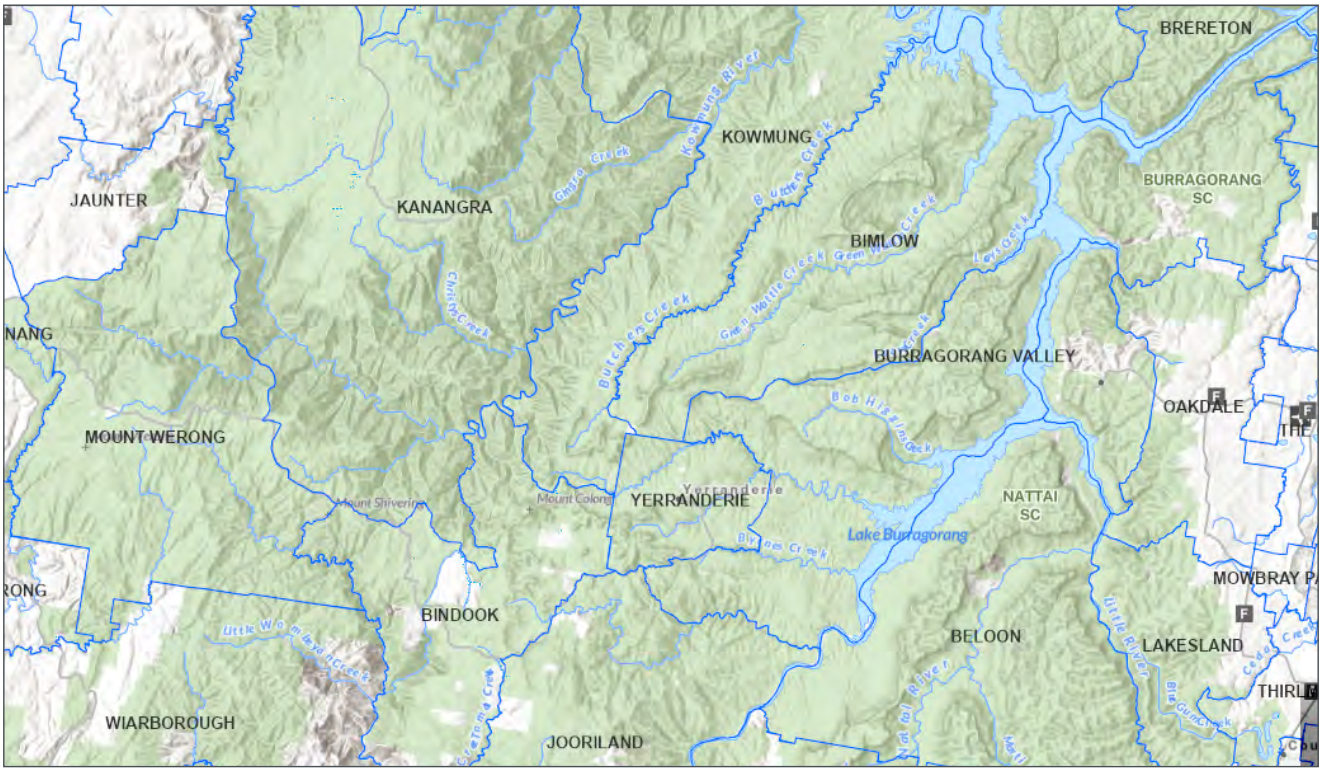


Image depicts a sample of the Suburb dataset © DCS Spatial Services 2023

Dataset/product description	Suburb dataset represents the gazetted boundary of a suburb or locality area. The Geographical Names Board (GNB) is responsible for new suburb names and amendments to the extent of a suburb boundary. The dataset also contains post codes that are held against each suburb, sourced and matched from Australia Post. It is a polygon feature class within the NSW Digital Cadastral Database (DCDB).
Dataset uses	Administrative boundary data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • define addresses in NSW • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning • inform water and carbon accounting programs.
Current status	The Suburb dataset is up to date as per the current boundaries determined by the GNB. Coincidence with the cadastral fabric is maintained where required and the spatial accuracy of the Suburb dataset reflects that of the cadastral fabric. The attributes 'create date' and 'modified date' provide information on the features' temporal accuracy. There is no overall accuracy reported in the database. Any changes that occur to the dataset should have a reference in the authority of reference feature class in the DCDB.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Suburb Boundaries
Updates	The dataset is updated to reflect changes in boundaries as gazetted by the Geographical Names Board of NSW.
Custodian agency and contact	Geographical Names Board of NSW 346 Panorama Ave Bathurst NSW 2795 SS-GNB@customerservice.nsw.gov.au
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 www.spatial.nsw.gov.au/contact_us
Distributor(s)	Name: Public Sector Mapping Agencies Address: Unit 6, 113 Canberra Ave Griffith ACT 2603 Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 www.spatial.nsw.gov.au/contact_us

9.1.4 Dataset/product title: Local Government Area

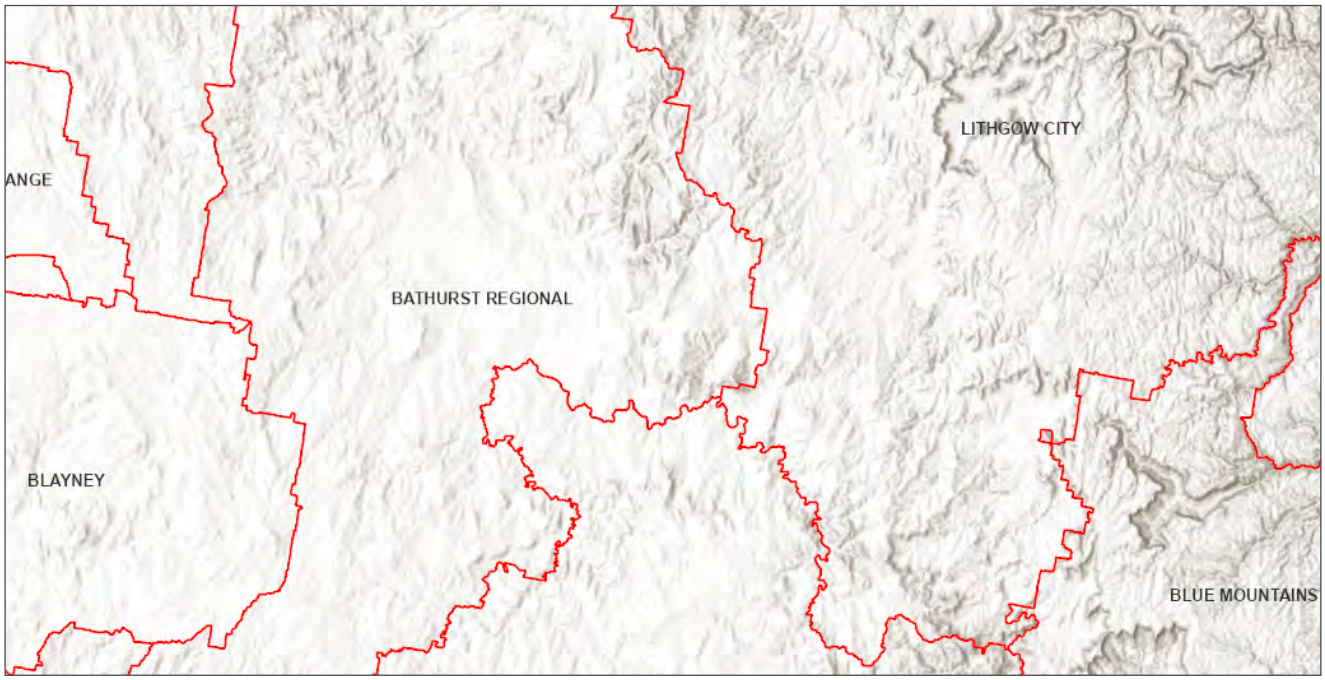


Image depicts a sample of the Local Government Area dataset © DCS Spatial Services 2023

Dataset/product description	Local Government Area depicts polygons of gazetted boundaries defining the Local Government Area. It contains all of the cadastral line data or topographic features which are used to define the boundaries between adjoining shires, municipalities, cities (Local Government Act 1993) and the unincorporated areas of NSW. The dataset also contains Council Names and ABS Codes It is a feature class within the NSW Digital Cadastral Database (DCDB).
Dataset uses	Land and property data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning • inform water and carbon accounting programs.
Current status	The Local Government Area dataset is up to date as per the current boundaries gazetted by the NSW Office of Local Government. Coincidence with the cadastral fabric is maintained where required and the spatial accuracy of the Local Government Area dataset reflects that of the cadastral fabric. The attributes 'create date' and 'modified date' provide information on the features' temporal accuracy. There is no overall accuracy reported in the database. Any changes that occur to the dataset should have a reference in the authority of reference feature class in the DCDB, this may also now include a reference to a plan in the Register of Public Surveys.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Local Government Area Boundary
Updates	The dataset is updated to reflect changes in boundaries as gazetted by the NSW Office of Local Government.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.1.5 Dataset/product title: State Electoral District

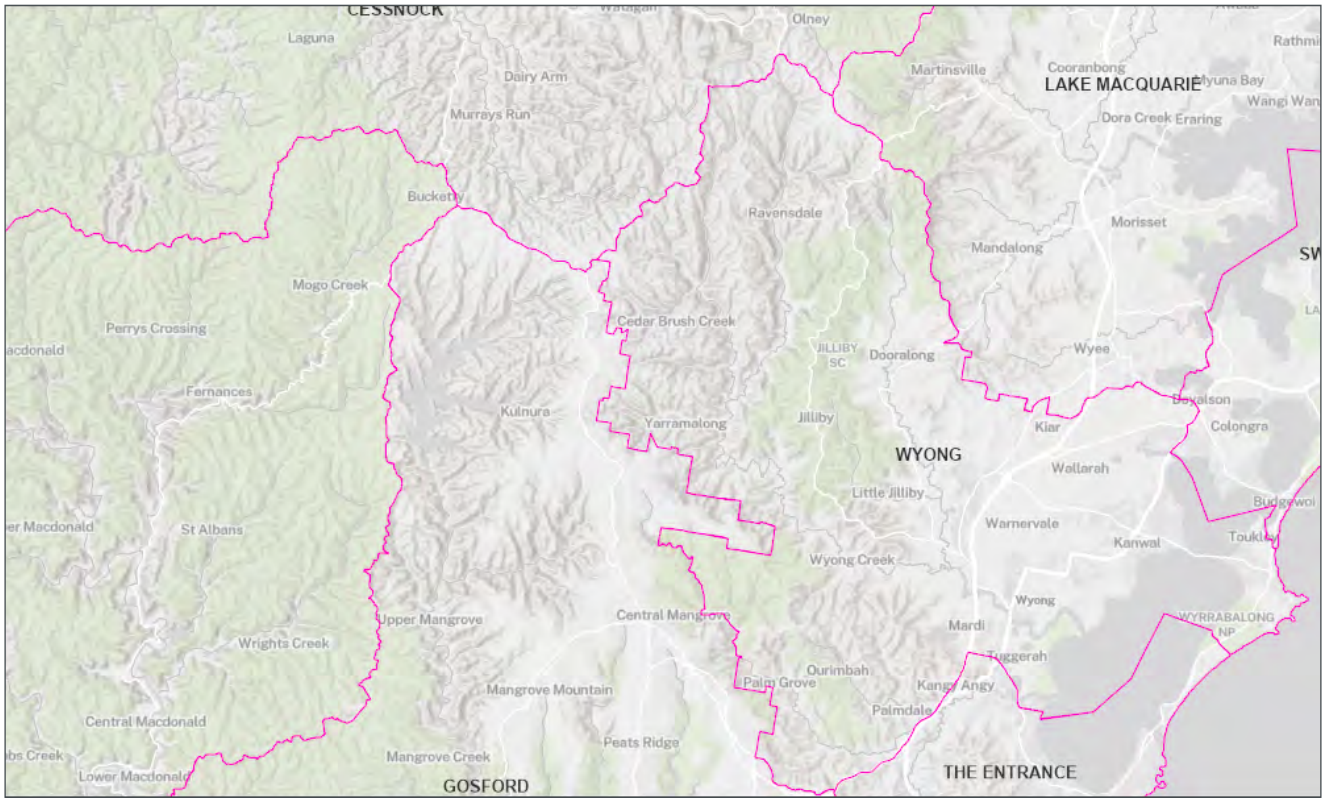


Image depicts a sample of the State Electoral District dataset © DCS Spatial Services 2023

Dataset/product description	State Electoral District dataset represents current NSW or NSW Federal electoral boundaries in conjunction with the Electoral Commission, containing all of the cadastral line data or topographic data features which form, by definition, the boundaries between adjoining electorates. It is a polygon feature class within the NSW Digital Cadastral Database (DCDB).
Dataset uses	Land and property data underpins the economic, social and environmental fabric of NSW. It also provides a snapshot of a region in addition to providing population breakdown for the area. This may assist in planning exercises.
Current status	The State Electoral District dataset is up to date as reflected in the current boundaries gazetted by the Australian Electoral Commission. Coincidence with the cadastral fabric is maintained where required and the spatial accuracy of the dataset reflects that of the cadastral fabric with relation to the boundaries as gazetted. The attributes 'create date' and 'modified date' provide information on the features' temporal accuracy. There is no overall accuracy reported in the database. Any changes that occur to the dataset should have a reference in the authority of reference feature class in the DCDB.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	State Electoral Districts
Updates	The dataset is updated to reflect changes in boundaries as gazetted by the Electoral Commission of NSW.
Custodian agency and contact	Name: NSW Electoral Commission Address: Level 25, 201 Kent Street Sydney NSW 2000 GPO Box 832, Sydney NSW 2001
Aggregator(s)	Name: NSW Electoral Commission Address: Level 25, 201 Kent Street Sydney NSW 2000 GPO Box 832, Sydney NSW 2001
Distributor(s)	Name: NSW Electoral Commission Address: Level 25, 201 Kent Street Sydney NSW 2000 GPO Box 832, Sydney NSW 2001

9.1.6 Dataset/product title: State Border

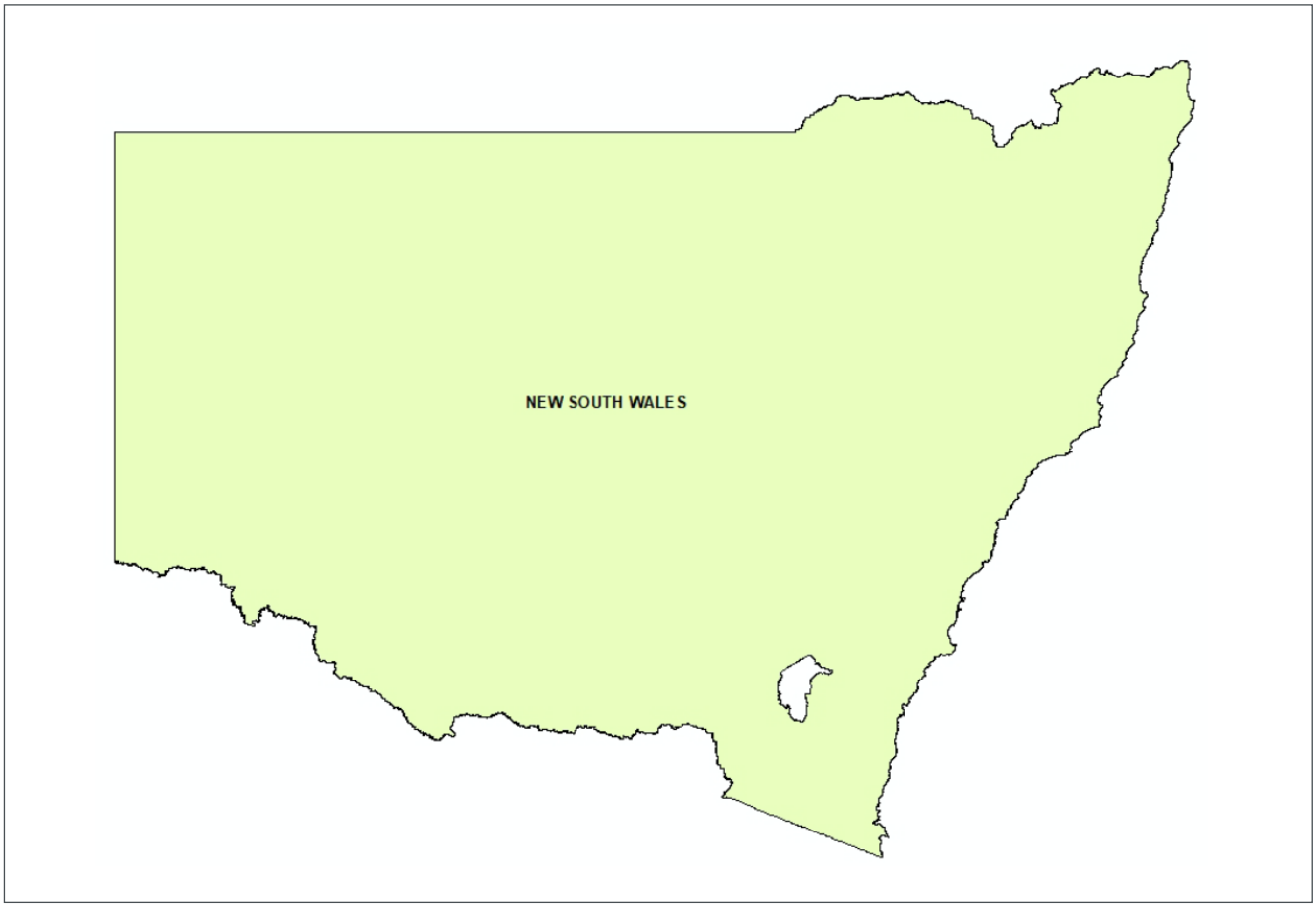
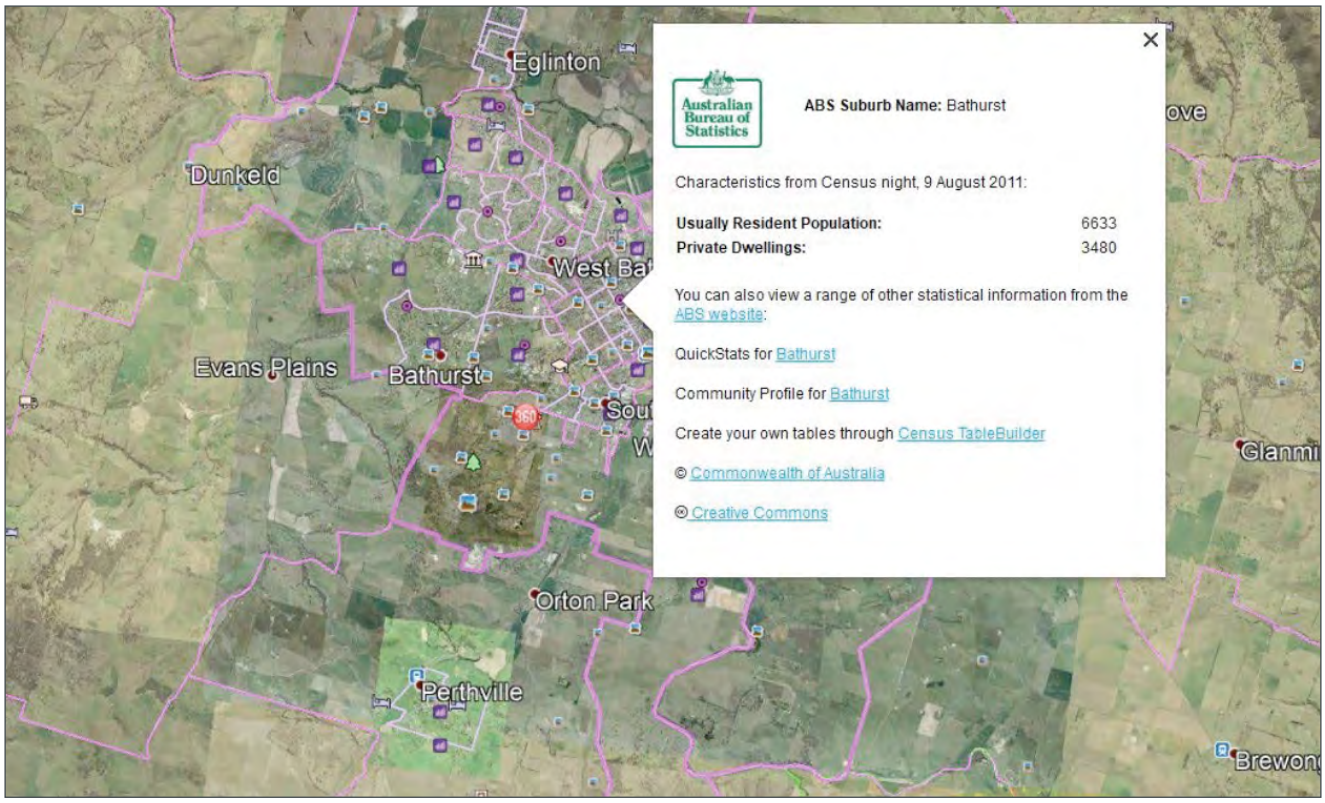


Image depicts a sample of the New South Wales State Border © DCS Spatial Services 2023

Dataset/product description	The State Border is a product dataset created from the LGA dataset which depicts the extent of NSW as described by the gazetted boundaries of Local Government Areas.
Dataset uses	Administrative Boundaries data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning • inform water and carbon accounting programs.
Current status	The Local Government Area dataset, on which the State Border dataset is based, is up to date as per the current boundaries gazetted by the NSW Office of Local Government. Coincidence with the cadastral fabric is maintained where required and the spatial accuracy of the Local Government Area dataset reflects that of the cadastral fabric. The attributes 'create date' and 'modified date' provide information on the features' temporal accuracy. There is no overall accuracy reported in the database. Any changes that occur to the dataset should have a reference in the authority of reference feature class in the DCDB.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	LGA metadata
Updates	The dataset is updated to reflect changes in boundaries as gazetted by the NSW Office of Local Government.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.1.7 Dataset/product title: Australian Bureau of Statistics Geographical Standard Boundaries



Screenshot of the ABS SA2 as displayed on the NSW Globe © DCS Spatial Services 2023

Dataset/product description	Australian Bureau of Statistics (ABS) Statistical Geographical Standard Boundaries divides an area of interest throughout the state of NSW on which statistics are collected for purposes under the Census and Statistics Act 1905 (Cth). The ABS Structures are a hierarchy of regions developed for the release of ABS statistical information. The main components are as follows: • Statistical Areas Level 4 • Statistical Areas Level 3 • Statistical Areas Level 2 • Statistical Areas Level 1 • Regional Boundaries.
Dataset uses	Used to define geographical areas to support statistical and socio-economic analysis at a state and regional scale. They are useful for analytical purposes within statistical boundaries through the aggregation of a wide swath of data and information.

Current status	ABS maintains the Australian Statistical Geography Standard (ASGS) and the Australian Standard Geographical Classification (ASGC) for pre-2011 census information. ABS provides this data via a web service direct from ABS. A link is provided to enable users to download data directly from the ABS website. This data is available in the following formats: • Shp • Tab • Dmp • Csv • WMS • WFS • ESRI File Geodatabase (gdb). The regions defined in the ABS Structures will not change until the next Census in 2021. The Non-ABS Structures are updated only when the ABS considers that there are major changes to the administrative boundaries they represent.
Standards and specifications	Continued spatial upgrades of Administrative Boundaries data. Enhanced access to boundaries via online mechanisms. Further standards, specifications and classifications can be found at: http://www.abs.gov.au/standards http://www.abs.gov.au/classifications
Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Digital Boundary Files - ASGS Non ABS Structures
Updates	Every five years.

