

DCS Spatial Services

# Products and Services Catalogue

September 2024



# DCS Spatial Services

## Who we are

DCS Spatial Services, an agency within the NSW Department of Customer Service, provides spatial and land information to individuals, businesses and government agencies. This authoritative spatial data forms the foundation of NSW's mapping and spatial information systems and is utilised by the community, government, and various industry sectors such as telecommunications, agriculture, environmental organisations, and urban planning.

## What we do

DCS Spatial Services converts the wealth of spatial and land data it collects into a comprehensive and authoritative range of geospatial mapping products and services. These products and services support a range of community, business and government activities, including tourism, land management, electoral boundaries and emergency management.



# NSW Spatial Collaboration Portal

The NSW Spatial Collaboration Portal (SCP) provides a secure platform to facilitate the delivery of NSW spatial datasets.

The portal enables the search and discovery of spatial datasets for all NSW citizens. It also allows local, state, and federal agencies to deliver spatial data, asset management and visualisation services securely.

There are three tiers of user access, however, open data is available to view without registering an account. To access groups, secured data and saved content you will need to be a registered user. Data custodians who intend to upload data for collaboration must also register as a user and then contact our onboarding team.

**Access:** Open.

## Spatial Hosting Portal

The Spatial Hosting Portal (SHP) is a secure platform managed by DCS Spatial Services for NSW Government agencies that have spatial data but do not have their own portal. Users interacting with this platform will be those who are uploading data and linking it to the SCP for discoverability.

**Access:** Managed.

## Emergency Management Portal

The Emergency Management Portal (EMP) is a secure platform managed by DCS Spatial Services for the delivery of emergency management content such as the Emergency Services Spatial Information Library (ESSIL) and Spatial Information Mapping System (SIMS) online application.

ESSIL combines data from more than 200 source agencies into 350 seamless state-wide layers. These layers encompass all areas of emergency planning, response and recovery. DCS Spatial Services Emergency Information Coordination Unit (EICU) supports public safety through the availability of spatial data for management, planning and mitigation of emergencies. This portal was implemented to provide a collaborative data sharing system on behalf of emergency service organisations and the emergency management sector.

