

NSW Foundation Spatial Data Framework Data Custodian Records



The following spatial theme profile is the formal custodian arrangements for whole of government foundation spatial data.

Positioning theme

Theme profile



Image typical DFSI Spatial Services CORSnet-NSW installations
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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	<p>Positioning is NSW's authoritative, reliable, high-accuracy spatial referencing system, providing a common reference for all geospatial data.</p> <p>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.</p>

<p>Status</p>	<p>CORSnet-NSW is a network of 200 (current at 15 May 2018) 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.</p> <p>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.</p> <p>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.</p>
<p>Future status</p>	<p>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.</p> <p>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.</p>
<p>Standards</p>	<p>Metadata for the relevant Spatial Services datasets are required to comply with AS/NZS ISO 19115 ANZLIC Metadata Profile v1.1 and ISO 19139</p> <p>Intergovernmental Committee on Surveying and Mapping 2014. Standards and Practices for Control Surveys (SP1). ICSM Publication no 1. Version 2.1</p> <p>LPI 2012. Guidelines for CORSnet-NSW Continuously Operating Reference Stations (CORS). Version 1.1</p> <p>LPI 2012. Surveyor General's Direction Number 12: Control Surveys and SCIMS</p> <p>IERS 2003 computation standards</p> <p>National Measurement Act 1960</p> <p>Surveying and Spatial Information Act 2002</p> <p>Surveying and Spatial Information Regulation 2017</p>
<p>Version</p>	<p>Version 0.7</p>