Custodian agency and contact	Name: Australian Bureau of Statistics, ABS House Address: Locked Bag 10, Belconnen ACT 2616
Aggregator(s)	Name: Australian Bureau of Statistics, ABS House Address: Locked Bag 10, Belconnen ACT 2616
Distributor(s)	Name: Australian Bureau of Statistics, ABS House Address: Locked Bag 10, Belconnen ACT 2616

9.2 Land Parcel and Property theme

NSW Foundation Spatial Data Framework: Theme profile

Image depicts a sample of the Land Parcel and Property theme © DCS Spatial Services 2023 (Displayed: Cadastral Line, Lot, Road, Unidentified, Water and Annotation features)

Name	Land Parcel and Property
Description	A land parcel is an area of land with defined boundaries, under unique ownership for specific property rights or interests. A property is something that is capable of being owned, in the form of real property (land). The interest can involve physical aspects, such as the use of land, or conceptual rights, such as a right to use the land in the future. The NSW cadastre is an up to date parcel based land information system which contains a unique identifier which can be linked of interests in land (i.e. rights, restrictions and responsibilities). The cadastre includes a geometric definition of land parcels linked to other records, such as land titles, describing the nature of the interests, the ownership or control of those interests, and often the value of the parcel and its improvements. A cadastral product or service visualises the boundaries of land parcels, often buildings on land, the parcel identifier, and basic topographic features. The land parcel and property theme provides the foundation fabric of land ownership. It consists of the digital cadastral database and associated parcel and property information.

Datasets	Cadastral Fabric Cadastral Features Property
Purpose	Land and property data underpins the economic, social and environmental fabric of Australia and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning • water and carbon accounting programs.
Status	The Spatial Services digital cadastral database (DCDB) maintenance program captures all changes to the statewide cadastral fabric from new survey plans and a variety of other sources. The DCDB upgrade program is improving the spatial accuracy of the cadastral fabric by using survey dimensions and improved survey control. Upgrades are carried out together with the relevant Local Government Authority and are further facilitated through the incorporation of data provided by Local Government Authorities, Hunter Water and Sydney Water. Upgrade positional accuracy varies across the state and generally ranges from less than 5m from true position in rural areas to less than 0.2m from true position in urban areas, dependent on the survey control available. Data quality in both Cadastral Maintenance and Cadastral Upgrade is assured through specification compliance and data topology rules. Spatial Services is currently undertaking a cadastral supply chain digital transformation initiative thorough the Cadastre NSW Program.
Future status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians. The majority of updates to the datasets in this theme originate from subdivision, registration and gazettal activity. DCS Spatial Services works with Local and State Government to upgrade the accuracy of the DCDB.
Standards	Metadata for the relevant DCS Spatial Services datasets complies with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and 19139.
Version	Version 0.7

9.2.1 Dataset/product title: Cadastral Fabric

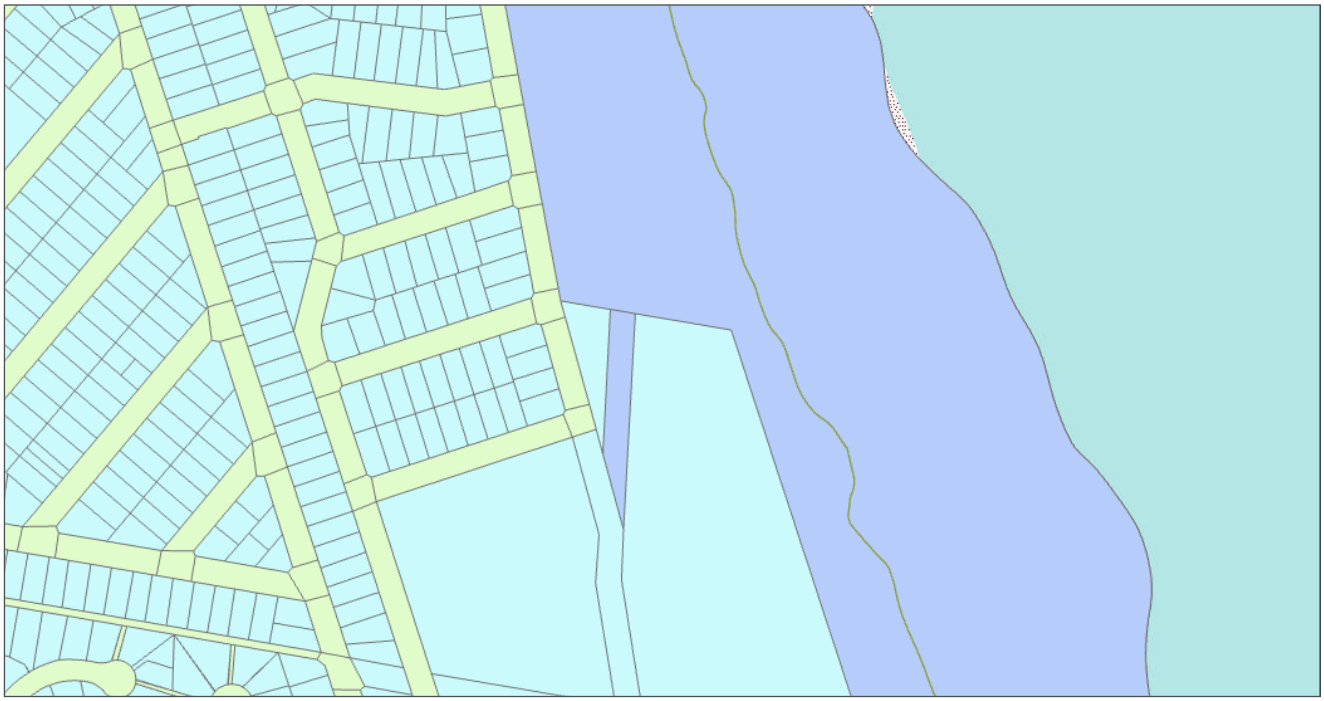


Image depicts a sample of the standard Cadastral Fabric dataset
© DCS Spatial Services 2023 (Displayed: Lot, Road, Unidentified, Water, Annotation features)

Dataset/product description	The Cadastral Fabric is made up of the following features within the NSW Digital Cadastral Database (DCDB). **Lot** Depicts a parcel of land created on a survey plan. Each lot may be represented by standard lots, standard part lots, strata or stratum. Each lot has a lot number, section number, plan lot area, plan number, plan label, ITS title status, and stratum label. **Road** Represents dedicated public roads which are open ways for the passage of vehicles, persons or animals on land. The road dataset includes public roads in use. Each road type has a section number, plan number, plan label, ITS title status, road type, road width or Crown/Council width, lot number, and stratum label. **Unidentified** Represents a parcel of land that cannot be identified. Crown land, vested, dedicated and severed land may be included in this category as well as Old System lots for which lot/DP identification cannot be found. This dataset also identifies the locations of 100ft wide reserves, ACT regions, closed roads, crossings, surveyed areas, and un-surveyed areas. **Water Feature** Represents tidal, non-tidal and ocean waters which form a cadastral boundary.

Dataset uses	Land and property data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning • inform water and carbon accounting programs.
Current status	DCS Spatial Services continuously updates the Land Parcel and Property theme with information sourced from relevant stakeholders and custodians. The majority of updates to the datasets in this theme originate from subdivision, registration and gazettal activity. The data is up to date to within 10 working days from when a plan is lodged at NSW Land Registry Services. Data is also sourced from Crown Lands, the NSW Department of Planning and Environment - Environment and Heritage Group, the Aboriginal Land Council, Local Land Services, the Electoral Commission and NSW Trade and Investment. The DCDB upgrade program commenced in 2007 and is ongoing, improving the spatial accuracy of different feature classes. Upgrades are carried out in consultation with the relevant Local Government Authority and are further facilitated through the incorporation of data provided by external agencies. Upgrade positional accuracy varies across the state and generally ranges from less than 5m from true position in rural areas to less than 0.2m from true position in urban areas, dependent on the survey control available. Data quality for both Cadastral Maintenance and Cadastral Upgrade activities are assured through specification compliance and data topology rules. The client delivery database is automatically updated each evening with the changes that occurred that day in the maintenance environment.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.

Metadata	NSW Lot Data Set NSW Unidentified Area Data Set NSW Roads Data Set NSW Water Feature Data Set
Updates	Constant as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCSS patial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.2.2 Dataset/product title: Cadastral Features

Image depicts a sample of the standard Cadastral Features dataset © DCS Spatial Services 2023
(Displayed: Cadastral Line, Easement, Road Corridor, Railway Corridor,
Water Corridor, Annotation features)

Dataset/product description	Cadastral Features are made up of the following data held in the NSW Digital Cadastral Database (DCDB). **Easement** Depicts a right, attached to land (the dominant tenement), to use other land (the servient tenement) for a specified non-exclusive purpose known to the law, e.g. right of carriageway, easement to drain water etc. – however the law also recognises an easement in favour of a statutory authority without a dominant tenement, described as an 'easement in gross'. **Road Corridor** Represents the spatial extent of the legal road network. **Road Centreline** Represents a line that forms the centreline of cadastral road corridors.

	Railway Corridor Represents a part of the DCDB covering railway land that is not defined by a lot. **Water Feature Corridor** Represents the spatial extent of tidal, non-tidal and ocean waters which form a cadastral boundary. **Watermark** Represents the extent of a water feature or the delineation between water features of a different type or status. The dataset contains high water mark, low water mark, the limit of tidal influence and bay closing lines. **Authority Reference** Depicts the changes to an area definition that has occurred through a gazettal, act or government file action.
Dataset uses	Land and property data underpins the economic, social and environmental fabric of NSW and is used, amongst other things, to: • secure tenure for access to capital • define allowable use of land • manage native title, nature conservation, heritage protection, defence, and disaster management • improve infrastructure and property development planning • inform water and carbon accounting programs.
Current status	DCS Spatial Services continuously updates the Land Parcel and Property theme with information sourced from relevant stakeholders and custodians. The majority of updates to the datasets in this theme originate from subdivision, registration and gazettal activity. The data is up to date to within 10 working days from when a plan is lodged at DCS Spatial Services. Data is also sourced from Crown Lands, the NSW Department of Planning and Environment - Environment and Heritage Group, the Aboriginal Land Council, Local Land Services, the Electoral Commission and the Department of Trade and Investment. Data quality for both Cadastral Maintenance and Cadastral Upgrade activities are assured through specification compliance and data topology rules. The client delivery database is automatically updated each evening with the changes that occurred that day in the maintenance environment.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115-2 ANZLIC Metadata Profile v1.1 and ISO 19139. The Address information is required to conform to the NSW Addressing User Manual. This document is available at: https://www.gnb.nsw.gov.au/__data/assets/pdf_file/0005/231908/NSW_Address_Policy_and_User_Manual_2021_.pdf

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Easement Data Set NSW Road Corridor Data Set NSW Road Centreline Data Set NSW Railway Corridor Data Set NSW Water Feature Corridor Data Set NSW Watermark Data Set NSW Authority Reference Data Set
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.2.3 Dataset/product title: Property

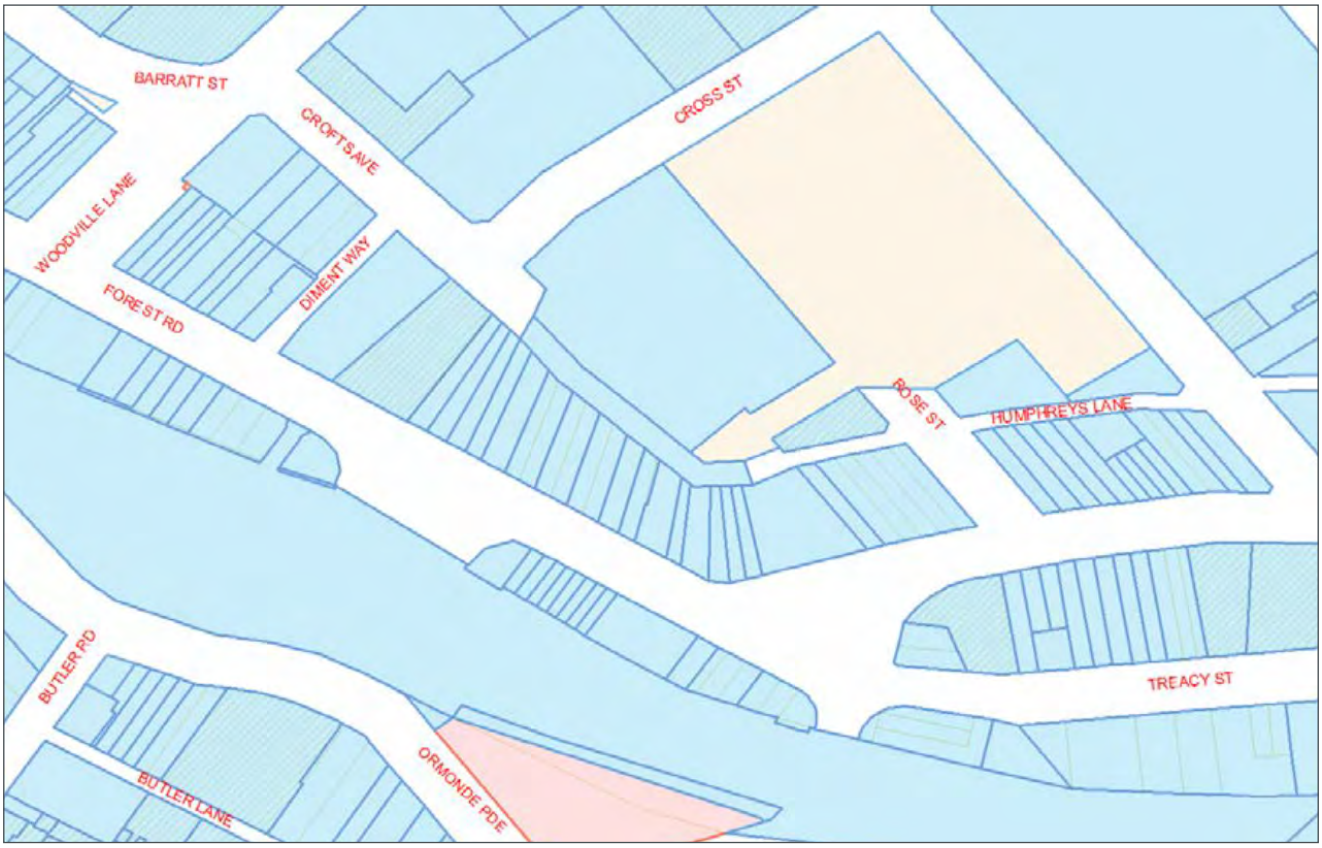


Image depicts spatial location of properties as held in the Property NSW Valnet database
© DCS Spatial Services 2023

Dataset/product description	Property data is a polygon feature class that spatially represents an aspatial property description as provided by Property NSW in their Valnet database. Properties are divided into 3 categories: 'Property' (Complete), 'Incomplete' and 'Other'.
Dataset uses	Property is used to spatially locate the property as defined by Property NSW in their Valnet database. A property contains all address features related to it.
Current status	All Property information held in the database is accurate as at time of capture and processes are in place to continuously update data as new information is obtained.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115-2 ANZLIC Metadata Profile v1.1 and ISO 19139. The Address information is required to conform to the NSW Addressing User Manual. This document is available at: https://www.gnb.nsw.gov.au/__data/assets/pdf_file/0005/231908/NSW_Address_Policy_and_User_Manual_2021_.pdf

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Property
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.3 Geocoded Addressing theme

NSW Foundation Spatial Data Framework: Theme profile

Image depicts a sample of house numbers overlaid on a cadastral dataset

Name	Geocoded Addressing
Description	Addressing is the specific identification of a fixed location (for example, a plot of land, building, part of a building, way of access or other construction) which is represented by a structured arrangement of place names. It may be further detailed with the inclusion of other valuable attributes including geocodes.
Datasets	Address Point
Purpose	Addressing data provides users with unique and clear identification of a plot of land that allows the user to find and access the property for a variety of purposes. Addressing is used for: • communication • address validation • public safety • delivery of products and services • socio-economic and demographic analysis.

Status	The NSW Addressing database is the authoritative property addressing system for NSW. This database was initially populated with address information sourced from the PSMA's Geocoded National Address File (GNAF) and continuously updated through automated batching processes of property and address information sourced from Property NSW (Valnet database), spatially structured components sourced from the Digital Cadastral Database (legal boundaries) and Digital Topographic Database (road names and extents), Councils, Geographical Names Board and Transport for NSW. The NSW Addressing database provides incremental address updates to PSMA to maintain GNAF's currency on behalf of NSW.
Standards	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115-2 ANZLIC Metadata Profile v1.1 and ISO 19139. The Address information is required to conform to the NSW Addressing User Manual. This document is available at: https://www.gnb.nsw.gov.au/__data/assets/pdf_file/0005/231908/NSW_Address_Policy_and_User_Manual_2021_.pdf
Version	Version 0.7

9.3.1 Dataset/product title: Address Point

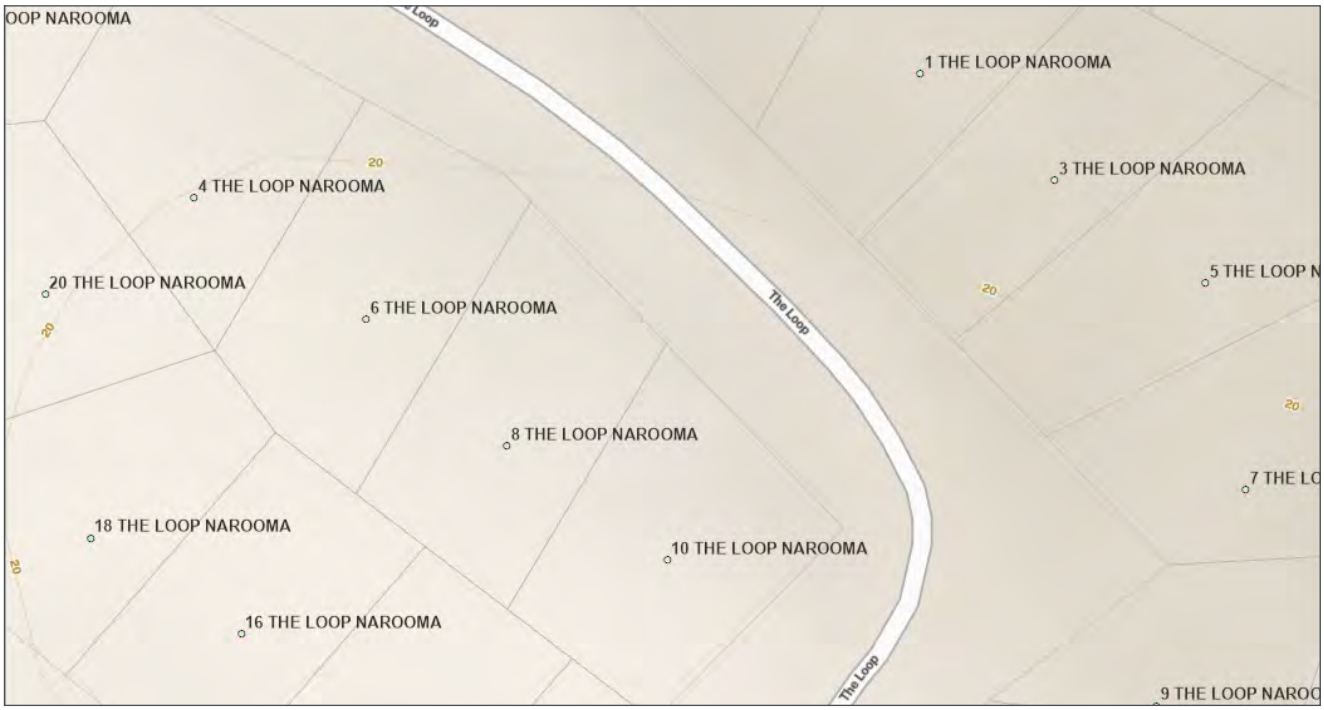


Image depicts Address Points labelled with House numbers and situated at centroid of Property.
NB Building Address Points are displayed in brown colour and are situated over buildings

Dataset/product description	Address Point is a point feature class used to spatially locate an address. The original location is a system generated centroid (midpoint) of the associated property polygon. Note: The Address Point does not reflect the location of a dwelling located within the property unless the sub-type has been designated as a 'Building'.
Dataset uses	Addressing data provides users with unique and unambiguous identification of an address site. Addressing can be used for: • communication • address validation • public safety • delivery of products and services • socio-economic and demographic analysis.
Current status	All Address Points held in the database are accurate as at time of capture and processes are in place to continuously update data as new information is obtained.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115-2 ANZLIC Metadata Profile v1.1 and ISO 19139. The Address information should conform to the NSW Addressing User Manual. This document is available at: https://www.gnb.nsw.gov.au/__data/assets/pdf_file/0005/231908/NSW_Address_Policy_and_User_Manual_2021_.pdf

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Addressing
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4 Transport theme

NSW Foundation Spatial Data Framework: Theme profile

Image depicts a sample of the Transport theme © DCS Spatial Services 2023

Name	Transport
Description	Transport data is a representation of the land, water and air networks used to move people and goods, and deliver services, from one location to another. It includes network connectivity and characteristics such as type, name and potential restrictions on what can be moved through the network.
Datasets	**Roads** • Road Segment • Road Associated Structures • Road Associated Facilities **Aviation** • Airports • Runway • Helipads **Rail** • Railway • Rail Associated Structure • Rail Associated facilities **Maritime** • Maritime Associated Facilities

Purpose	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Status	The public road network is continuously maintained using information provided by the state and local government road authorities, the land registration process, latest available imagery and other source information available. Roads, access tracks and fire trails data within the forest, park and reserve crown estate is maintained using data supplied by relevant custodial agencies. Private property roads and tracks are cyclically maintained using latest available imagery. Other features within the transport theme such as railways, ferry, aviation, crossings and traffic control devices are derived from a range of sources over time.
Future status	DCS Spatial Services will be the reliable source of truth for this Foundation theme, providing a complete, current and accurate coverage of NSW. The objective is to integrate the best available data and undertake continuous revision to meet the requirements of key data users. The NSW Transport theme roads data complies with most of the National Roads Working Group requirements. Continuous improvement to the data model and data content will further ensure the broader objectives are met. Transport theme data will be enhanced by systematic improvement to the rail, water navigation and aviation data networks and infrastructure.
Standards	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Version	Version 0.7