**Access:** Restricted to Emergency Services Organisations and their supporting agencies.

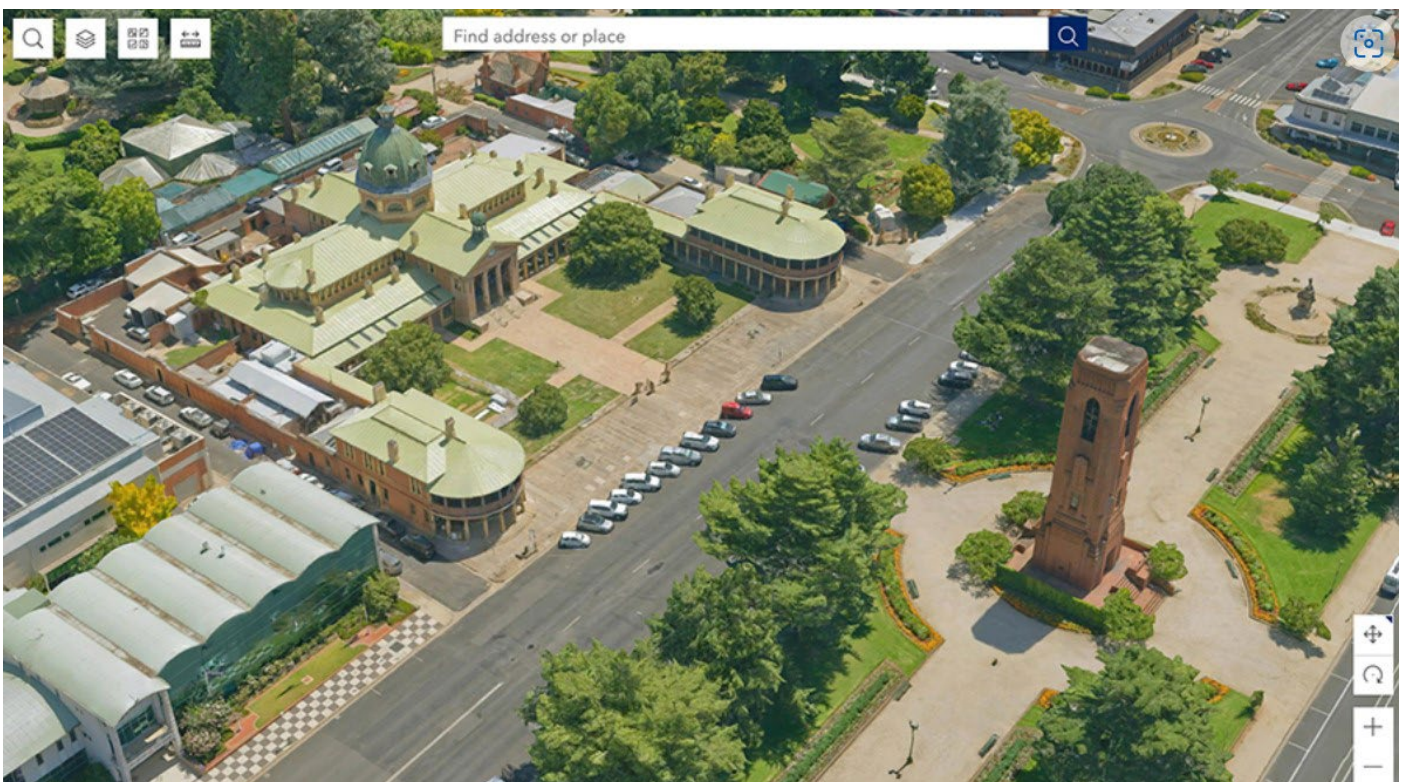
# NSW Spatial Digital Twin

DCS Spatial Services is currently developing the NSW Spatial Digital Twin (SDT), an online tool which will pull together place-based information from across NSW that can be used to make our communities stronger, safer, smarter and to create more jobs. It combines data to create 2D, 3D and 4D models in a variety of ways, providing real-world visual insights to support decision-making and planning for our communities.

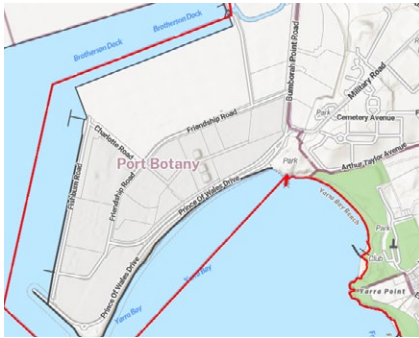
To do this, the next generation SDT will see the existing Spatial Collaboration Portal revitalised to improve customer experience. It will provide a single place for government agencies and industry to search, download, share and stream spatial data from the data custodians who control access.

The SDT will also include the SDT Explorer, an easy-to-use web-based tool that encourages exploration, allowing users to search for a variety of data types. More experienced users will be able to create their own models, run analysis and generate reports. Frontline service organisations will use the SDT Explorer to visualise risk, model and predict impacts and make better decisions based on real-time information.

Another feature will be SDT Stories which will guide users through visual narratives centred around a place, so they are informed about developments and activities in their areas. Government agencies will be able to use the SDT Stories to break down language and accessibility barriers to engage with communities like never before.

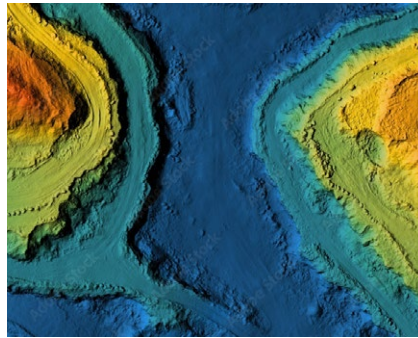


# The Foundation Spatial Data Framework (FSDF) Themes & Categories



## Administrative Boundaries

Is a collection of legislative, regulatory, political, maritime and general administrative boundaries sourced from local and state boundary datasets.



## Elevation & Depth

Is accurate, multi-resolution data on the Earth's surface, including contours, spot heights, digital elevation models, and point clouds



## Geocoded addressing

Is the single source of truth for address information in NSW, providing a centralised database of authoritative address points and related features used by government, emergency services and businesses to identify and locate properties across the state.



## Positioning

Positioning is NSW's authoritative, reliable, high-accuracy spatial referencing system, providing a common reference for all geospatial data.



