Title	Greater Sydney Region Urban Vegetation Cover to Modified Mesh Block 2016

Abstract

The Greater Sydney Region Urban Vegetation Cover to Modified Mesh Block 2016 provides both an area and percentage of vegetation for city blocks and infrastructure corridors in the Greater Sydney Region as of 2016. With this dataset, users can estimate tree canopy and vegetation cover in urban areas at many scales, such as mesh block, precinct, or local government area. Having current and accurate estimates of tree canopy and vegetation like this supports citizens and governments to reliably identify areas of tree canopy and confidently develop urban greening and heat island mitigation strategies and action.
This dataset provides the user with information of high spatial accuracy. The dataset uses vegetation information derived from high resolution aerial photography combined with boundary and land use information from the Australian Bureau of Statistics (ABS) Mesh Block polygon dataset augmented with road and railroad data from the NSW Digital Cadastral Database. The content was co-designed with state and local governments and developed using scientifically-rigorous methodologies. The extent of the dataset covers urban, major urban, peri-urban and other urban areas within the Greater Sydney Region. While the dataset provides wall to wall coverage of many councils, it does not include far outlying rural areas in the Region.

Resource locator

Show on SEED Web Map	Name: Show on SEED Web Map Protocol: WWW:DOWNLOAD-1.0-http--download Description: Display dataset on SEED's map Function: download
Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for Greater Sydney Region Vegetation Cover Estimates to Cadastre 2016 Function: download
User guide for OEH urban heat and green cover datasets	Name: User guide for OEH urban heat and green cover datasets Protocol: WWW:DOWNLOAD-1.0-http--download Description: Guidance and data description for use by NSW Local Government Areas for local environmental planning. This document contains detailed guiding information on the use conditions and descriptions for the NSW Office of Environment and Heritage (OEH) urban heat and vegetation cover datasets, especially for use in support of multi-scale analysis (i.e., local government areas and regional). Function: download
Download Package	Name: Download Package Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data (Shapefile & Geodatabase) Function: download
ArcGIS Layer files for mapping tree canopy and vegetation	Name: ArcGIS Layer files for mapping tree canopy and vegetation Protocol: WWW:DOWNLOAD-1.0-http--download Description: Layer files for symbology when using ArcGIS/ArcMap v. 10.x for displaying the dataset. Layer files include All Vegetation, Shrubs & Trees only and Tree Canopy. Each layer file displays the percentage of each vegetation canopy group into five classes (less than 10%, 10% to 20%, 20% to 30%, 30% to 40% and greater than 40%) for the named

vegetation attribute/field. Each class is a shade of green.

Function: download

Summary of vegetation for the Significant Urban Area (ABS) for the Greater Sydney Region, by LGA, Suburb and Land Zone, 2016

Name: Summary of vegetation for the Significant Urban Area (ABS) for the Greater Sydney Region, by LGA, Suburb and Land Zone, 2016

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Title: Table of vegetation cover for the Significant Urban Area (ABS) for the Greater Sydney Region, summarised by Local Government Area, Suburb and Land Zone, 2016 Purpose: The table provides a summary representation of vegetation cover in metropolitan Sydney by LGA, suburb and land zone in 2016, and may be suitable for analysis of vegetation and land use for environmental planning. Description: The table depicts the area (square meters and hectares) and percentages of vegetation classes for each land zone in LGA Suburbs. Vegetation classes are defined as grass (less than 0.5 metres high), shrub (0.5 to 3 metres high) and trees/tree canopy (greater than 3 metres high). All vegetation is the sum of grass, shrub and trees. Total Area is the area used to calculate the percentages. For metadata and methodology information for the vegetation cover data, please reference the SEED record for Greater Sydney Region Urban Vegetation Cover to Modified Mesh Block 2016: https://datasets.seed.nsw.gov.au/dataset/greater-sydney-region-urban-vegetation-cover-to-modified-mesh-block Data Sources: 2016 Greater Sydney Region urban vegetation cover (NSW Office of Environment and Heritage); Environmental Planning Instrument - Land Zoning (NSW Department of Planning and Environment) - from 1 November 2016 for comparison purposes Process: Utilising ArcGIS, the urban vegetation cover data was integrated with the Land Zoning dataset. Standard Data Quality management procedures were performed on both the source data and the integration process. Limitations: This summary was generated from the source imagery using the same methodology as the vegetation cover to the modified mesh blocks. The table is to be considered as accurate as the information contained in the source datasets and reflects the land zone and vegetation cover conditions in 2016. The vegetation cover data was collected to the extent of the Significant Urban Area of Metropolitan Sydney and does not provide complete coverage for LGAs with rural areas. Noted exclusions in the vegetation cover data are rural areas in Wollondilly, Blue Mountain and Hawkesbury LGAs.