9.4.1 Dataset/product title: Road Segment

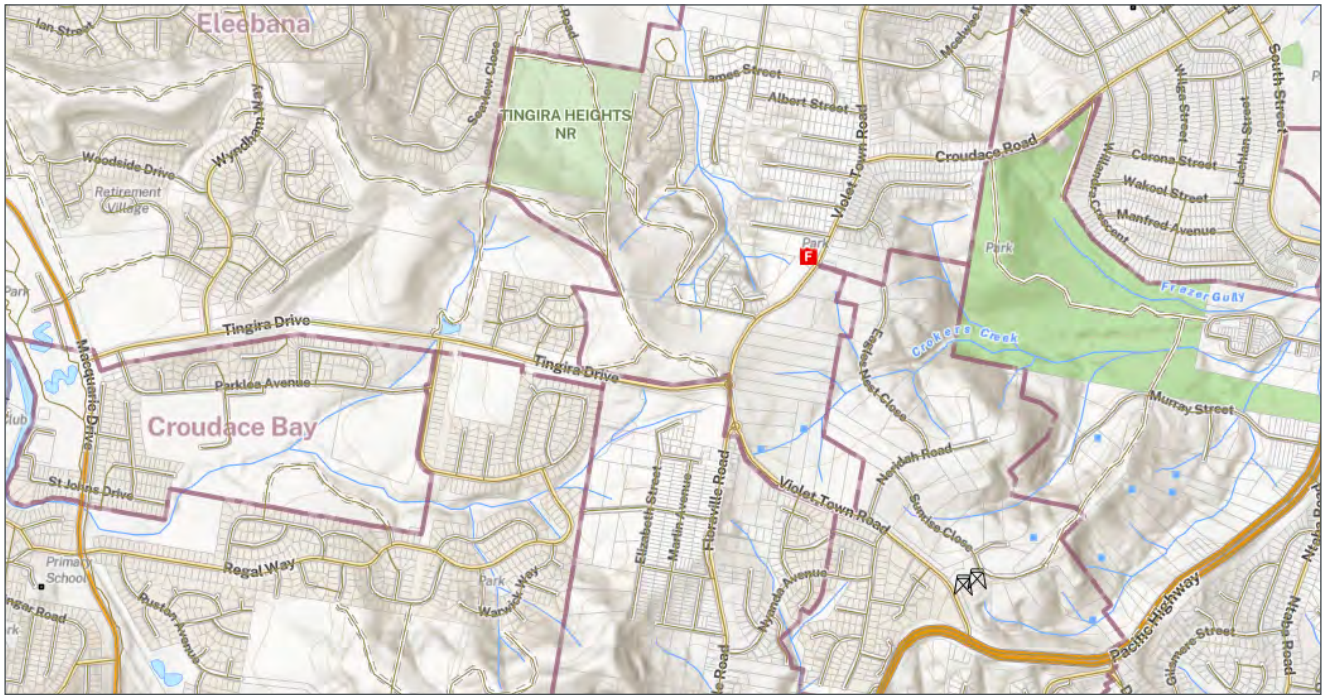


Image depicts sample of the Road Segment dataset © DCS Spatial Services 2023

Dataset/product description	Road segment represents the centreline of a section of road having common attributes and terminating at its physical end or to an intersection with another road at the same grade or level. It is an open way for the passage of vehicles, person or animals on land. This data is held and maintained within the NSW Digital Topographic Database (DTDB) and includes key attributes such as road name, type, surface, lane count and on-type (e.g. onground, onbridge, intunnel etc).
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Road Segment
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.2 Dataset/product title: Road Associated Structures

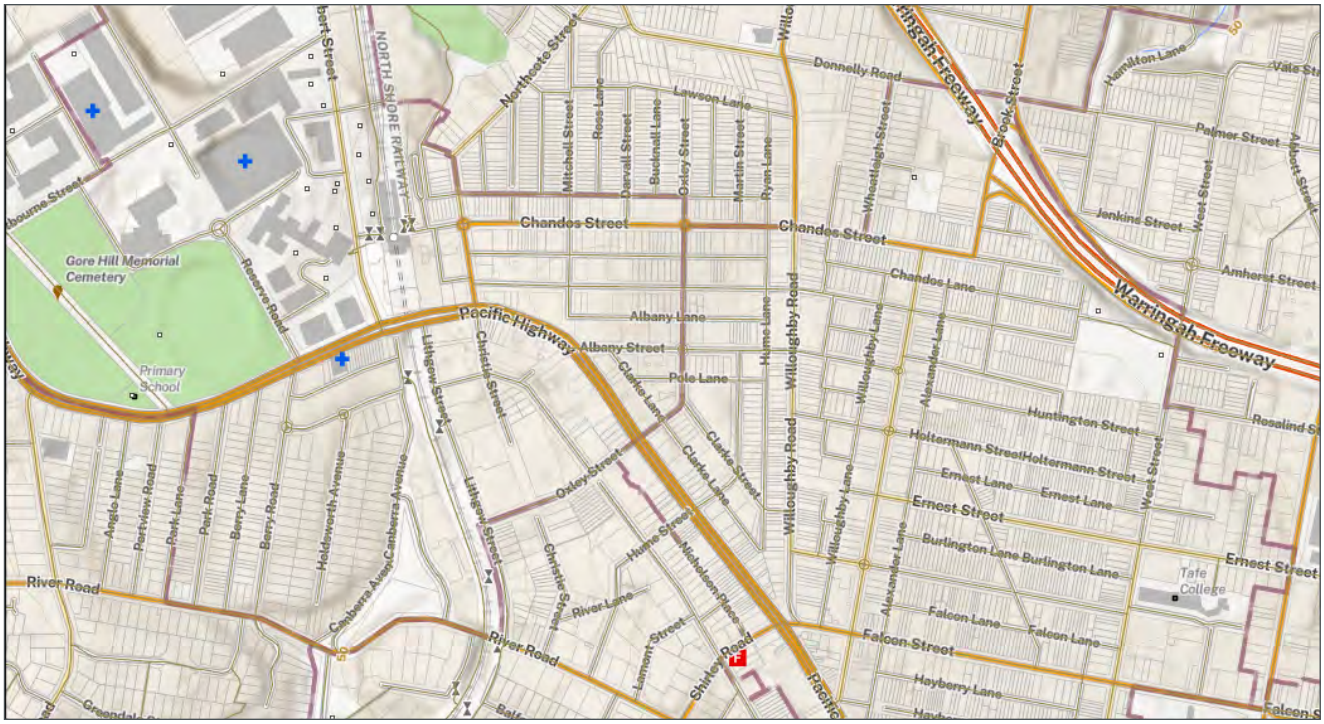


Image depicts sample of the Road Associated Structures dataset © DCS Spatial Services 2023

Dataset/product description	Various structural elements associated with the Road dataset. The following are 'crossings' being a point feature class representing structures that facilitate the crossing of a road or railway over, under or through another feature. **Road Bridge** A structure erected over a depression or obstacle to carry a road. **Road Tunnel** An underground or underwater road passage. **Floodway** A section of road specifically designed to allow periodic or permanent subjection to water inundation. **Road Culvert** A masonry conduit which serves as a channel-crossing for water or a transport network beneath a road. **Ford** A shallow or flat portion of a bed of a watercourse where a crossing may be affected. Note the 'ontype' attributes of road-segment features mentioned above which have an obvious topological link to these features.

Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Service (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Crossing Dataset
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.3 Dataset/product title: Road Associated Facilities

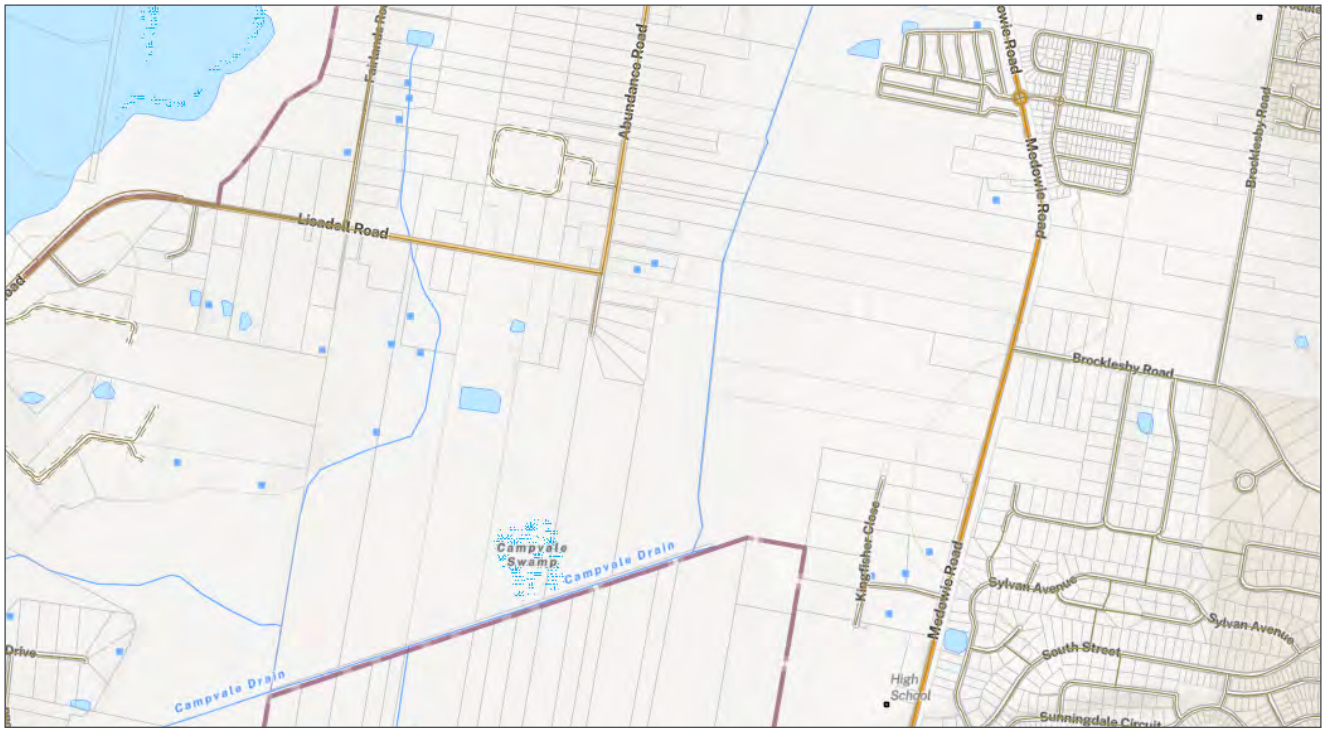


Image depicts sample of the Road Associated Facilities dataset © DCS Spatial Services 2023

Dataset/product description	Various facilities associated with the Road dataset. The following are 'facility points' being a point feature class defining a facility related to transport. **Bus Interchange** A connection or terminal point for long distance bus travellers or other major transport interchange. **Parking Area** An area set aside for the parking of motor vehicles. The following are 'traffic control devices' being a point feature class representing structures which control movement of traffic along a road. **Level Crossing** A place where a road and railway intersect at the same level. **Toll Booth** A structure on a road which requires the user to pay a toll or fee to use the road. **Impediment** A structure generally associated with a road that controls or varies the normal travel of vehicles or pedestrians. **Roundabout** The notional midpoint of a roundabout that has been constructed to allow smooth integration of traffic.

	Gate An opening in a fence or wall for the passage of vehicles or animals and which may contain a device to limit passage. **Cattle Grid** An open floored structure designed to be crossed by motor vehicles.
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Transport Facility Point NSW Road Traffic Control Devices
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.4 Dataset/product title: Aviation – Airports

Image depicts sample of the Aviation – Airports dataset © DCS Spatial Services 2023

Dataset/product Description	Airport is a facility, either on land or water, where aircraft can take off or land. It usually consists of hard-surfaced landing strips, a control tower, hangars, and accommodations for passengers and cargo. This data is held and maintained within the NSW Digital Topographic Database (DTDB) and includes key attributes such as airport name.
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Transport Facility Point
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.5 Dataset/product title: Aviation – Runway

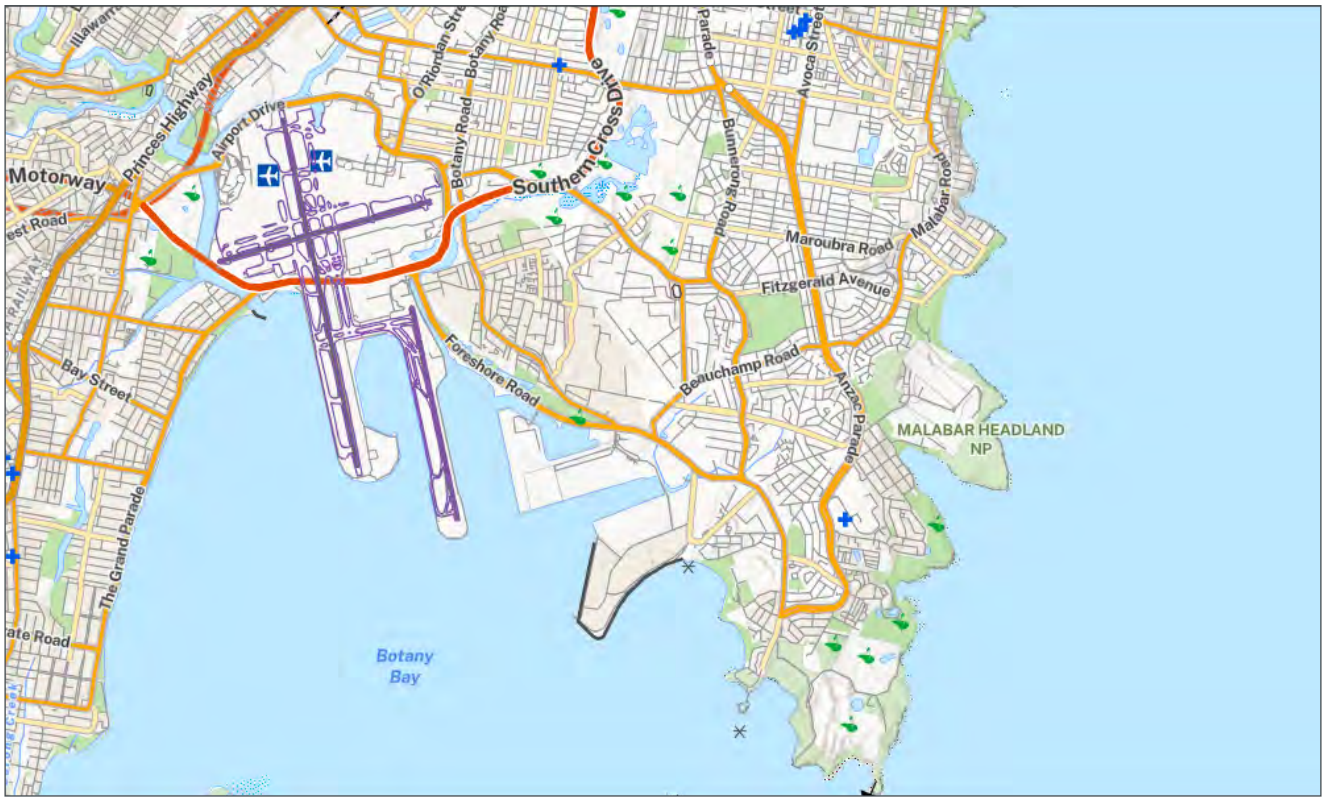


Image depicts sample of the Aviation – Runway dataset © DCS Spatial Services 2023

Dataset/product description	Runway represents the straight paths used for landing and take-off of aircraft. A runway can be a landing ground, runway centreline and runway perimeter. This data is held and maintained within the NSW Digital Topographic Database (DTDB).
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Runway Dataset
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.6 Dataset/product title: Aviation – Helipad

Image depicts sample of the Aviation – Helipad dataset © DCS Spatial Services 2023

Dataset/product description	Helipad is a structure or area set aside or designated for the landing of helicopters. This data is held and maintained within the NSW Digital Topographic Database (DTDB).
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Transport Facility Point
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.7 Dataset/product title: Railway

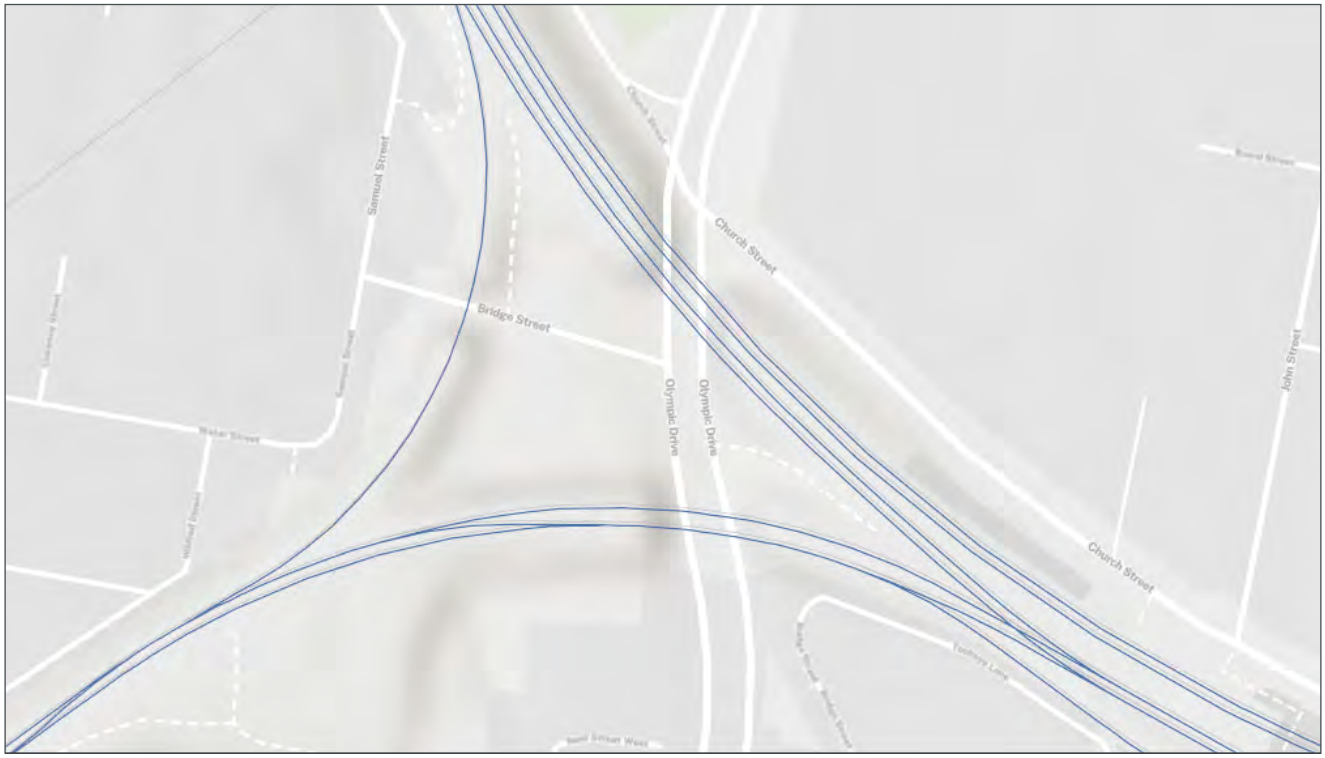


Image depicts sample of the Railway dataset © DCS Spatial Services 2023

Dataset/product description	Railway represents a permanent way having one or more rail lines which provide tracks for vehicles. A railway can be heavy rails, light rail, monorail and heavy rail siding, for example a railway, tramway or monorail. This data is held and maintained within the NSW Digital Topographic Database (DTDB) and includes key attributes such as railway name and on-type (e.g onground, onbridge, intunnel etc).
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Railway dataset
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.8 Dataset/product title: Rail Associated Structures

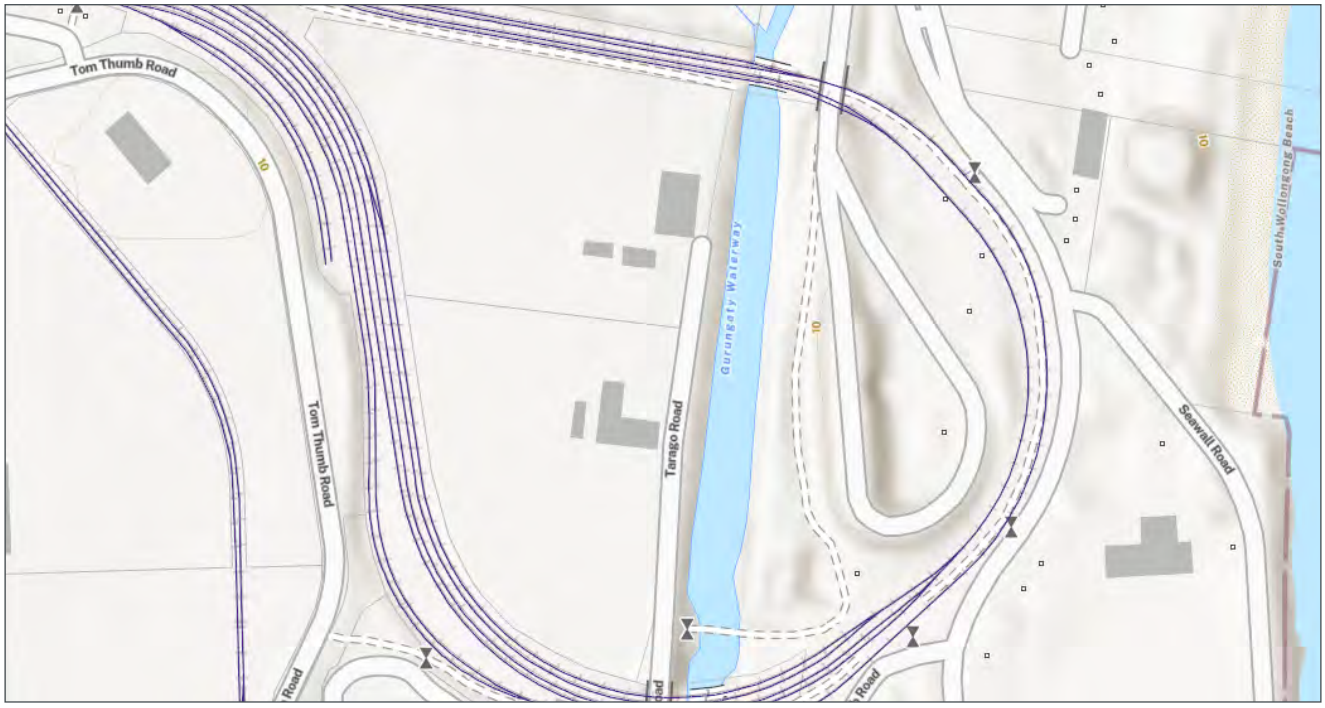


Image depicts sample of the Rail Associated Structures dataset © DCS Spatial Services 2023

Dataset/product description	Various structural elements are associated with the Railway dataset. The following are 'crossings' being a point feature class representing structures that facilitate the crossing of a road or railway over, under or through another feature. **Rail Bridge** A structure erected over a depression or obstacle to carry a railway. **Rail Tunnel** An underground or underwater railway passage. **Rail Culvert** A masonry conduit which serves as a channel-crossing for water or a transport network beneath a railway. Note the 'ontype' attributes of railway features which have an obvious topological link to these features.
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Crossing Dataset
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.9 Dataset/product title: Rail Associated Facilities

Image depicts sample of the Rail Associated Facilities dataset © DCS Spatial Services 2023

Dataset/product description	Various facilities associated with the Railway dataset. The following is a 'facility point' being a point feature class defining a facility related to transport. **Railway Station** A structure beside a railway line with facilities for passengers and freight. The following is a 'traffic control device' being a point feature class representing structures which control movement of traffic along a road. **Level Crossing** A place where a road and railway intersect at the same level.
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Transport Facility Point NSW Road Traffic Control Device
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.4.10 Dataset/product title: Maritime Associated Facilities