## Transport

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



## Water

Is based on hydrology, encompassing the movement, distribution, and quality of surface and groundwater, and includes various hydrological features such as watercourses, water bodies, groundwater sources and related infrastructure.



## Imagery

Is visual data captured by airborne, spaceborne, or terrestrial sensors, providing detailed views of the Earth's surface to support mapping, emergency services, natural resource management, and various other applications, including historical and real-time analysis through products like orthorectified mosaics and stereo-viewable images.



## Land Parcel and Property

Is the representation of land parcel boundaries and properties under unique ownership, providing a foundational cadastral fabric for land ownership, property rights, and interests.



## Place names

Is the authoritative database of over 80,000 official place names, including their history, origin and meaning, and is essential for economic, social, environmental analysis, emergency response and cultural identity.



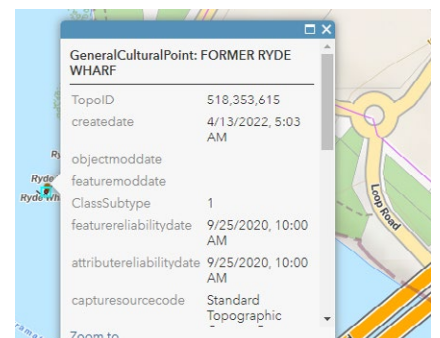
## Land Cover and Land Use

Land cover data 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. The data provides insight into the behaviour to a wide variety of conditions, both natural and situational.



## Physiography

A classification of topographic features related to land surface and landforms, including distinct areas like intertidal flats and approximate locations of named landforms with indistinct boundaries.



## Features of Interest

A digital dataset that covers cultural (man-made) features across NSW, providing information about their locations and names including utility lines, water supply canals, and locations of facilities such as police stations and hospitals, which are essential for planning, emergency services and environmental monitoring.

## FSDF Data Products

FSDF Theme	Key Datasets	Delivery options	Standard Formats	Data Access	Frequency	Geometry Description
Administrative Boundaries	Parish, County, Suburb, LGA, State & Federal Electoral Districts, etc	SCP, Data Request	GDB, SHP, WMS, WFS	Open	As required	
Elevation & Depth	Historical Contours, Current 2m Contours, Spot Heights, Relative Heights, Point cloud, Digital Elevation Model	SCP, Data request, ELVIS	ASC, GDB, LAS, LAZ, SHP, TIFF, WMS, WFS	Open	As required	
Geocoded Addressing	Address Point, Way Point, Proway, Address string	SCP, Data Request	GDB, SHP, Table, WMS, WFS	Open	Daily	
Imagery	Aerial, Satellite, Reality, Historical imagery	SCP, Data Request	ECW, JP2, SLPK, TIFF, WMS, WFS	Open, Restricted	As completed	
Land Parcel & Property	Lot, unidentified, road & water feature	SCP, Data request	GDB, SHP, TAB, WMS, WFS	Open	Daily, As requested	
Place Names	Geographical Names Register	Data Request, GNB Website	CSV, PDF, WMS, WFS	Open	As required	
Positioning	Survey Mark Sketches, survey mark information including coordinates, heights, and attributes	SCP, SCIMS Online	PDF, WMS, WFS	Open	As required	
Transport	Roads, Aviation, Rail, Maritime, Other	SCP, Data Request	GDB, SHP, WMS, WFS	Open	Daily	
Water	Coastline, Fuzzy Extent Water Area, Hydro Area, Hydro Line, Named Water Course etc	SCP, Data Request	GDB, SHP, WMS, WFS	Open	5-10 years	
Land Cover	Native Vegetation Extent, Woody Extent & Foliage, Plant Community Type Classification, Land Use	SCP	GDB, PDF, HTML, TIFF, XML, WMS, WFS	Open, Restricted	As completed	
Features of Interest	Electricity transmission lines, Education facilities, Building complex point, Health facilities etc	SCP, Data Request	GDB, SHP, WMS, WFS	Open	Daily, As required	
Physiography Category	Distinctive Land Surface, Fuzzy Extent	SCP, Data Request	ASC, WMS, WFS	Open	As required	