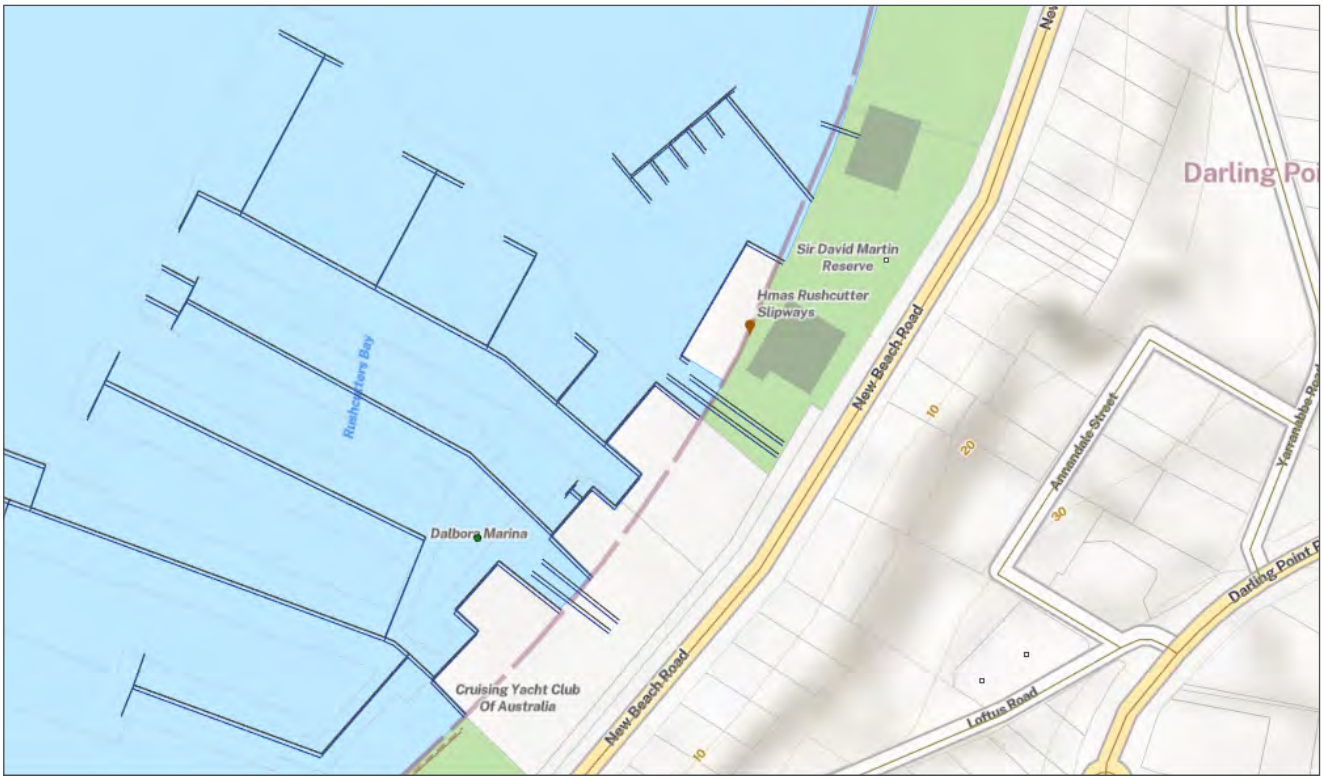


Image depicts sample of the Maritime Associated Features dataset © DCS Spatial Services 2023

Dataset/product description	Various other facilities associated with the Maritime dataset. The following are facility points and lines related to transport. **Wharf** Any structure on a waterfront designed to make it possible for vessels to lie alongside and take or unload cargo, passengers etc. **Launching Ramp** A sloping construction to facilitate launching or retrieving boats from water. **Marina** A facility for commercial and recreational craft where mooring, supplies, repairs, and various services are available.
Dataset uses	Transport data is used for: • delivering emergency services • mapping, charting and navigation • planning for and delivering resources and services • asset management • infrastructure planning and development.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians, by data verification from other internal and external databases, by field investigation and research, as well as through DCS Spatial Services' regular cycle of updating aerial imagery.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139.
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Transport Facility Line NSW Transport Facility Point
Updates	Periodically
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.5 Positioning theme

NSW Foundation Spatial Data Framework: Theme profile

Image typical DCS Spatial Services CORSnet-NSW installations

Name	Positioning
Description	Positioning is NSW's authoritative, reliable, high-accuracy spatial referencing system. The Positioning theme includes the coordinates and their uncertainty of all location-based data promulgated from, or related to, the Geocentric Datum of Australia (GDA94) and the Australian Height Datum (AHD71).
Datasets	CORSnet-NSW Survey Control Information Management System (SCIMS)
Purpose	Positioning is NSW's authoritative, reliable, high-accuracy spatial referencing system, providing a common reference for all geospatial data. Services are used by specialists and non-specialists alike, for a growing number of applications (e.g. surveying, construction, mining, precision agriculture, asset capture, tracking, navigation, emergency response, law enforcement, insurance, security, climate/weather forecast and recreation). In order to maximise the benefits of positioning and the enabling infrastructure, and to provide assurance to users of the fitness for purpose of the position outputs, guiding principles are required to enable the consistent and reliable determination and use of position information.
Status	CORSnet-NSW is a network of 200 (current at 15 May 2023) permanent Global Navigation Satellite System (GNSS) Continuously Operating Reference Stations (CORS) providing DGPS, RTK/NRTK and RINEX data 24/7 to enable users to achieve sub-metre to 2cm level positional accuracy. SCIMS contains coordinates and related information for more than 250,000 survey marks (State Survey Mark, Permanent Mark, Trigonometrical Station, Cadastral Reference Mark, Miscellaneous Survey Mark, Mapping Control Point, Geodetic Bench Mark) established under the direction of the Surveyor General. Positions of these marks are provided as GDA94 latitude and longitude values or easting and northing in MGA coordinates. Heights are provided in metres referring to AHD71. Positions are also assigned a horizontal and vertical class according to ICSM SP1 commensurate with their designed and achieved precision. This data is continuously being collected and updated.

Future status	The CORSnet-NSW network of permanent Global Navigation Satellite System (GNSS) stations is expected to form part of the National Positioning Infrastructure Capability plan in future years, providing DGPS, RTK/NRTK and RINEX data 24/7 at sub-metre to 2-3cm level accuracy. It also provides the backbone of GDA2020 in NSW. SCIMS contains coordinates and related information for survey marks established under the direction of the Surveyor General. SCIMS is being improved to enable survey measurements and other attribute data to be included and more accessible to users. This data is continuously being collected and updated.
Standards	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and ISO 19139 Intergovernmental Committee on Surveying and Mapping 2014. Standards and Practices for Control Surveys (SP1). ICSM Publication no 1. Version 2.1 LPI 2012. Guidelines for CORSnet-NSW Continuously Operating Reference Stations (CORS). Version 1.1 LPI 2012. Surveyor General's Direction Number 12: Control Surveys and SCIMS IERS 2003 computation standards National Measurement Act 1960 Surveying and Spatial Information Act 2002 Surveying and Spatial Information Regulation 2017
Version	Version 0.7

9.5.1 Dataset/product title: CORSnet-NSW

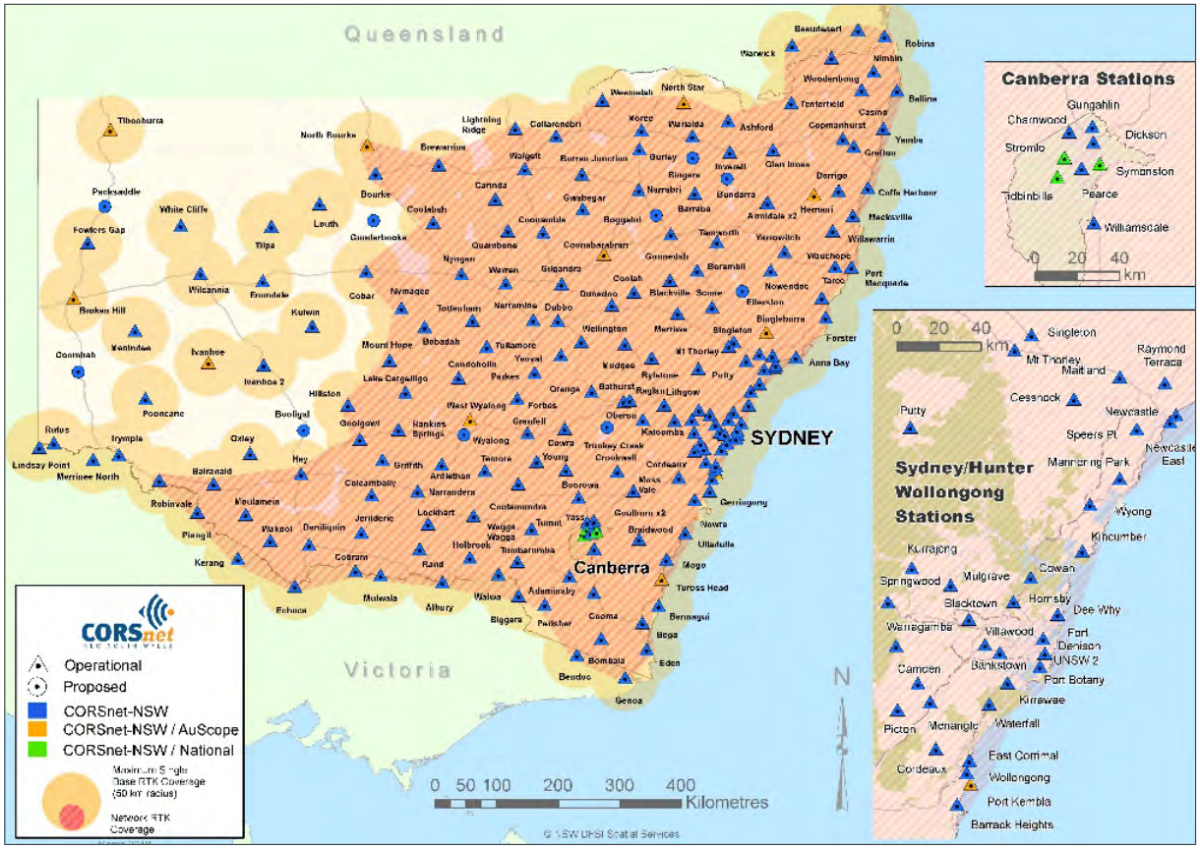


Image depicts the CORSnet-NSW coverage over NSW (valid at March 2018)
© DCS Spatial Services 2023

Dataset/product description	CORSnet-NSW is a precise positioning service that gives users access to fast and accurate positioning and guidance solutions across NSW. CORSnet-NSW uses the latest Global Navigation Satellite System (GNSS) technology to provide an accurate spatial reference network for NSW and support the growing number of precise positioning and guidance applications throughout the state.
Dataset uses	Positioning Infrastructure is NSW's authoritative, reliable, high-accuracy spatial referencing system and provides a common reference for all geospatial data. Services are used by specialists and non-specialists alike, for a growing number of applications (e.g. surveying, construction, mining, precision agriculture, asset capture, tracking, navigation, emergency response, law enforcement, insurance, security, climate/weather forecast and recreation). In order to maximise the benefits of positioning and the enabling infrastructure, and to provide assurance to users of the fitness for purpose of the position outputs, guiding principles are required to enable the consistent and reliable determination and use of position information. CORSnet-NSW is a component of Positioning Infrastructure in which the services are used internally by surveyors to maintain and improve the NSW survey control network and by aerial operations to determine precise trajectories of the airborne sensors of imagery and LiDAR missions. CORSnet-NSW services are offered commercially through authorised resellers to the surveying and mapping, civil and construction and agriculture industries. For a list of these resellers and their contact details go to www.corsnet.com.au.

Current status	CORSnet-NSW is a network of permanent Global Navigation Satellite System (GNSS) Continuously Operating Reference Stations (CORS) providing DGPS, RTK/NRTK and RINEX data 24/7 to enable users to achieve sub-metre to 2 cm level positional accuracy.
Standards and specifications	The data provided complies with the following standards: Metadata for the relevant DCS Spatial Services datasets are required to comply with: AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and ISO 19139 Intergovernmental Committee on Surveying and Mapping 2014. Standards and Practices for Control Surveys (SP1). ICSM Publication no 1. Version 2.1 LPI. 2012. Guidelines for CORSnet-NSW Continuously Operating Reference Stations (CORS). Version 1.1 IERS 2003 computation standards National Measurement Act 1960 Surveying and Spatial Information Act 2002 Surveying and Spatial Information Regulation 2017 Data specifications available at www.corsnet.com.au for DGPS, RTK/NRTK and RINEX data
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	CORSnet-NSW dataset

Updates	CORSnet-NSW dataset is updated in real time every second for every CORS connected to the CORSnet-NSW data centre. The precise coordinates of the CORS sites are updated with NMI Regulation 13 Certification values: 1. On operation and public release of the CORS site 2. If the CORS monument has been shown to have physically moved 3. If the CORS antenna has been replaced 4. At least every five years.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.5.2 Dataset/product title: Survey Control Information Management System (SCIMS)

Image depicts a screenshot of the SCIMS interface through SIX Maps © DCS Spatial Services 2023

Dataset/product description	The Survey Control Information Management System (SCIMS) is a database that contains all of the coordinates, heights and related information for NSW survey marks that form the official State Survey Control Network. The network is represented physically by over 250,000 survey marks positioned at varying densities across NSW. Each survey mark is assigned a horizontal and vertical spatial position and a class and order, according to accuracy, monument and other factors. Detailed metadata information is also recorded. SCIMS data is supplied to the surveying and spatial industries through the SCIMS online internet product.
Dataset uses	SCIMS is a reliable and accurate spatial referencing system that underpins cadastral boundary definition, engineering/infrastructure surveys, mapping and a variety of other spatial applications. The database is frequently utilised for asset management, establishing property boundaries, constructing public infrastructure and environmental monitoring. The uncertainties assigned to marks have varying degrees of accuracy and therefore have specific purposes.
Current status	SCIMS contains coordinates and related information for more than 250,000 survey marks established under the direction of the Surveyor General. These marks are tied to the GDA/MGA coordinate reference system and AHD71 vertical reference system. They are also assigned horizontal and vertical uncertainties. This data is continuously being collected and updated.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and ISO 19139 Intergovernmental Committee on Surveying and Mapping 2014. Standards and Practices for Control Surveys (SP1). ICSM Publication no 1. Version 2.1 IERS 2003 computation standards National Measurement Act 1960 Surveying and Spatial Information Act 2002 Surveying and Spatial Information Regulation 2017 Surveyor General's Direction No.1: Approved Permanent Marks Surveyor General's Direction No.2: Preparation of Locality Sketch Plans Surveyor General's Direction No.4: Using SCIMS Surveyor General's Direction No.7: Surveying and Spatial Information Regulation 2017 - Applications Surveyor General's Direction No.11: Preservation of Survey Infrastructure Surveyor General's Direction No.12: Control Surveys and SCIMS
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW SCIMS dataset
Updates	SCIMS data is updated daily.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.6 Place Names theme

NSW Foundation Spatial Data Framework: Theme profile

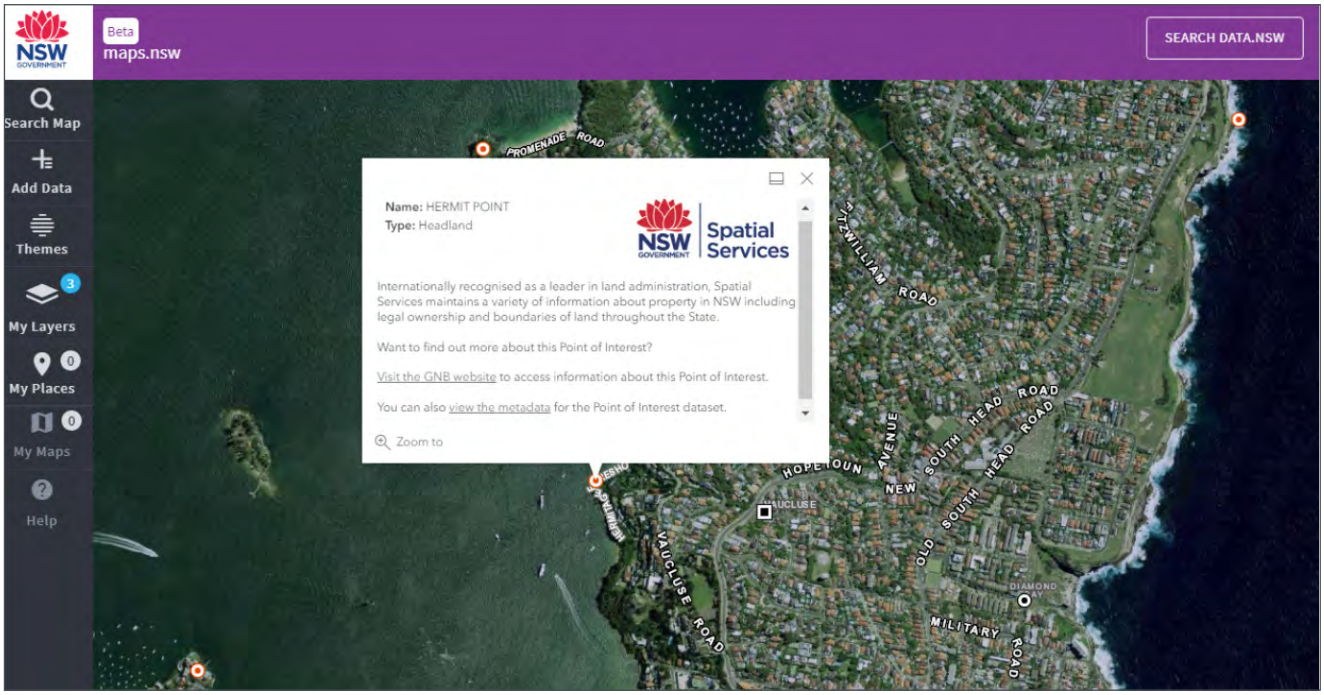
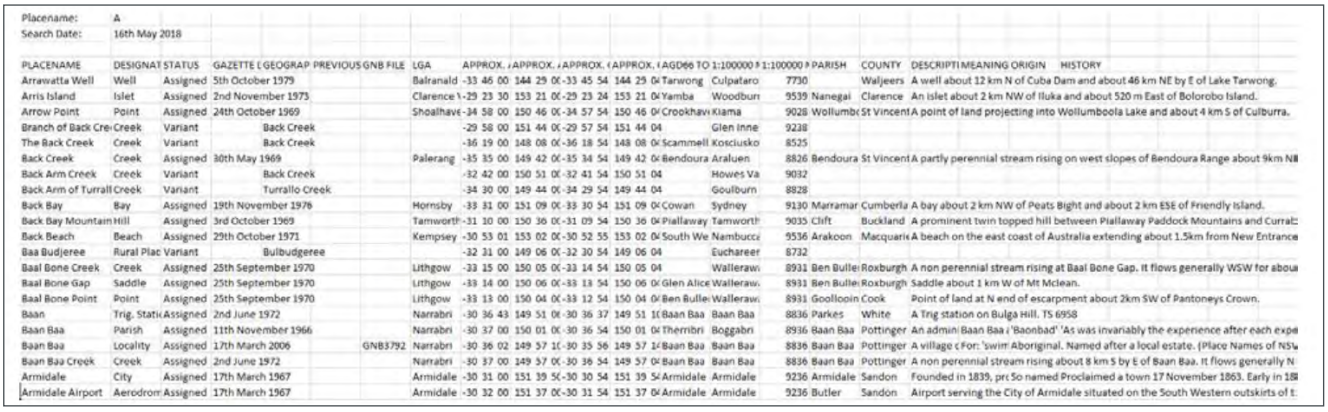


Image depicts GNB Place Names © DCS Spatial Services 2023

Name	Place Names
Description	Place Names are the recorded names of cultural and physical features and their associated location and extent. Place Names within this theme refer to those names that have been officiated through gazettal.
Datasets	Geographical Names Register Place Names
Purpose	Place Names are used to identify and record the official names for the location of places and features, and, the gazetted or historical information associated with those names. Place names are the most widely used spatial identifier. Place Names are integral to: • Economic, social and environment analysis • Providing a link/index function to other spatial and aspatial data • emergency response • cultural identity and heritage • mapping and navigation.
Status	The source of official place names for NSW, containing authoritative references and information pertaining to the history, origin and meaning of place names and provides information to the Gazetteer of Australia.
Future status	GNB will be the reliable source of truth for this Foundation Theme, providing a complete, current and accurate coverage of NSW.

Standards	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and ISO 19139. GNB AS/NZS ISO 19131:2008 Geographic Information – Data product specifications.
Version	Version 0.7

9.6.1 Dataset product title: Geographical Names Register Place Names



Placename: A
Search Date: 16th May 2018

PLACENAME	DESIGNAT	STATUS	GAZETTE D	GEOGRAP	PREVIOUS	GNB FILE	LGA	APPROX. /	APPROX. /	APPROX. (	APPROX. (	AGD66 TO	1:100000 M	1:100000 P	PARISH	COUNTY	DESCRIPTI	MEANING ORIGIN	HISTORY
Arrawatta Well	Well	Assigned	5th October 1979				Balranald	-33	46	00	144	29	0(	-33	45	54	144	29	0(
Arris Island	Islet	Assigned	2nd November 1973				Clarence \	-29	23	30	153	21	0(	-29	23	24	153	21	0(
Arrow Point	Point	Assigned	24th October 1969				Shoalhave	-34	58	00	150	46	0(	-34	57	54	150	46	0(
Branch of Back Cre	Creek	Variant			Back Creek			-29	58	00	151	44	0(	-29	57	54	151	44	04
The Back Creek	Creek	Variant			Back Creek			-36	19	00	148	08	0(	-36	18	54	148	08	0(
Back Creek	Creek	Assigned	30th May 1969				Palerang	-35	35	00	149	42	0(	-35	34	54	149	42	0(
Back Arm Creek	Creek	Variant			Back Creek			-32	42	00	150	51	0(	-32	41	54	150	51	04
Back Arm of Turrall	Creek	Variant			Turrallo Creek			-34	30	00	149	44	0(	-34	29	54	149	44	04
Back Bay	Bay	Assigned	19th November 1976				Hornsby	-33	31	00	151	09	0(	-33	30	54	151	09	0(
Back Bay Mountain	Hill	Assigned	3rd October 1969				Tamworth	-31	10	00	150	36	0(	-31	09	54	150	36	0(
Back Beach	Beach	Assigned	29th October 1971				Kempsey	-30	53	01	153	02	0(	-30	52	55	153	02	0(
Baa Budjeree	Rural Plac	Variant			Bulbudgeree			-32	31	00	149	06	0(	-32	30	54	149	06	04
Baal Bone Creek	Creek	Assigned	25th September 1970				Lithgow	-33	15	00	150	05	0(	-33	14	54	150	05	04
Baal Bone Gap	Saddle	Assigned	25th September 1970				Lithgow	-33	14	00	150	06	0(	-33	13	54	150	06	0(
Baal Bone Point	Point	Assigned	25th September 1970				Lithgow	-33	13	00	150	04	0(	-33	12	54	150	04	0(
Baan	Trig. Stati	Assigned	2nd June 1972				Narrabri	-30	36	43	149	51	0(	-30	36	37	149	51	1(
Baan Baa	Parish	Assigned	11th November 1966				Narrabri	-30	37	00	150	01	0(	-30	36	54	150	01	0(
Baan Baa	Locality	Assigned	17th March 2006			GNB3792	Narrabri	-30	36	02	149	57	1(	-30	35	56	149	57	1(
Baan Baa Creek	Creek	Assigned	2nd June 1972				Narrabri	-30	37	00	149	57	0(	-30	36	54	149	57	0(
Armidale	City	Assigned	17th March 1967				Armidale	-30	31	00	151	39	5(	-30	30	54	151	39	5(
Armidale Airport	Aerodrom	Assigned	17th March 1967				Armidale	-30	32	00	151	37	0(	-30	31	54	151	37	0(

PLACENAME	DESIGNAT	STATUS	GAZETTE D	GEOGRAP	PREVIOUS	GNB FILE	LGA	1:100000 M	1:100000 P	PARISH	COUNTY	DESCRIPTI	MEANING ORIGIN	HISTORY
Arrawatta Well	Well	Assigned	5th October 1979				Balranald	Culpataro	7730		Waljeers	A well about 12 km N of Cuba Dam and about 46 km NE by E of Lake Tarwong.		
Arris Island	Islet	Assigned	2nd November 1973				Clarence \	Yamba	Woodburi	9539	Nanegai	Clarence	An islet about 2 km NW of Iluka and about 520 m East of Bolorobo Island.	
Arrow Point	Point	Assigned	24th October 1969				Shoalhave	Crookhavi	Kiama	9028	Wollumbo	St Vincent	A point of land projecting into Wollumboola Lake and about 4 km S of Culburra.	
Branch of Back Cre	Creek	Variant			Back Creek			Glen Inne		9238				
The Back Creek	Creek	Variant			Back Creek			Scammell	Kosciusko	8525				
Back Creek	Creek	Assigned	30th May 1969				Palerang	Bendoura	Araluen	8826	Bendoura	St Vincent	A partly perennial stream rising on west slopes of Bendoura Range about 9km NE	
Back Arm Creek	Creek	Variant			Back Creek			Howes Va		9032				
Back Arm of Turrall	Creek	Variant			Turrallo Creek			Goulburn		8828				
Back Bay	Bay	Assigned	19th November 1976				Hornsby	Cowan	Sydney	9130	Marramar	Cumberla	A bay about 2 km NW of Peats Bight and about 2 km ESE of Friendly Island.	
Back Bay Mountain	Hill	Assigned	3rd October 1969				Tamworth	Piallaway	Tamworth	9035	Clift	Buckland	A prominent twin topped hill between Piallaway Paddock Mountains and Currab	
Back Beach	Beach	Assigned	29th October 1971				Kempsey	South We	Nambucca	9536	Arakoon	Macquarie	A beach on the east coast of Australia extending about 1.5km from New Entrance	
Baa Budjeree	Rural Plac	Variant			Bulbudgeree				Euchareer	8732				
Baal Bone Creek	Creek	Assigned	25th September 1970				Lithgow	Ben Bulle	Wallerawi	8931	Ben Bulle	Roxburgh	A non perennial stream rising at Baal Bone Gap. It flows generally WSW for abou	
Baal Bone Gap	Saddle	Assigned	25th September 1970				Lithgow	Glen Alice	Wallerawi	8931	Ben Bulle	Roxburgh	Saddle about 1 km W of Mt Mclean.	
Baal Bone Point	Point	Assigned	25th September 1970				Lithgow	Ben Bulle	Wallerawi	8931	Goulloolin	Cook	Point of land at N end of escarpment about 2km SW of Pantoneys Crown.	
Baan	Trig. Stati	Assigned	2nd June 1972				Narrabri	Baan Baa	Baan Baa	8836	Parkes	White	A Trig station on Bulga Hill. TS 6958	
Baan Baa	Parish	Assigned	11th November 1966				Narrabri	Therribri	Boggabri	8936	Baan Baa	Pottinger	An admini Baan Baa ('Baonbad' 'As was invariably the experience after each expe	
Baan Baa	Locality	Assigned	17th March 2006			GNB3792	Narrabri	Baan Baa	Baan Baa	8836	Baan Baa	Pottinger	A village (For: 'swim' Aboriginal. Named after a local estate. (Place Names of NSV	
Baan Baa Creek	Creek	Assigned	2nd June 1972				Narrabri	Baan Baa	Baan Baa	8836	Baan Baa	Pottinger	A non perennial stream rising about 8 km S by E of Baan Baa. It flows generally N	
Armidale	City	Assigned	17th March 1967				Armidale	Armidale	Armidale	9236	Armidale	Sandon	Founded in 1839, pre So named Proclaimed a town 17 November 1863. Early in 18	
Armidale Airport	Aerodrom	Assigned	17th March 1967				Armidale	Armidale	Armidale	9236	Butler	Sandon	Airport serving the City of Armidale situated on the South Western outskirts of t	

Image depicts a sample of the Geographical Names Register Place Names dataset

Dataset/product description	The Geographical Names Register (GNR) is a database of the authoritative place names in NSW. Since its inception in 1966 the Geographical Names Board has recorded information in relation to NSW geographical names within the GNR. There are currently over eighty thousand place names recorded in the GNR. On average, 200 new place names are assigned and added to this database every year. Every record in this database has the provision for over thirty attributes ranging from spatial location information in respect to co-ordinate, map tile, parish etc. to cultural information on history, meaning and origin. The GNR also holds official information such as the name's status and feature type, and temporal information dealing with the gazettal date of the name.
Dataset uses	Place Names are used to identify and record the official and/or commonly used names for the location of places and features, and the gazetted or historical information associated with those names. Place Names are integral to: • emergency response • cultural identity and heritage • mapping and navigation.
	More broadly, correct use of accurate place name can provide benefits for communities and organisations engaged in: • Trade and commerce • Population censuses and national statistics • Property rights and cadastre • Urban and regional planning • Environmental management • Natural disaster preparedness, relief, and aid • Security strategy and peacekeeping operations • Search and rescue operations • Map and atlas production • Automatic navigation • Tourism • Communications, including postal and news services.

Current status	The source of official place names for NSW, containing authoritative references and information pertaining to the history, origin and meaning of place names and provides information to the Gazetteer of Australia.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and ISO 19139. Data is collected in accordance with the Geographical Names Act 1966.
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Geographical Names Register Place Names
Updates	Continuously.
Custodian agency and contact	Name: Geographical Names Board of NSW Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Agency: DCS Spatial Services Address: 346 Panorama Ave, Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Agency: DCS Spatial Services Address: 346 Panorama Ave, Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.7 Elevation and Depth theme

NSW Foundation Spatial Data Framework: Theme profile

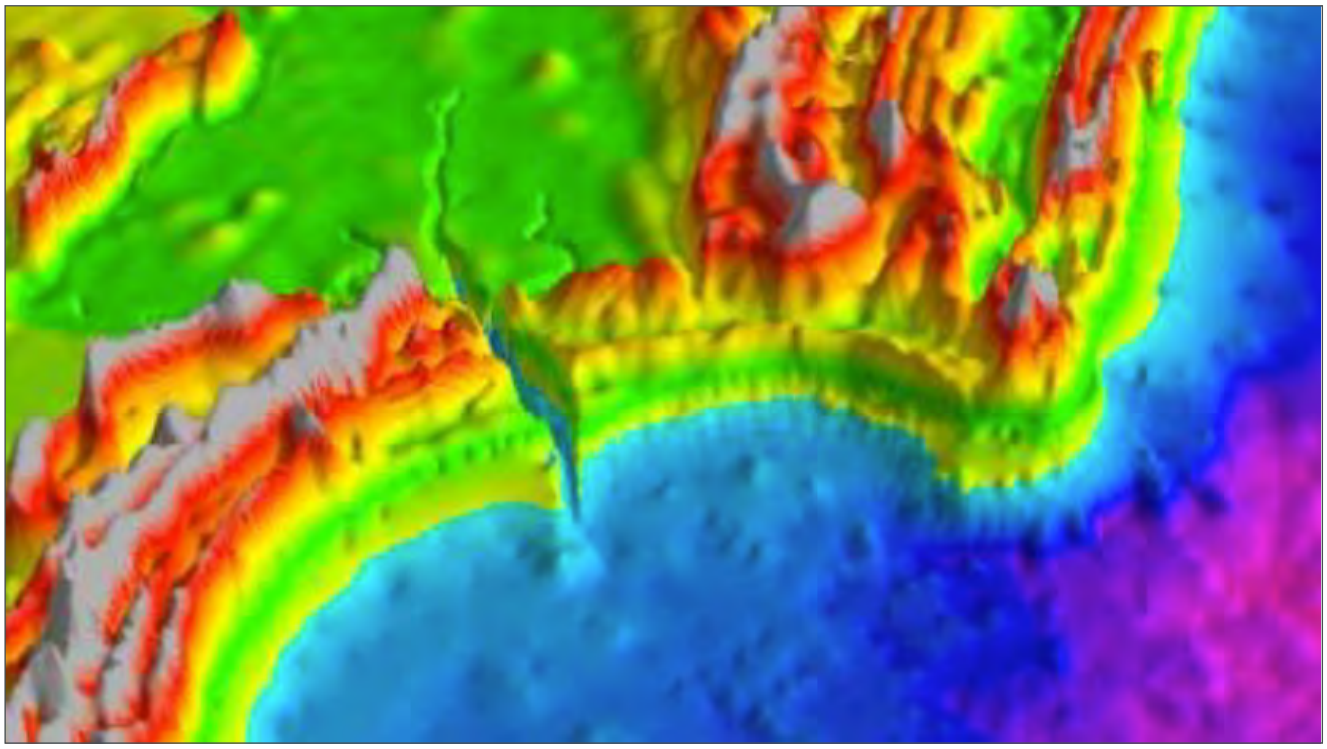


Image depicts a sample of gridded digital elevation and bathymetric data

Name	Elevation and Depth
Description	Elevation and Depth is the measurement of the Earth's surface above or below a vertical datum to obtain the height of the land. Data is collected using a range of sensors including: laser, sonar, radar and optical. Technical methodologies are used to derive spot heights, raster surfaces, contours, triangulated irregular networks and digital elevation models.
Datasets	Contours Spot Heights Relative Heights Point Clouds Digital Elevation Models

Purpose	Elevation and Depth provides an accurate representation of the Earth's surface enabling evidence based decision making, 3D modelling, planning and earth surface representation. Elevation and Depth underpins: • safe hydrographic, aeronautical and road navigation • climate science, including climate change adaptation • emergency management and natural hazard risk assessment • environmental, including water management • engineering projects and infrastructure development • definition of maritime and administrative boundaries • natural resource exploration.
Status	Update frequencies vary for each dataset. Individual current status can be found under each Spatial data profile.
Future status	The objective is to maintain elevation datasets to meet the FDSI requirements of key data users. Current programs include: • Aerial LiDAR capture program across NSW. • DEM and Point Cloud generation from photogrammetric techniques. Longer term programs include: • Update of contour data using updated DEM data generated from LiDAR and photogrammetry. • Hydrological enforcement using improved surface models.
Standards	AS/NZS ISO 19115 - ANZLIC Metadata Profile Version 1.1 AS/NZS ISO 19131:2008 Geographic Information - Data product specifications OGC compliant Web Map Services (WMS) and Web Feature Services (WFS) Metadata for the relevant DCS Spatial Services datasets complies with AS/NZS ISO 19115-2, ANZLIC Metadata Profile v1.1 and ISO 19139 Intergovernmental Committee on Surveying and Mapping (ICSM): Guidelines for Digital Elevation Data DCS Spatial Services: Elevation Data Products Specification and Description (LiDAR) DCS Spatial Services: Elevation Data Products Specification and Description (Airborne Photogrammetry)
Version	Version 0.7

9.7.1 Dataset/product title: NSW Contours

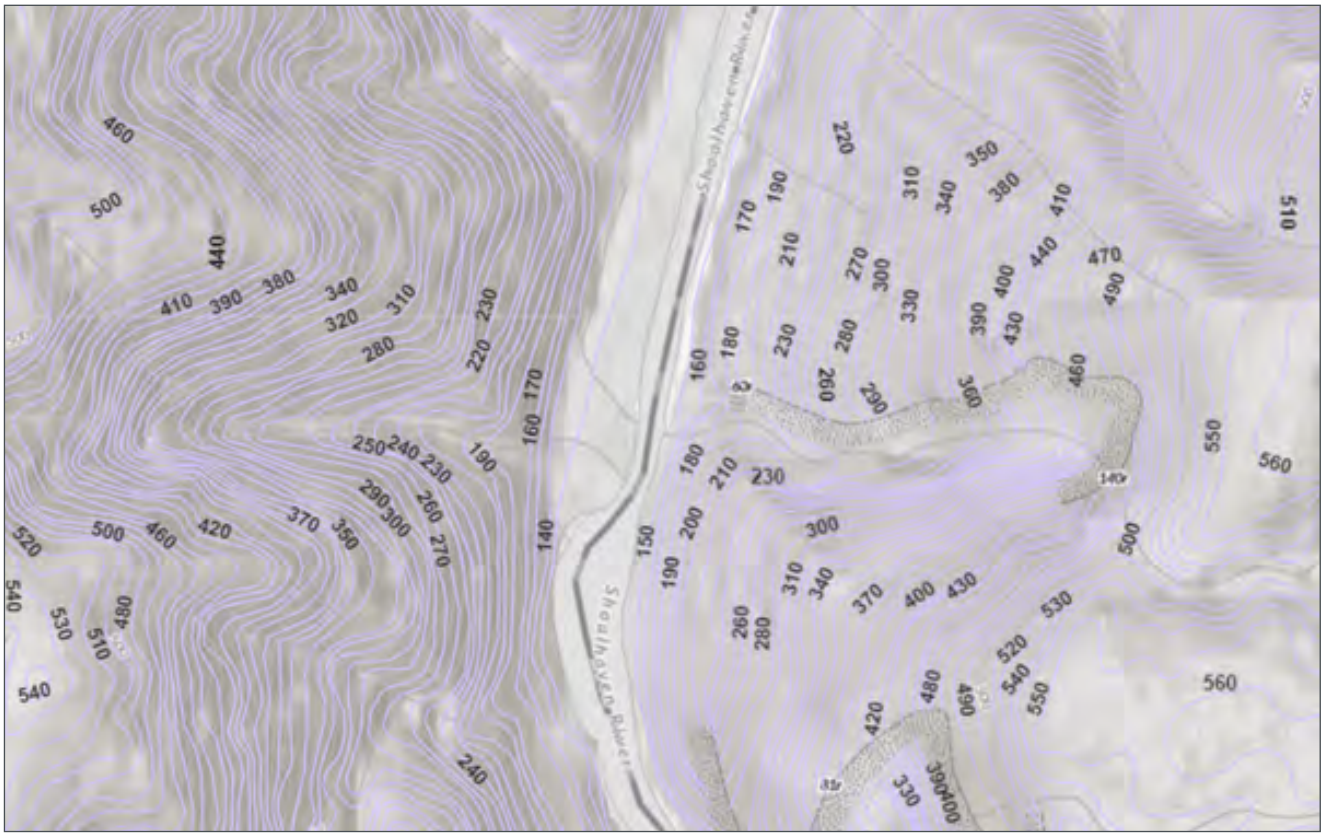


Image depicts sample of the NSW Contour dataset © DCS Spatial Services 2023

Dataset/product description	Contours are virtual imaginary lines on the ground, joining points of an equal elevation in relation to the Australian Height Datum (AHD). A contour can be a standard contour, depression contour or an ancillary contour. It is a part of the NSW Digital Topographic Database (DTDB).
Dataset uses	Elevation and Depth provides an authoritative digital representation of the Earth's surface enabling evidence based decision making, policy development and an essential reference to other foundation datasets. Elevation and Depth underpins: • safe hydrographic, aeronautical and road navigation • climate science, including climate change adaptation • emergency management and natural hazard risk assessment • environmental, including water management • definition of maritime and administrative boundaries • defence and national security • natural resource exploration and exploitation.
Current status	Data is as initially captured at 1:25 000, 1:50 000 and 1:100 000 scales from stereoscopic aerial photography.
Standards and specifications	Metadata for the relevant Spatial Serivces datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Contours
Updates	Update of this data using high resolution digital elevation model is being planned.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.7.2 Dataset/product title: NSW Spot Heights

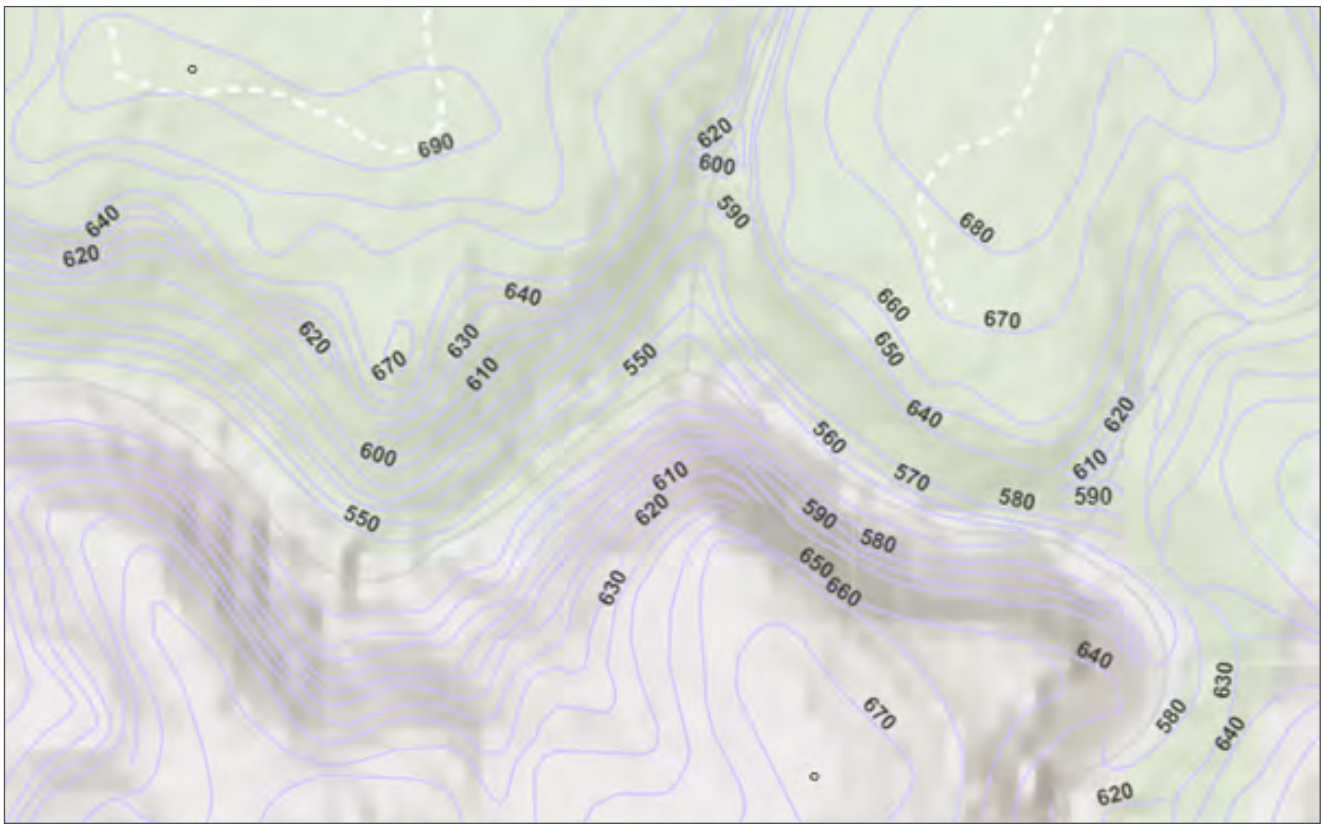


Image depicts sample of the NSW Spot Height dataset © DCS Spatial Services 2023

Dataset/product description	Spot Height is a point feature class representing individual points on the earth's surface, the elevation of which has been related to a datum by ground or photogrammetric survey. It is a part of the NSW Digital Topographic Database (DTDB).
Dataset uses	Elevation and Depth provides an authoritative digital representation of the Earth's surface enabling evidence based decision making, policy development and an essential reference to other foundation datasets. Elevation and Depth underpins: • safe hydrographic, aeronautical and road navigation • climate science, including climate change adaptation • emergency management and natural hazard risk assessment • environmental, including water management • engineering projects and infrastructure development • definition of maritime and administrative boundaries • defence and national security • natural resource exploration and exploitation.
Current status	Data is as initially captured at 1:25 000, 1:50 000 and 1:100 000 scales from stereoscopic aerial photography.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Spot Heights
Updates	Not planned.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.7.3 Dataset/product title: NSW Relative Heights

Image depicts sample of the NSW Relative Height dataset © Spatial Services 2023

Dataset/product description	Relative Height is a point feature class representing relative heights of a vertical face of a cliff. It is a part of the NSW Digital Topographic Database (DTDB).
Dataset uses	Elevation and Depth provides an authoritative digital representation of the Earth's surface enabling evidence based decision making, policy development and an essential reference to other foundation datasets. Elevation and Depth underpins: • safe hydrographic, aeronautical and road navigation • climate science, including climate change adaptation • emergency management and natural hazard risk assessment • environmental, including water management • engineering projects and infrastructure development • definition of maritime and administrative boundaries • defence and national security • natural resource exploration and exploitation.
Current status	Data is as initially captured at 1:25 000, 1:50 000 and 1:100 000 scales from stereoscopic aerial photography.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner: © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Relative Heights
Updates	Not planned.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.7.4 Dataset/product title: Point Cloud

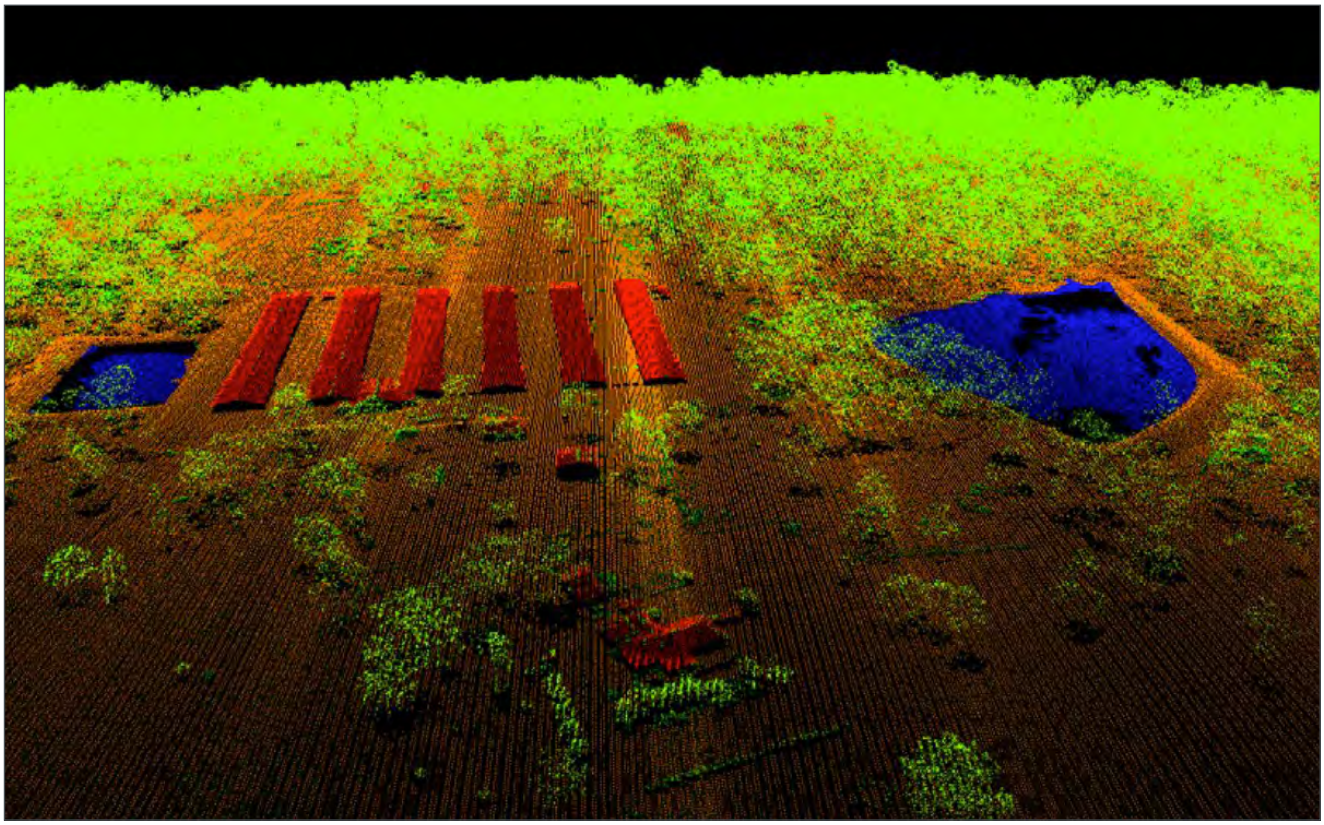


Image depicts sample of the NSW Point Cloud dataset © Spatial Services 2023

Dataset/product description	The point cloud data set consists of point clouds captured from LiDAR (Light Detection and Ranging) and derived from airborne imagery using photogrammetric techniques.
Dataset uses	This product has been produced for DCS Spatial Services, local and state government and agency programs including Emergency Services. This product is also used on a whole of government basis as a visible record of the landscape at a given point in time, allowing for analysis to be carried out relating to flood modelling and water catchment management.
Current status	The LiDAR program is focused on the entire coast of NSW and west to the Great Dividing Range. Additionally, the program extends to rural towns in the central and western Divisions. Photogrammetric point clouds have been generated from airborne imagery for the central and western divisions of NSW.
Standards and specifications	Metadata for the relevant Spatial Serices datasets complies with AS/NZS ISO 19115-2, ANZLIC Metadata Profile v1.1 and ISO 19139 Intergovernmental Committee on Surveying and Mapping (ICSM) Guidelines for Digital Elevation Data DCS Spatial Services: Elevation Data Products Specification and Description (LiDAR) DCS Spatial Services: Elevation Data Products Specification and Description (Airborne Photogrammetry)