Aspatial
 Raster
 Vector
 Point
 Line
 Polygon
 Data

## DCS Spatial Services Data Services

Service	Themes	Standard Formats	Data Access	Service Description
CORSnet-NSW	Positioning	RINEX, RTCM, NTRIP, CMR, CMRx	Restricted	A network of Global Navigation Satellite System (GNSS) Continuously Operating Reference Stations (CORS). Data provided under contract to data resellers and the National Positioning Infrastructure Program.
Digital Twin Visualisation Service	All	JSON, KML, CSV, WFS, WMS	Open	A cross-sector, collaborative digital workbench for all of government use, that will visualise location information, in a 4D model of the real world (3D, plus time).
Emergency Services Spatial Information Library (ESSIL)	All	Raster, Vector	Restricted	A collaborative data sharing system which combines data from source agencies into seamless statewide layers benefitting emergency service agencies.
Gravity Model	Positioning	GeoTiff	TBA	The model improves accuracy of the height datum across the entirety of NSW with benefits statewide for exploration and management of resources, major infrastructure and construction planning, earthquake detection and natural disaster recovery.
Historical Imagery Viewer	Imagery	JPG	Open	Historical aerial and satellite imagery allowing users to search, discover and download imagery dating back to the 1930s.
NSW Elevation Data Service	Elevation & Depth	Vector, Raster	Open	Delivery service for NSW elevation datasets in 100k map partitions, including 2m Contour, 5m DEM, Slope and Aspect Data.
NSW Flood Imagery Viewer	Imagery, Water	Raster	Open	Provides a reference for flood risk mapping and flood data from recent and previous flood events in NSW.
NSW Topographic Maps	All	PDF, GeoTiff	Open	Access georeferenced topographic maps with easy download of current and historical releases. Includes map scale 25k, 50k and 100k series across NSW.
NSW Point	Geocoded Addressing	JSON	Restricted	Application designed to be embedded into NSW Government online forms and applications to capture the validated, authoritative address with geocode location utilising authoritative NSW addressing data.
Spatial Hosting portal	N/A	Various	Managed	Esri Enterprise Portal provides NSW Government agencies that have spatial data but do not have their own portal with a platform to upload data and link it to the Spatial Collaboration Portal (SPC) for discoverability.
SCIMS Online	Positioning	Vector, PDF, SHP, JSON	Open	SCIMS Online in a web mapping tool that provides public access to SCIMS data, including coordinates, heights, and attributes for Permanent Survey Marks (PSMs). This data is also available through rest APIs via the SCP.
Spatial Collaboration Portal	All	Various	Open	A secure platform to facilitate the delivery of NSW spatial datasets.
Spatial Map Viewer	All	PDF	Open	An interactive map for analysing, editing, visualising, measuring and selecting data layers and map sections.
SIX Maps Viewer	Imagery	Raster	Open	Visualisation service for cadastral and topographic information, satellite data and aerial photography.

All datasets are available in the following standard spatial reference systems: GDA94 or GDA2020. Other reference systems can be provided through a custom data sale. See glossary on [page 8](#).

## Glossary & Acronyms

Term	Definition
API	Application Programming Interface
Aspatial	Doesn't have a specific location or is not related to a particular space. Is more abstract or not tied to a specific geographic location.
BAV	Bulk Address Validation
CC attribution	Creative Commons (CC) license
CORSnet-NSW	Network of permanent Global Navigation Satellite System (GNSS)
Elvis	Elevation Information System
GNB Website	Self-service place name website
HAPE	Historical Imagery Viewer
Line	A line is a collection of related points, such as rivers, trails, and streets.
Point	Used to represent abstract points, such as schools, points of interest, bridge and culvert locations.
Polygon	A collection of related lines, such as the boundary of a city.
Raster	Provides a representation of the world as a surface divided up into a regular grid array, or cells, where each of these cells has an associated value.
SCIMS	Web mapping tool
SCP	Spatial Collaboration Portal
Vector	Individual points stored as coordinate pairs that indicate a physical location in the world.
WFS	Web Feature Service
WMS	Web Map Service

## Need more information?

### Want to use our data?

For more detailed technical information on our data products, see the relevant product guides on our website.

Discover more at our [website](#).

See more at the [Spatial Collaboration Portal](#).



### Contact us

If you have any questions, please [contact us](#).