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Point Cloud
Updates	LiDAR point cloud data is updated in specific locations across NSW as required. An update of the photogrammetrically derived point cloud is not planned.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.7.5 Dataset/product title: Digital Elevation Model

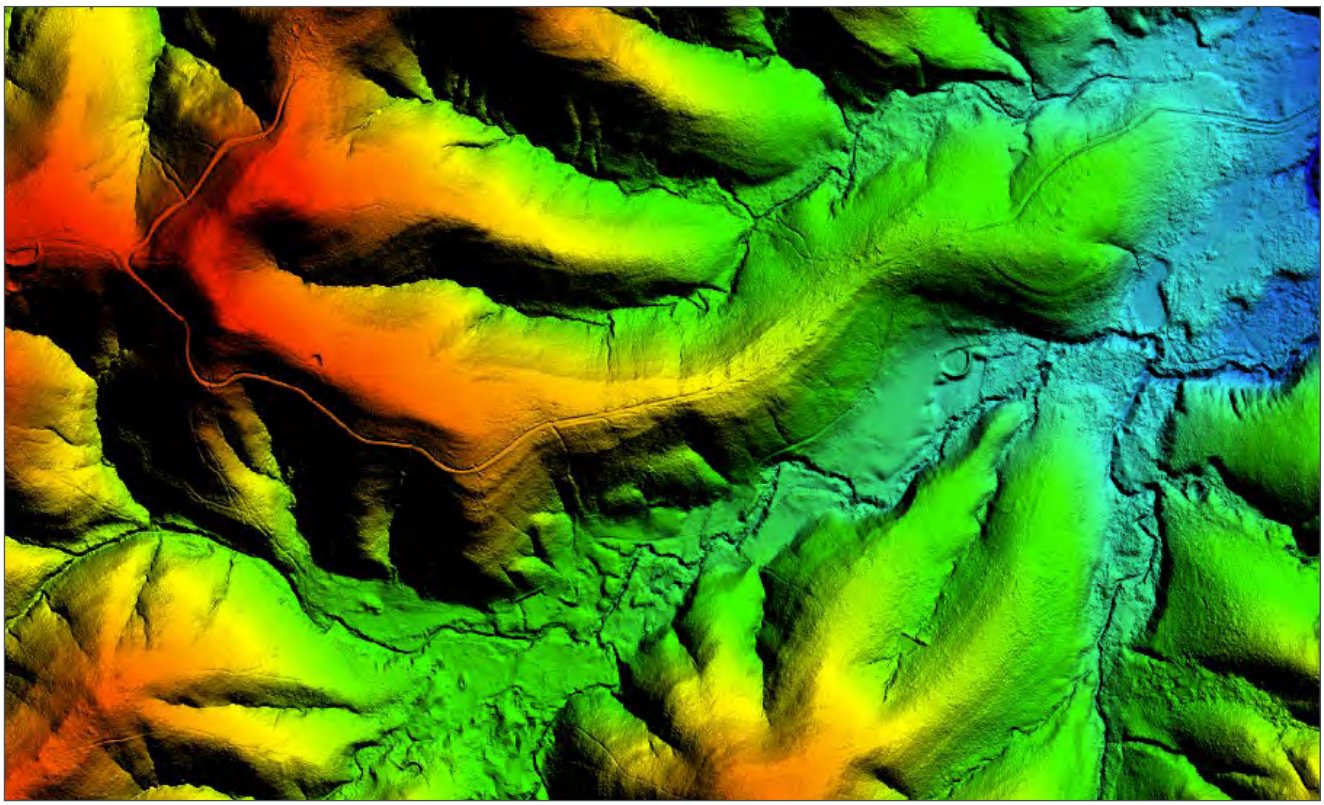


Image depicts sample of the NSW Digital Elevation Model dataset © DCS Spatial Services 2023

Dataset/product description	Digital Elevation Models (DEM) are derived from DCS Spatial Services' (SS) point cloud data. The DEM is a bare earth representation of the earth's surface where all the above ground feature has been removed. **DEM derived from LiDAR** Are 1m or 2m resolution. Data is not hydrologically enforced (breaklines) or hydrologically conditioned (identification and analysis of sinks). **DEM derived photogrammetry** Data is 5m resolution. Areas of no data caused by steep slopes, shadow and vegetation have been interpolated or filled-in with another data source and will not be as accurate as the bare open ground areas. The data is not hydrologically enforced (breaklines) or hydrologically conditioned (identification and analysis of sinks).
Dataset uses	This product has been produced for DCS Spatial Services, local and state government and agency programs including Emergency Services. This product is also used on a whole of government basis as a visible record of the landscape at a given point in time, allowing for analysis to be carried out relating to flood modelling and water catchment management.
Current status	The LiDAR program is focused on the entire coast of NSW and west to the Great Dividing Range. Additionally, the program extends to rural towns in the central and western Divisions. Photogrammetric DEM's have been generated from airborne imagery for the central and western divisions of NSW.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets complies with AS/NZS ISO 19115-2, ANZLIC Metadata Profile v1.1 and ISO 19139 Intergovernmental Committee on Surveying and Mapping (ICSM) Guidelines for Digital Elevation Data DCS Spatial Services: Elevation Data Products Specification and Description (LiDAR) DCS Spatial Services: Elevation Data Products Specification and Description (Airborne Photogrammetry)
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Digital Elevation Model
Updates	DEM data is based on point cloud data. LiDAR point cloud data is updated in specific locations across NSW as required. An update of the photogrammetrically derived point cloud is not planned.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.8 Imagery theme

NSW Foundation Spatial Data Framework: Theme profile

Images depict samples of airborne imagery over Bathurst, NSW (left) at 10cm in RGB and CIR (Left)

Name	Imagery
Description	Imagery is the product created from the use of airborne, space borne or terrestrial sensors. These technologies image the surface of the Earth to allow for the visualisation of land surface features. Imagery includes data sourced from satellite, aircraft and vehicle mounted sensors. These technologies have a range of capabilities that includes but is not limited to, the ability to record multispectral and hyperspectral data and produce products such as orthorectified mosaics and stereo-viewable imagery.
Datasets	Standard Aerial Imagery Orthorectified Mosaics and Modules Standard Aerial Imagery Stereo Workspaces Town Aerial Imagery Orthorectified Mosaics and Modules Special Project Orthorectified Imagery
Purpose	Imagery provides an accurate representation of an area and its features for analysis and decision making purposes. These include: • mapping • emergency services incident response • natural resource management • environmental management • geosciences • ustainable human and land use development.

Status	DCS Spatial Services is the source of truth for the Imagery data theme. DCS Spatial Services currently operates an imagery capture program that supports Whole of Government outcomes. Priority is given to Emergency Services work and projects are undertaken for specialty or priority capture. Capture is undertaken at a resolution of 50cm across New South Wales, whilst 10cm resolution imagery capture is undertaken for regional townships. 10cm capture in the Sydney, Illawarra, Newcastle region is not currently a part of DCS Spatial Services capture program as it is left to the open market for capture through contractors on an as-needed basis. The Imagery as a final product consists of an orthorectified imagery mosaic which is created as a result of imagery processing workflow consisting of; aerial-triangulation, colour balancing and the joining of overlapping image strips. These products are available either in a 4 band (BGRN) image mosaic consisting of the Blue, Green, Red, and Near infra-Red bands, or as a 3 band (RGB) image mosaic, which consists of the Red, Green and Blue bands. Historical aerial photography and second party imagery datasets are held and owned by DCS Spatial Services including high, medium and low resolution aerial imagery and satellite imagery.
Future status	DCS Spatial Services will be the reliable source of truth for this Foundation Theme, providing a complete, current and accurate coverage of NSW. The objective is to integrate the best available data and undertake continuous revision with suitable metadata for appropriate decisions.
Standards	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115-2 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139
Version	Version 0.7

NSW Foundation Spatial Data Framework: Imagery Theme

9.8.1 Dataset/product title: Standard Aerial Imagery

Images depicts a sample of the Standard Aerial Imagery dataset, RGB left, CIR right
© DCS Spatial Services 2023

Dataset/product description	DCS Spatial Service's standard imagery capture program covers the entire state of NSW. Standard coverage imagery is captured and processed at a 50cm Ground Sample Distance (GSD) and is available as either 5km x 5km image modules or mosaicked to the extent of a 1:100,000 mapsheet.
Dataset uses	This product has been produced to identify visible land cover features and terrain to support DCS Spatial Services along with local and state government programs, including Emergency Services. This product is used on a whole of government basis as a visible record of the landscape at a given point in time, allowing for comparative analysis to be carried out over different epochs.
Current status	DCS Spatial Services captures and updates this theme from advice provided by stakeholders primarily through Imagery and Elevation NSW, a working group of the NSW Location Leadership Group.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Standard Orthorectified Imagery
Updates	Continuous with input from Stakeholders
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.8.2 Dataset/product title: Town Aerial Imagery

Image depicts a sample of the Town Aerial Imagery dataset © DCS Spatial Services 2023

Dataset/product description	DCS Spatial Services town imagery program covers regional townships across the state of New South Wales. Town imagery is captured and processed at Ground Sampling Distance (GSD) of 10cm and is available as 1.25km x 1.25km image modules or mosaicked to the extent of the imagery capture.
Dataset uses	This product has been produced to identify visible land cover features and terrain to support DCS Spatial Services along with local and state government programs, including Emergency Services. This product is used on a whole of government basis as a visible record of the landscape at a given point in time, allowing for comparative analysis to be carried out over different epochs.
Current status	DCS Spatial Services captures and updates this theme from advice provided by stakeholders primarily through Imagery and Elevation NSW, a working group of the NSW Location Leadership Group.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139 Second Party Imagery may have specifications that differ from Spatial Service's standard product and or content specifications, see the NSW Spatial Data Catalogue for specific details.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Town Orthorectified Imagery
Updates	Continuous with input from Stakeholders
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.8.3 Dataset/product title: Special Project Orthorectified Imagery

Image depicts a sample of the Special Project Orthorectified Imagery dataset

Dataset/product description	Special project orthorectified imagery relates to imagery captured for emergency response purpose or to support decision making in exceptional cases. The purposes for this imagery can include; floods, storms, hail, fire, tidal surges and drought amongst others. This imagery may have been flown at a variety of image resolutions and the coverage extents are dependent on the nature of the situation and the specific technical requirements of the response activity. The coverage of special project orthorectified imagery for NSW is available as variable window mosaic images at varying GSD's.
Dataset uses	This product has been produced to identify visible land cover features and terrain to support DCS Spatial Services along with local and state government programs, including Emergency Services. This product is used on a whole of government basis as a visible record of the landscape at a given point in time, allowing for comparative analysis to be carried out over different epochs.
Current status	DCS Spatial Services captures and updates this product from advice provided by stakeholders primarily through Imagery NSW, a working group of the Location Leadership Group.

Standards and Specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139 Second Party Imagery may have specifications that differ from DCS Spatial Services standard product and or content specifications, see the NSW Spatial Data Catalogue for specific details.
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Special Project Orthorectified Imagery
Updates	Continuous with input from Stakeholders
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 Email: spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.8.4 Dataset/product title: Standard Aerial Imagery Stereo Workspaces

Images depicts a sample of the Standard Aerial Imagery Stereo Workspaces dataset
(Left: Nadir look-angle imagery, Right: Backwards look-angle imagery)

Dataset/product description	Standard Aerial Imagery Stereo Workspaces relates to overlapping imagery pairs that are available for each flight line of imagery captured for standard aerial imagery jobs. These image pairs are captured at a 50cm Ground Sample Distance (GSD). The coverage of standard aerial imagery stereo workspaces is available across the entire state of NSW.
Dataset uses	Stereo imagery workspaces are available to organisations or individuals with specialist digital stereoscopic mapping capabilities. The stereo workspaces allow for 3-dimensional measurement and data capture and are suited to applications such as natural resource and environmental management, mining and coastal surveillance.
Current status	DCS Spatial Services captures and updates this product from advice provided by stakeholders primarily through Imagery NSW, a working group of the Location Leadership Group.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139 Second Party Imagery may have specifications that differ from DCS Spatial Services standard product and or content specifications, see the NSW Spatial Data Catalogue for specific details.

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Special Project Orthorectified Imagery
Updates	Continuous with input from Stakeholders
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9 Water theme

NSW Foundation Spatial Data Framework: Theme profile

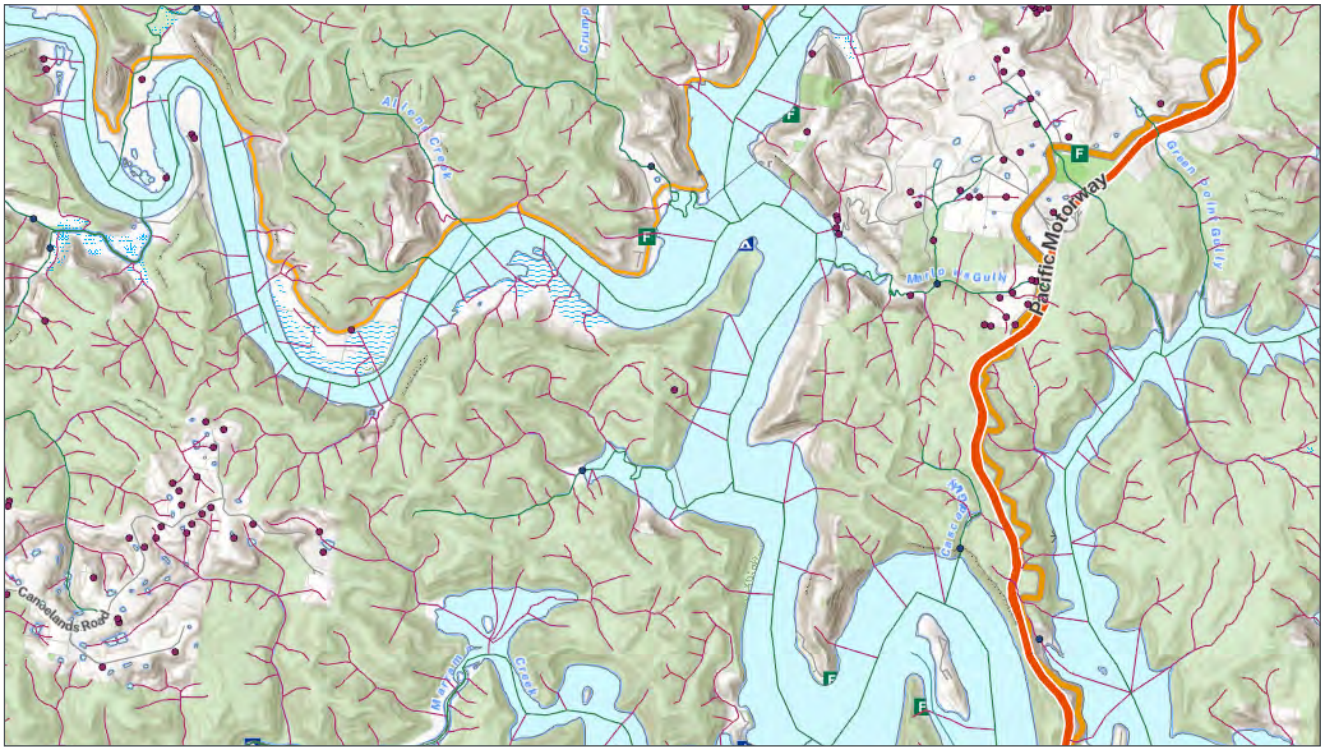


Image depicts a sample of the water theme datasets © DCS Spatial Services 2023

Name	Water
Description	The Water theme is based on hydrology which is the study of the movement, distribution and quality of water. This includes the hydrologic cycles, water resources and environmental watershed sustainability. Hydrology includes surface hydrology, hydrogeology, drainage basin management and water quality where water plays the central role. Water (surface water and groundwater) is concerned with information as aligned with the definitions under the Water Act 2007. This theme includes Hydrology elements which are described as: **Surface Water** • Water in a watercourse, lake or wetland. • Any water flowing over or lying on land, either: • after having precipitated naturally after having risen to the surface naturally from underground. **Groundwater** • Water occurring at a place below ground that has been pumped, diverted or released to that place for the purpose of being stored there • Does not include water held in underground tanks, pipes or other works.

Datasets	Ancillary Hydro Point Coastline Fuzzy Extent Water Area Fuzzy Extent Water Line Hydro Area Hydro Line Hydro Point Named Water Course
Purpose	Water security is one of Australia's major challenges. The benefits of using these nationally consistent data products include analysis, improved operational practises and policy decision making. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Status	The data was systematically upgraded in 2011 using latest available imagery to achieve a more consistent state wide and national specification. Update frequencies vary for each dataset. Individual current status can be found under each Spatial data profile.
Future status	The objective is to maintain the hydrology datasets to meet the FDSI requirements of key data users.
	Current programs include: • Farm dam and other water storages are continuously updated using latest available imagery for NSW government water custodians and auditors. • Development projects are investigating the use of high resolution surface model data for the improvement of selected catchment areas within the State. • Integration of custodial and other higher order data from other providers will continue to ensure continued improvement of data. Longer term programs include: • Continued spatial upgrade of hydrology datasets using latest acquired and higher resolution imagery • Utilisation of feature recognition and change detection for the maintenance of farm dam and other water storages • Increased accuracy of sea and estuarine shorelines to assist with planning, emergency management and climate control.
Standards	AS/NZS ISO 19115 - ANZLIC Metadata Profile Version 1.1. AS/NZS ISO 19131:2008 Geographic Information - Data product specifications. OGC compliant Web Map Services (WMS) and Web Feature Services (WFS).
Version	Version 0.7

9.9.1 Dataset/product title: NSW Ancillary Hydro Point

Image depicts sample of the NSW Ancillary Hydro Point dataset

Dataset/product Ddescription	NSW Ancillary Hydro Point data represents a location that has unique hydrology characteristics or monitors or controls stream flow or manages hydrographical spatial data integrity. Features within an ancillary hydro point class include: bore, lock, rapids, spring, tidal limit marker, waterfall, dissipation point, regulators, barriers, river gauge, and sink.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Ancillary Hydro Point
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.2 Dataset/product title: NSW Coastline

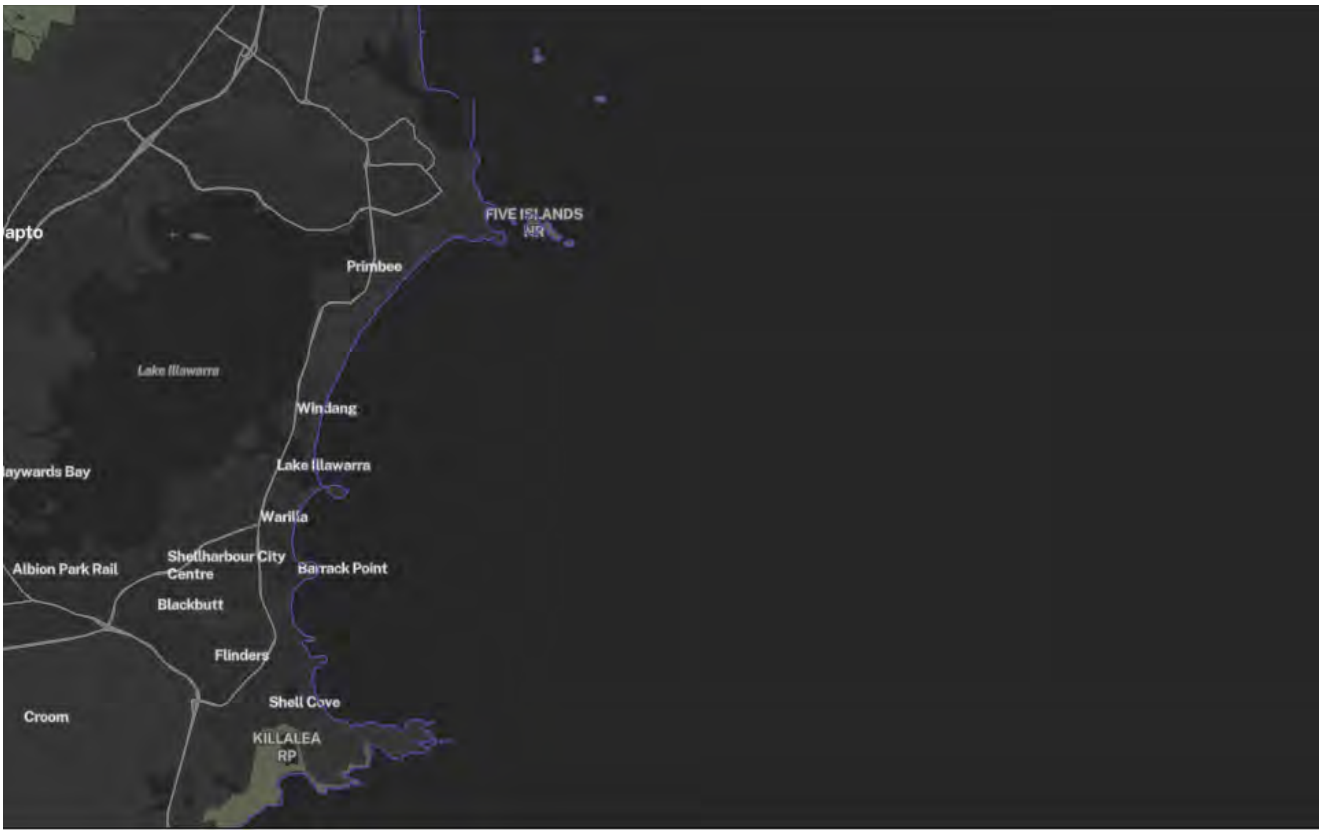


Image depicts sample of the NSW Coastline dataset © DCS Spatial Services 2023

Dataset/product description	NSW Coastline data is linear feature class defining the line of contact between a body of water and the land. In particular, the line delineating the interface between land, internal waters and the "Territorial Sea" as defined by the Seas and Submerged Lands Act - No. 161 of 1973. The coastline defining Mean High Water Mark (MHWM) does not include MHWM within estuaries. Features within coastline feature class include: mean high water mark and mean low water mark.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.

Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services regular cycle of updating from aerial imagery and elevation data.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Coastline
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.3 Dataset/product title: NSW Fuzzy Extent Water Area

Image depicts sample of the NSW Fuzzy Extent Water Area © DCS Spatial Services 2023

Dataset/product description	NSW Fuzzy Extent Water Area is polygon feature class representing the approximate extents of formally named water features that have relatively indistinct name extent. Fuzzy extent water areas are divided into Bay like, River like and Sea like sub types. Bay like class is defined as bay-like features, which includes Bays, Bights, Coves, Entrances, Gulfs, Harbours, Inlets, Ports and River Mouths. River like is defined as a named river-like feature of indefinite name extent which includes Anabranch, Arm, Bend, Canal, Channel, Cowal, Passage, Reach, River Bend, River Feature, and Strait that have not been represented by another hydrographic feature class. A sea like water body includes sea and ocean.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.

Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Fuzzy Extent Water Area
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.4 Dataset/product title: NSW Fuzzy Extent Water Line

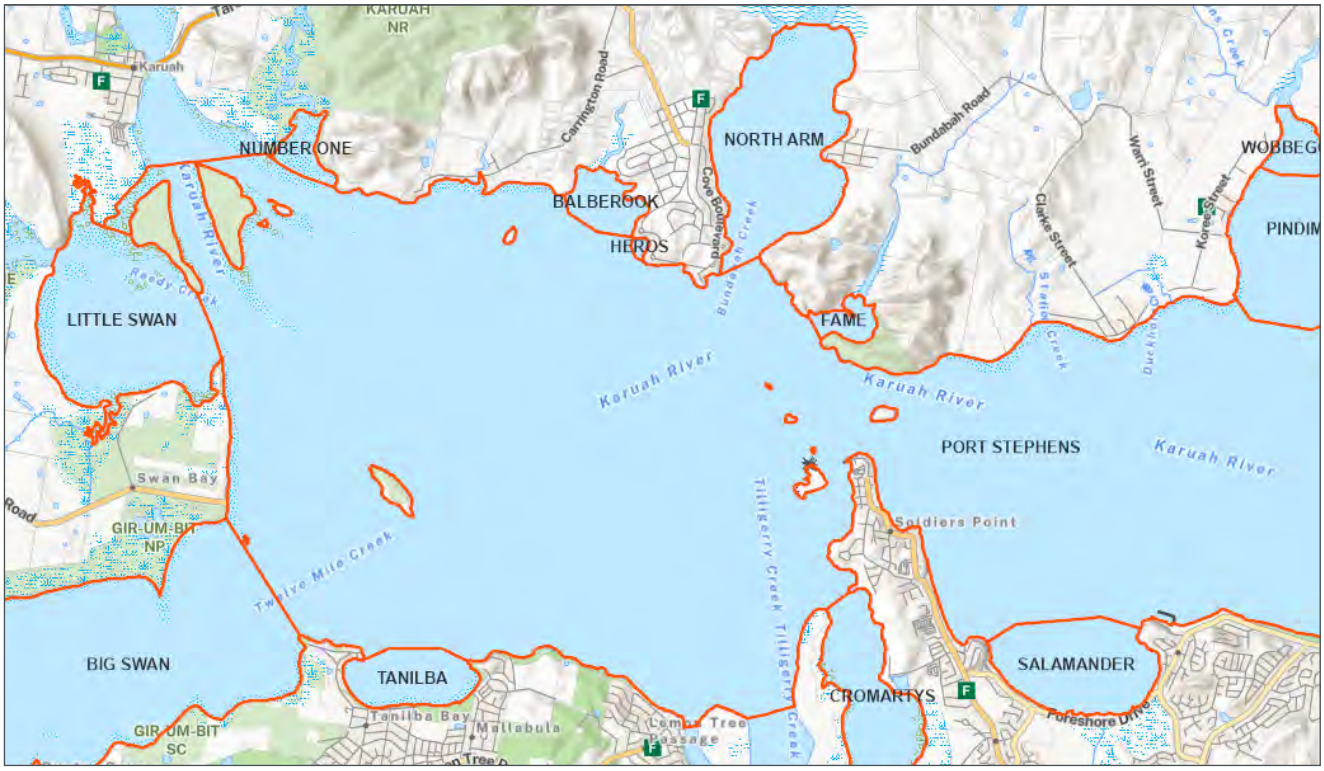


Image depicts sample of the NSW Fuzzy Extent Water Line © DCS Spatial Services 2023

Dataset/product description	NSW Fuzzy Extent Water Line is a linear feature class representing the approximate extents of formally named water features that have relatively indistinct name extent. Fuzzy extent water lines features include Anabranch, Arm, Bend, Canal, Channel, Cowal, Passage, Reach, River Bend, River Feature, and Strait.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System.
	More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Fuzzy Extent Water Line
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.5 Dataset/product title: NSW Hydro Area

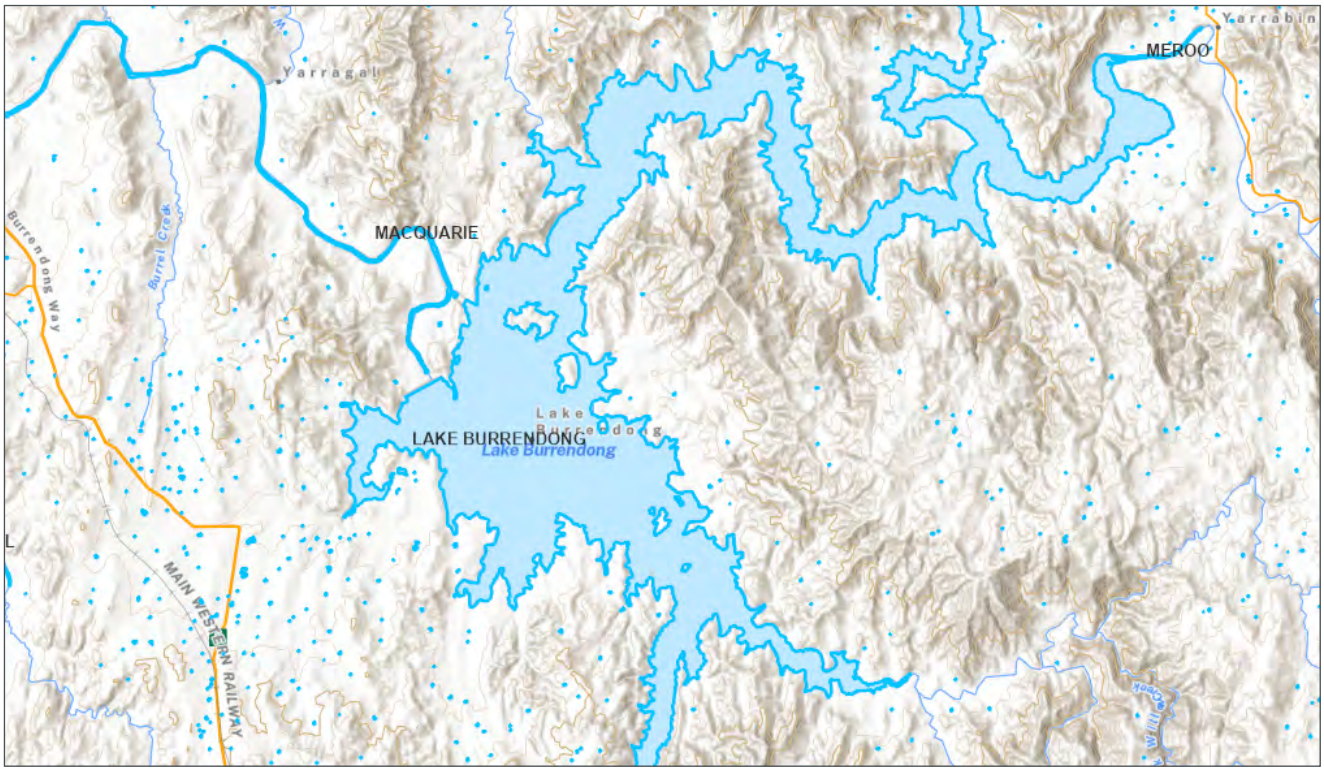


Image depicts sample of the NSW Hydro Area dataset © DCS Spatial Services 2023

Dataset/product description	NSW Hydro Area is a polygon feature class defining hydrographic feature types. This feature class is divided into waterbody area and water course. Waterbody is a standard body of inland water of which flow is minor. Waterbody may be natural waterbody or man-made waterbody. Water course is a way or course through which water may pass. Hydro area feature class is also classified as perennial, non-perennial or mainly dry.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Hydro Area
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.6 Dataset/product title: NSW Hydro Line

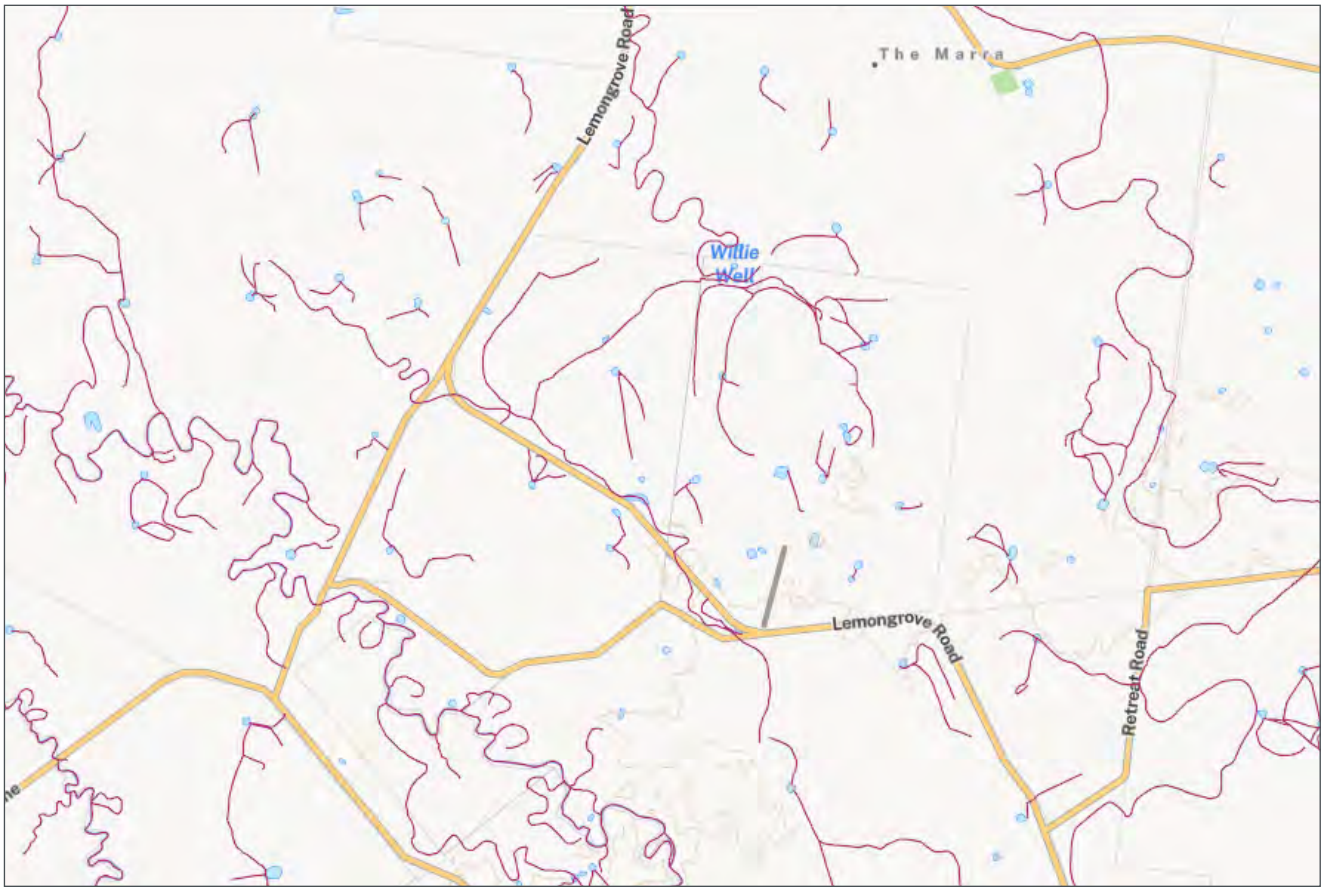


Image depicts sample of the NSW Hydro Line dataset © DCS Spatial Services 2023

Dataset/product description	NSW Hydro Line defines the centreline of a water course. It includes features such as natural water course, canal-drain, race, spill way and tunnel-siphon. It includes key attributes such as hydro line name, perennially and flow direction.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Hydro Line
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.7 Dataset/product title: NSW Hydro Point

Image depicts sample of the NSW Hydro Point dataset © DCS Spatial Services 2023

Dataset/product description	NSW Hydro Point defines point hydrographic feature types. It represents points of standard bodies of inland water where flow is minor and is defined as either natural water body or man-made water body. The dataset also indicates whether a hydro point is perennial, non-perennial or mainly dry.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.

Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011
Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	Hydro Point
Updates	Continuous as described above.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.9.8 Dataset/product title: NSW Named Water Course

Image depicts sample of the NSW Named Water Course dataset © DCS Spatial Services 2023

Dataset/product description	NSW Named Water Course defines the centreline of a named water course as a single feature. It is an aggregation of Hydro Line parts.
Dataset uses	Water security is one of Australia's major challenges. Key users of the hydrology data are NSW State and Local Government agencies as well as Federal Government agencies. These bodies use this data to better manage State and Local Government assets. This hydrology data provides the NSW component of the Australian Hydrological Geospatial Fabric which is a critical input to the Australian Water Resources Information System. More widespread use of the hydrology data is also found in emergency management response and recovery efforts, hazard mitigation or disaster risk reduction, climate change, natural resource assessment, environmental planning and monitoring, insurance, mining and agriculture.
Current status	DCS Spatial Services continuously updates this theme with information sourced from relevant stakeholders and custodians; by data verification from other internal and external databases; research and through DCS Spatial Services' regular cycle of updating from aerial imagery and elevation data.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011

Access and licensing	Spatial Services, a division of the Department of Customer Services (DCS) creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by DCS Spatial Services constitutes Crown copyright. DCS Spatial Services has applied the Creative Commons Attribution 4.0 Australia Licence. DCS Spatial Services asserts the right to be attributed as author of the original material in the following manner:  © DCS Spatial Services [date of extraction] **Additional terms for the use of DCS Spatial Services material** Any derived products which are created will be required to clearly mark the date that any extractions from the DCS Spatial Services Spatial Database occurred. All Intellectual Property which is owned by DCS Spatial Services should only be loaded on any external cloud platforms if DCS Spatial Services' Intellectual Property remains unchanged, maintained and preserved.
Metadata	NSW Named Water Course
Updates	As required.
Custodian agency and contact	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Aggregator(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us
Distributor(s)	Name: DCS Spatial Services Address: 346 Panorama Ave Bathurst NSW 2795 spatial.nsw.gov.au/contact_us

9.10 Land Cover theme

NSW Foundation Spatial Data Framework: Theme profile

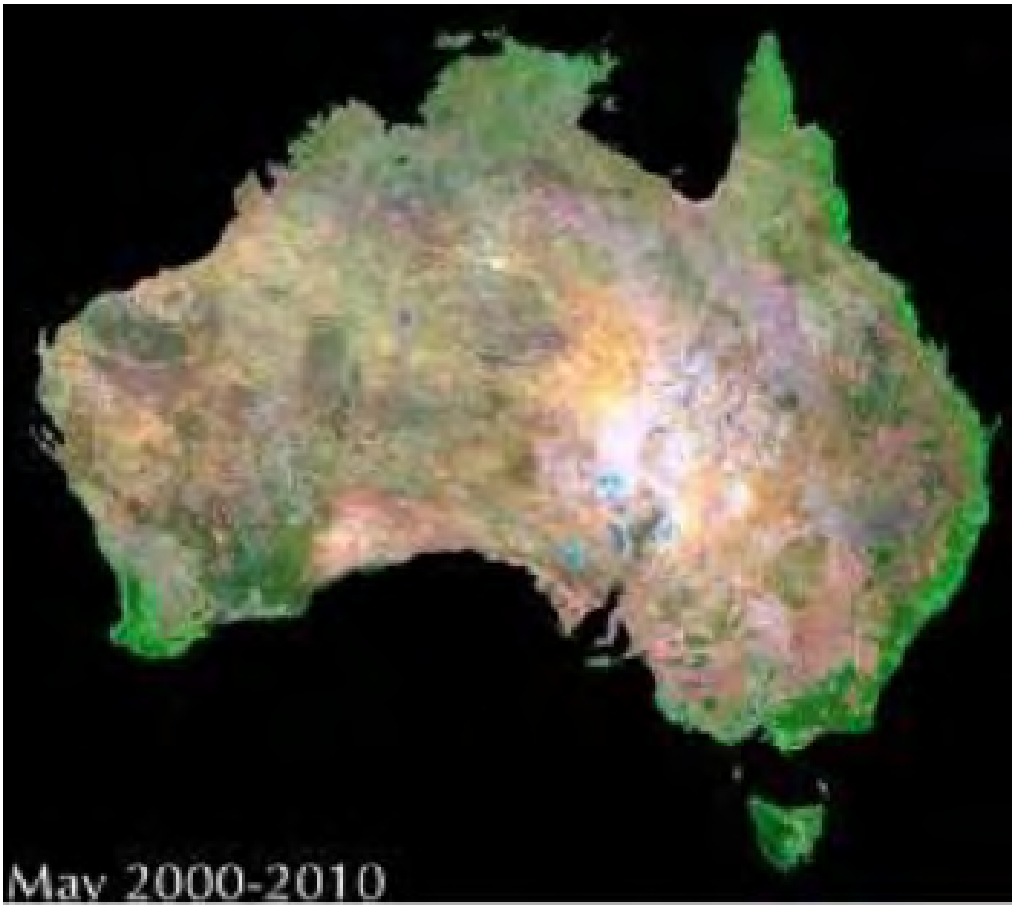


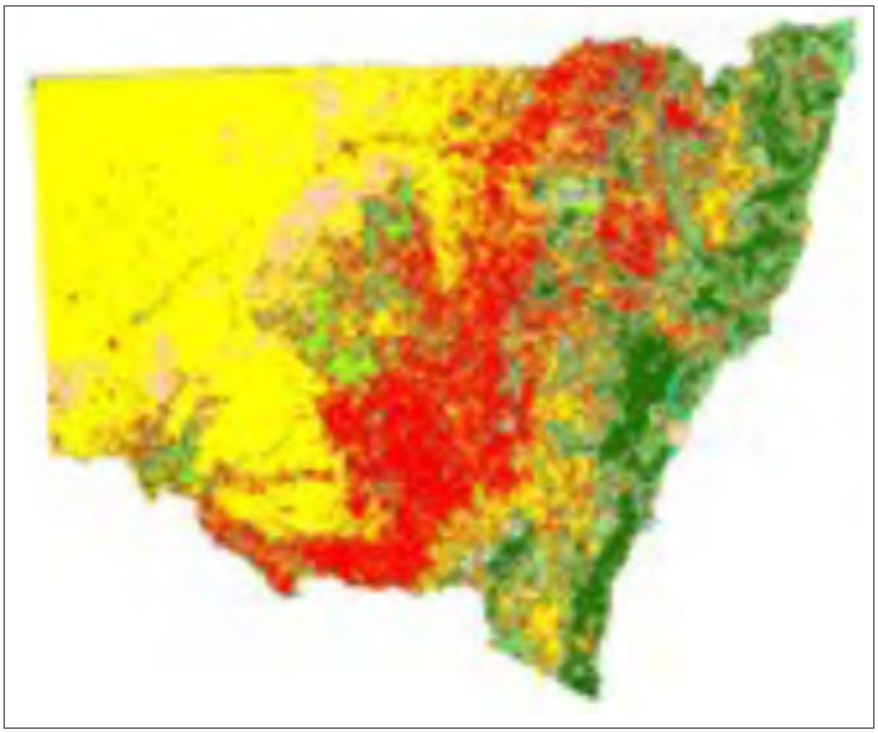
Image depicts Land Cover information for Australia © Geoscience Australia 2023

Name	Land Cover
Description	Land cover is the visible, biophysical cover on the Earth's surface including trees, shrubs, grasses, soils, exposed rocks and water bodies, as well as anthropogenic elements such as plantations, crops and built environments. Land cover changes for many reasons, including seasonal weather, severe weather events such as cyclones, floods and fires, and human activities such as mining, agriculture and urbanisation. Remote sensing data recorded over a period of time allows the observation of land cover dynamics. Classifying these responses provides a robust and repeatable way of characterising land cover types. These complement on ground survey where available.
Datasets	NSW Interim Native Vegetation Extent (2008-v2) NSW SLATS LANDSAT Woody Change: Derived Vector Database 1988 – 2010 Plant Community Type Classification Land Use Soil Landscapes Landscapes and Soils Soil data online

Purpose	The Land Cover theme is an essential and authoritative source of information that can provide insight into the behaviour of land cover to a wide variety of conditions, both natural and situational. This provides natural resource managers with the capacity to identify emerging patterns of land cover change and provides a broad spatial and historical context within which to interpret that land cover change. This can be combined with other information to assess if any pro-active intervention is required to alter change happening to the land cover. Information about Land Cover dynamics is essential to understanding and addressing a range of national challenges including: • mapping and monitoring land use, natural resources, biodiversity, water usage, drought, pollution, minerals, water quality, wetlands, groundwater dependent ecosystems, land clearing, floodplains, crop acreage and growth, remnant vegetation, land degradation, irrigation, dry land salinity, and vegetation condition • management of forests, rivers, fisheries, catchments and agriculture • national and state inventories of forests, greenhouse gases, endangered species, land cover, topography, and carbon sinks • emergency management of floods, bushfires and landslides.
Status	The NSW Department of Planning and Environment - Environment and Heritage Group is the source of truth for this data theme. NSW Department of Planning and Environment - Environment and Heritage Group manages the state-wide vegetation, soils and land use datasets needed to support the Land Cover definitions. The current status of the land cover related datasets are as listed. • Woody extent – Statewide 2008 published and updated annually metadata. • Woody vegetation clearing (NSW SLATS 1988-2010)metadata links: a) Landsat woody change data (25m) for 1988-2010, and b) NSW SLATS LANDSAT Woody Change Vector Database 1988-2010. • Plant community type classification available via VIS Classification DB. • Land use. NSW 2005. • Soils Landscapes.
Standards	Woody vegetation extent – state-wide using 5m pixels from SPOT 5 Woody vegetation clearing (NSW SLATS, derived from SPOT 5)
Version	Version 0.7

NSW Foundation Spatial Data Framework: Land Cover Theme

9.10.1 Dataset/product title: NSW Interim Native Vegetation Extent (2008-v2)

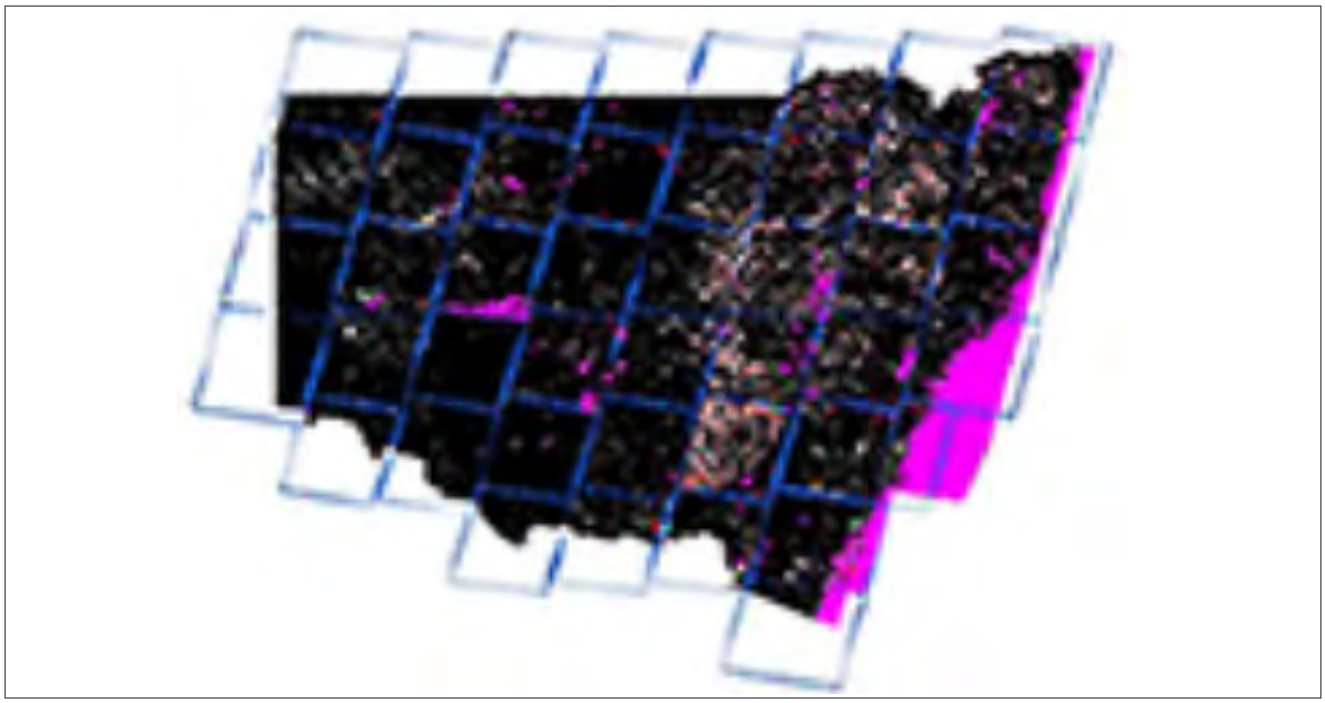


NSW Native Vegetation Extent © NSW Department of Planning and Environment - Environment and Heritage Group 2023

Dataset/product description	A NSW Native Vegetation Extent layer prepared for the National Land and Water Resources Audit 2008. This represents native vegetation extent at 2006. A number of other useful intermediate products are also available.
Dataset uses	Environmental Planning and spatial mapping activities.
Current status	See National Land and Water Resources Audit 2008 report.
Standards and specifications	Metadata for the relevant DCS Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1, ISO 19115-2 and ISO 19139. AS/NZS ISO 4819:2011
Access and licensing	For access and licencing please contact: info@environment.nsw.gov.au
Metadata	Native Vegetation Extent
Updates	Caveat - Vegetation extent and nativeness layers generated for this project are interim in nature and are subject to ongoing refinement. While these products represent the best available estimate of vegetation extent and nativeness at this time they will be improved overtime and hence are not suitable for accurate reporting of vegetation change.

Custodian agency and contact	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Aggregator(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Distributor(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au

9.10.2 Dataset/product title: NSW SLATS LANDSAT Woody Change: Derived Vector Database 1988 – 2010

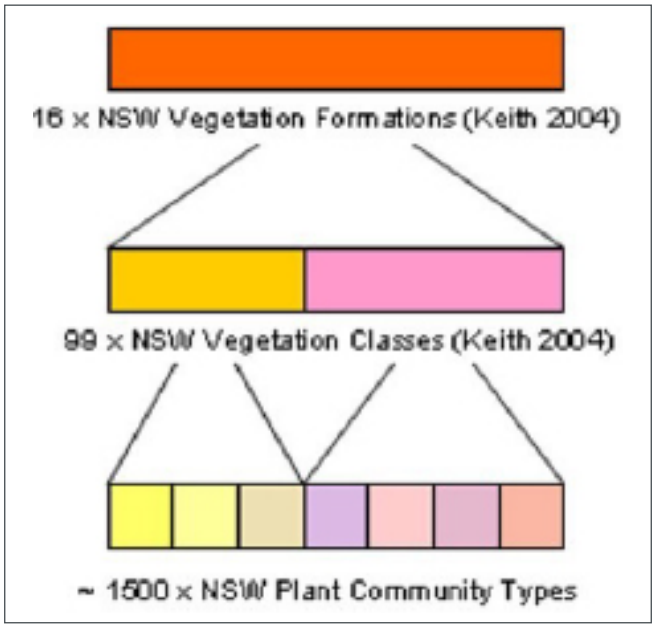


Data overview of LANDSAT Woody Change Tiles © NSW Department of Planning and Environment - Environment and Heritage Group 2023

Dataset/product description	This dataset was derived from the primary 'SLATS Landsat woody change data (25m) for 1988 – 2010' raster (grid) layers used to generate the annualised woody vegetation change rates for the 2010 NSW Annual Report of Native Vegetation. This data describes the areas and type of woody vegetation change (loss) based on the analysis of multi-date Landsat imagery covering NSW. This data is based on a biennial LANDSAT coverage between 1988-2006 and annual coverage 2006-2010. LANDSAT Imagery 1988-2008 was processed by Geosciences Australia at 25m resolution. 2008 onwards is based on USGS processed LANDSAT at 30m resolution. Note, this vector data may generate slightly different aerial statistics to those generated from the source raster data. This is due to variation caused by the data transformation and vector cleaning processes applied in generating the vector data.
Dataset uses	This vector change dataset was prepared by the NSW SLATS to provide users with a more convenient means of analysing the area and type of woody vegetation change (loss).
Current Status	Ongoing

Standards and specifications	The raster data has been converted to polygon format with a buffer of 1mm applied - adjoining adjacent pixels into a single polygon feature. Each SLATS epoch is a single feature class in the Gedodatabase. Each Feature class identifies the SLATS scene name, satellite image, dates, number days between images, major category of the type of interpreted change according to the SLATS change sub categories. Efforts have been made minimise topology errors in each of the feature classes.
Access and licensing	For access and licencing please contact: info@environment.nsw.gov.au
Metadata	NSW SLATS Woody Change: Derived Vector Database 1988-2010
Updates	The update of this product will follow the update of the raster woody vegetation change analysis.
Custodian agency and contact	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Aggregator(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Distributor(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Additional comments	The underlying methodology was developed over many years by the Queensland Department of Environment and Resource Management as a scientific approach to report change in woody vegetation and is known as the Statewide Landcover and Trees Study (SLATS). The underlying process is based on the published SLATS methods, which include both automated analysis of satellite imagery, and visual checking and editing of the change images by locally based specialist staff. During the editing process the interpreted/intended use is identified by specialist staff. The major categories assigned the woody change (loss) are Fire Activity, Agricultural Activity, Infrastructure and Forestry Activity. Within each of these major classes there are a series of subclasses which identify the specific type of activity - where applicable.

9.10.3 Dataset/product title: Plant Community Type Classification



Native Vegetation of NSW: classification hierarchy © NSW Department of Planning and Environment - Environment and Heritage Group 2023

Dataset/product description	The NSW Vegetation Information System (VIS) is being established to provide the NSW Government, its clients and community with a central authoritative repository for native vegetation data. The NSW VIS Plant Community Type Classification (VIS Classification Database) establishes a NSW Master Plant Community Type as focal point for both vegetation type mapping and regulatory assessment processes. The VIS Classification database stores a broad range of data related to the individual Plant Community Types (PCTs), including: • the NSW Master Plant Community Type Classification, including approximately 1,500 plant community types identified across NSW • scientific descriptions, and ecological and conservation profiles, of each plant community type; and • related regulatory data including: Over-cleared BioMetric Vegetation Types, BioMetric Condition Benchmarks and Over-cleared BioMetric Landscapes. The NSW VIS Classification Database does not store spatial information or flora survey information for the plant community types.
Dataset uses	The NSW Vegetation Information System (VIS) provides the NSW Government, its clients and the community with a central authoritative repository for native vegetation data. The VIS Classification provides plant community type information suited to: • state government agencies identifying key habitats and communities for conservation • the Rural Fire Service for fire management • catchment management authorities (CMAs) for monitoring the effectiveness of their land-use planning • local councils requiring information about vegetation to protect local stands of high conservation value, and inform decisions about development • contractors and non-government agencies identifying important habitats • general public and land owners seeking information about plant communities of interest.

Current status	The Plant Community Type classification is now maintained as version 2 of the VIS Classification database. Improving the data in the VIS Classification database is ongoing.
Standards and specifications	Modifications or improvements to the NSW Plant Community Type classification are regulated by the Plant Community Type Change Control Panel in accordance with the Plant Community Type Operational Standard.
Access and licensing	For access and licencing please contact: info@environment.nsw.gov.au
Metadata	Not applicable
Updates	All changes to the PCT classification are evidence based, and moderated by the Plant Community Type Change Control Panel chaired by the NSW Royal Botanic Gardens and Domain Trust. Updating data in the VIS Classification is an on-going process, and a series of classification projects are planned to upgrade the PCT classification on the NSW east coast. BioMetric vegetation types and BioMetric condition benchmarks also maintained in the VIS Classification database and exported periodically for upload to the regulatory tools.
Custodian agency and contact	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Aggregator(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Distributor(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Additional Comments	The NSW Vegetation Information System (VIS) is made up of a number of separate components arranged under three topics. Explore these links for more detail: • VIS Classification • VIS Flora Survey • VIS Maps The NSW plant community type (PCT) classification now maintained in the VIS Classification database was developed in 2011 to establish an unambiguous master community-level classification for use in vegetation mapping programs, BioMetric-based regulatory decisions, and as a standard typology for other planning and data gathering programs. The PCT classification consolidates two existing community-level classifications: • The NSW Vegetation Classification and Assessment database (Benson 2006 and 2008) developed by the Royal Botanic Gardens and Domain Trust, provides a list and detailed descriptions for plant communities in western and central-western NSW. • The Biometric Vegetation Types database (part of Environmental Outcomes Assessment Methodology) includes a list and abbreviated descriptions for plant communities across NSW. This data is used in NSW regulatory processes including property vegetation planning and BioBanking.

9.10.4 Dataset/product title: Land Use

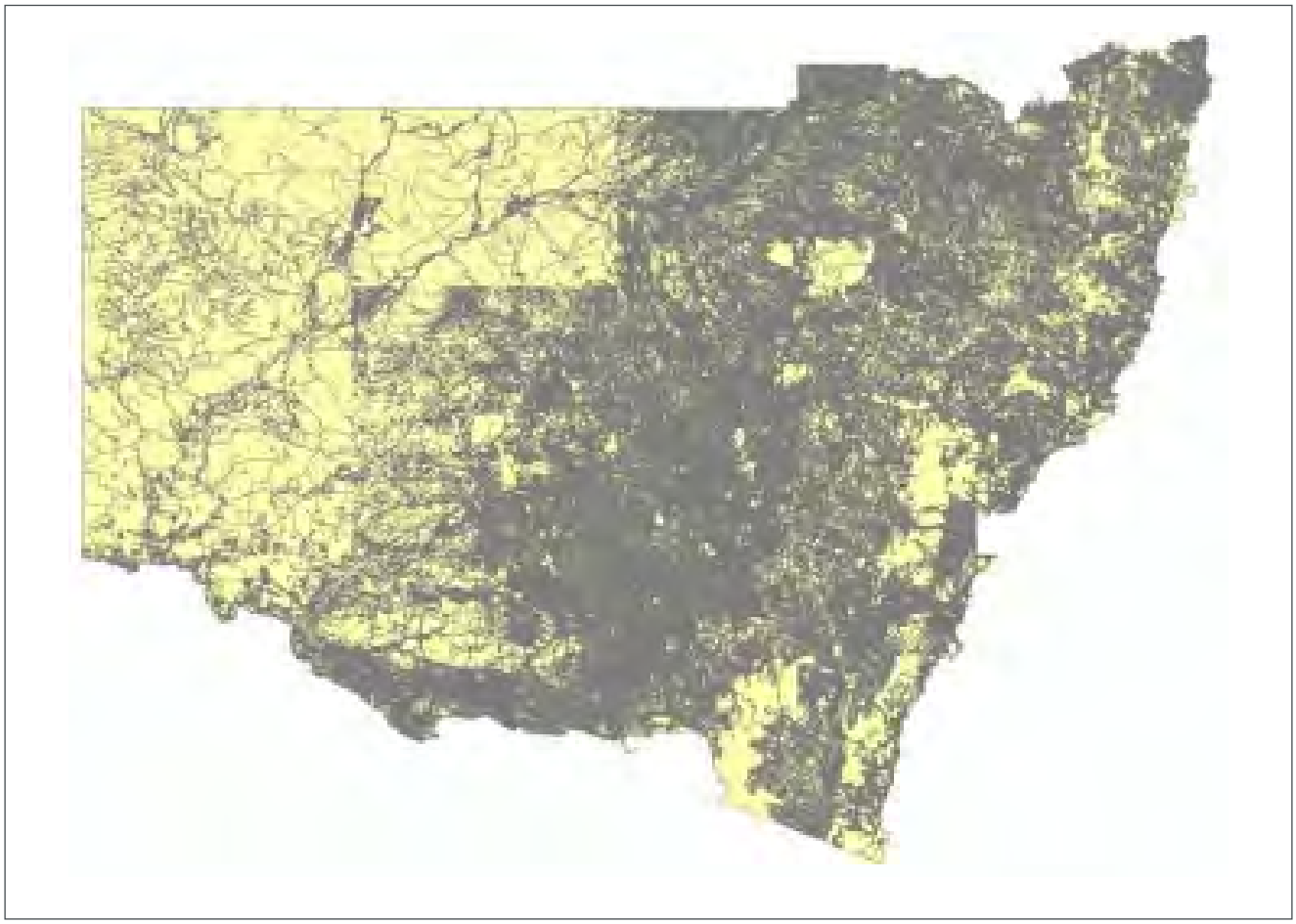


Image depicts a sample of the NSW Land Use map extent

Dataset/product description	Dataset of Land Use between June 2000 and June 2007 for the whole of New South Wales. Land use polygons are classified to both NSW classification (LUMAP) and National standards (ALUM, Australian Land Use and Management). The ALUM classification is based upon the modified Baxter and Russell classification and presented according to the specifications contained in Baxter and Russell Classification. The date of the data set is set as the land use occurring at the time the satellite imagery was acquired, which can range from 1999 to 2006. The V2 dataset was updated in May 2011 to include values in the attribute fields of Source, Source Date, Source Scale, Reliability and LU Mapping Date and is ALUM Version 7 compatible.
Dataset uses	Suitable for Strategic Land-use planning issues-state and local government. Suitable for modelling exercises related to climate change, erosion, recharge, biodiversity, planning disease control and assessment of high value rural assets. The dataset contains information on dryland cultivation and irrigated cultivation, irrigation infrastructure and information related to vegetation present at the time of mapping. Some areas have information related to irrigation and land management practices present along with areas with vegetation canopy cover information at the time of mapping.

Current status	Complete as of 2007.
Standards and specifications	Land Use mapped to ACLUMP standard. More classes identified in NSW LuMap. Hard copy mapping was prepared at 1:50,000 or 1:25,000. On screen mapping undertaken at 1:10,000 or better.
Access and licensing	For access and licencing please contact: info@environment.nsw.gov.au
Metadata	NSW Landuse
Updates	Sydney 1:100 000 map sheet to be incorporated into NSW dataset. NSW OEH is currently looking into ways of updating priority areas using ancillary datasets and as funding become available.
Custodian agency and contact	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Aggregator(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au
Distributor(s)	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 1232 Email: info@environment.nsw.gov.au

9.10.5 Dataset/product title: Landscapes and Soils - Soil data

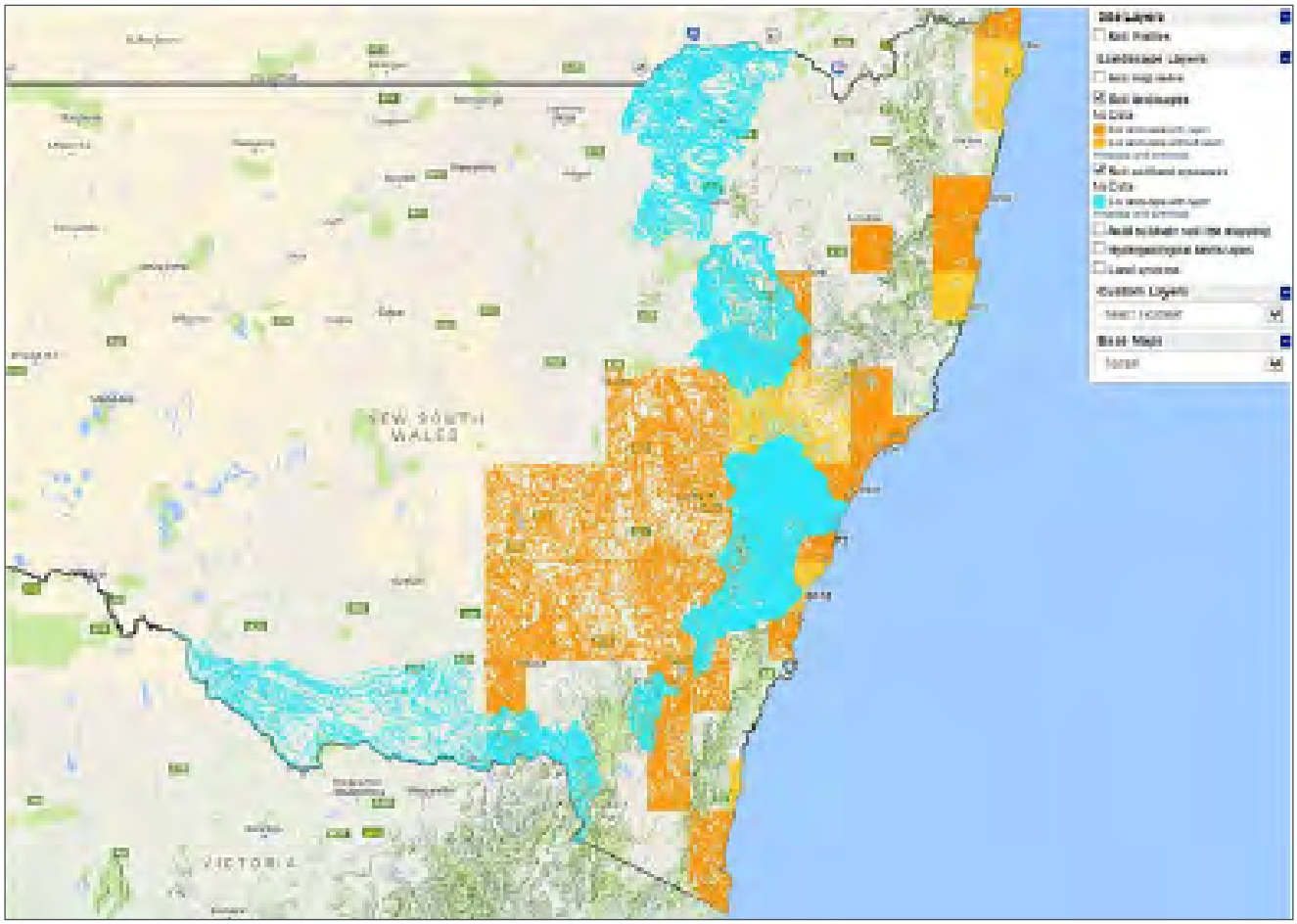


Image depicts a Soil Landscapes datasets available on eSPADE

Dataset/product description	Soil Landscapes comprise of the Soil Landscape Series mapping based on standard 1:100,000 and 1:250,000 topographic sheets and Soil and Land Resource Series mapping using catchment boundaries or other areas of state significance. Mapping and accompanying reports provide an inventory of soil and landscape properties of their area and identify major soil and landscape qualities and constraints. The 'Soil Landscape' concept integrates soil and topographic features into single units with relatively uniform land management requirements. Soils are described in terms of Australian Soil Classification, Great Soil Group and Northcote classification systems. Key soil materials are also identified for the Soil Landscape Series.
Dataset uses	Soil landscape mapping provides a primary source of natural resource information for planning and policy-making and environmental protection for State and Local Governments, including the foundation for the mapping of NSW's best land and soils as Biophysical Strategic Agricultural Land (BSAL).

	Provides a major information source for land managers, in education and most private sector consultancies involved in environmental impact assessment, and used in a wide range of planning, infrastructure, environmental and engineering applications. Also used as a primary input to National and State level soil surfaces used in planning and environmental modelling applications. Relationship to other datasets Soil landscape mapping have close synergies with other soil and land datasets also managed by OEH • Land Systems of Western NSW (soil mapping focusing on soil/landform and vegetation relationships) • Acid Sulfate Risk Mapping (mapping identifying areas with risks of Acid Sulfate Soils (ASS)) • Hydrogeological Landscapes of NSW and the ACT (mapping of distinct geology/ landscape/soil units to provide salinity and other land management recommendations).
Current status	See map of current Soil Landscape coverage. The Soil Landscape Series program was originally intended to cover the entirety of Eastern and Central NSW but effectively ceased in 2006 with approximately 25 per cent of the State covered. Subsequent mapping is continuing as part of the Soil and Land Resource Series. This soil mapping combines both previously published and new areas, upgrading them to the Soil and Land Resources standard. Ongoing mapping is targeted in regions of New South Wales where soil and land information is vital for land use planning, environmental protection and infrastructure development. Individual soil landscape maps have been rectified and integrated into a single seamless spatial data layer that is updated as new or improved mapping becomes available. This layer in turn has been integrated into best available statewide land and soil mapping custom products such as Land and Soil Capability (LSC) and Inherent Soil Fertility maps.
Standards and specifications	Terminology and methodology follows National Committee on Soil and Terrain (2009) and Milford et al. (2001). Current mapping standards identify minimum soil survey requirements for mapping procedures, data density and laboratory analysis. Maps are accurate at scale of publication (1:100,000 or 1:250,000).
Access and licensing	NSW Department of Planning and Environment - Environment and Heritage Group creates and manages Intellectual Property for the Crown in right of New South Wales. Acquisition of this data is subject to the customer entering into an appropriate Creative Commons license agreement. To the extent that Creative Commons licensing applies, all data and other material produced by OEH constitutes Crown copyright. OEH has applied the Creative Commons Attribution 4.0 Australia Licence. OEH asserts the right to be attributed as author of the original material in the following manner:  © State of New South Wales and NSW Department of Planning and Environment - Environment and Heritage Group [Year of publication] Soil and land information is accessible via eSPADE (OEH's soil spatial viewer) and from the OEH data portal

Metadata	Soil Landscapes of Central and Eastern NSW Soil and Land Resources of Central and Eastern NSW
Updates	Updated as new data becomes available through mapping projects in specific areas.
Custodian agency and contact	NSW Department of Planning and Environment - Environment and Heritage Group Head Office PO Box A290 Sydney South NSW 2124 E: data.broker@environment.nsw.gov.au
Aggregator(s)	NSW Department of Planning and Environment - Environment and Heritage Group Assessment Team Ecosystem Management Science PO Box 640 Parramatta NSW 2124 E: soils@environment.nsw.gov.au
Distributor(s)	NSW Department of Planning and Environment - Environment and Heritage Group Environment Line PO Box A290 Sydney South NSW 1232 E: data.broker@environment.nsw.gov.au
Additional comments	**References**: National Committee on Soil and Terrain, 2009, 'Australian soil and land survey field handbook', CSIRO Publishing, Melbourne. Milford, H.B., McGaw, A.J.E. and Nixon, K.J. (eds), 2001, 'Soil Data Entry Handbook' (3rd edition), NSW Department of Land and Water Conservation, Sydney.