Note the attached file for download contains the table in CSV format and a READ ME guidance document in RTF format.

Function: download

ArcGIS REST Service - GSR Urban Veg Cover

Name: ArcGIS REST Service - GSR Urban Veg Cover

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

An ArcGIS Server web service represents a GIS resource—such as a map, locator, or image—that is located on an ArcGIS Server site and is made available to client applications. Depending on the layers enabled, this web service allows a user to query its features and/or visualise the dataset. This service is aimed at advanced geographical information users, and will require access to geographical information system (GIS) software such as ArcGIS/ArcMap.

Function: download

WMS - GSR Urban Veg Cover

Name: WMS - GSR Urban Veg Cover

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Web Map Service (WMS) is a standard protocol for serving georeferenced map images over the internet that are generated by a map server using data from a GIS Database (NSW Government - Spatial Web Services Register June 2015). WMS allows a user to spatially visualise the dataset, but not query its features. This service is aimed at advanced geographical information users, and will require access to geographical information system (GIS) software such as QGIS and ArcGIS/ArcMap

Function: download

Greater Sydney Canopy and Thermal Assessment

Name: Greater Sydney Canopy and Thermal Assessment 2014 and 2016

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

2014 and 2016	This report describes the production of the information derived from digital aerial photography, satellite thermal and other data for environmental and other assessments for the Greater Sydney area, New South Wales, Australia. This includes the generation of baseline information on elevations, ground reflectance, presence of vegetation and its height, and accompanying meta-data. Historic data acquired in 2016 was used representing a relatively recent capture with large geographic coverage, and data acquired from 2014 used as a caparitor year over regions of interest. The information was generated using Urban Monitor® technology developed by the CSIRO. The spatial information produced supports further analysis by State, Local, Commonwealth and other agencies and research organisations involved in greenspace and other assessments. The digital data has been provided to enable it to be combined with other datasets. Function: download

Unique resource identifier

Code	888e253e-3b4e-4564-93ba-02f00ad3f2c5
Presentation form	Map digital
Edition	1
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/888e253e-3b4e-4564-93ba-02f00ad3f2c5
Purpose	urban and environmental planning, vegetation/tree cover analysis
Status	Completed

Spatial representation

Type	vector
Geometric Object Type	complex

Spatial reference system

Code identifying the spatial reference system	4283
Spatial resolution	10 cm
Additional information source	Data geographic extent covers all the Local Government Areas in the Greater Sydney Region. It is limited to the ABS Significant Urban Area (SUA) of the Sydney Greater Metropolitan Area (GMA). The extent of the SUA means complete and consistent coverage for the major urban, urban, peri-urban and other urban areas of the Sydney GMA. This means that there is limited coverage for rural areas, primarily in many of the outlying and heavily rural Local Government Areas within the Greater Metropolitan Area, such as the outlying areas of Hawkesbury and Wollondilly LGAs.

Topic category

Keyword set

keyword value	VEGETATION
	HUMAN-ENVIRONMENT-Urban-Design
	HUMAN-ENVIRONMENT-Livability
	HUMAN-ENVIRONMENT-Planning
	LAND-Cadastre
	LAND-Cover
	LAND-Use

Originating controlled vocabulary

Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	150.19
East bounding longitude	151.4
North bounding latitude	-34.2
South bounding latitude	-33.42
NSW Place Name	Greater Sydney Region

Vertical extent information

Minimum value	-100
Maximum value	2228

Coordinate reference system

Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711

Temporal extent

Begin position	2016-04-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Not planned

Contact info

Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555

Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Lineage

The Greater Sydney Region Vegetation Cover to Modified Mesh Block 2016 is a subset of the NSW Urban Vegetation Cover to Modified Mesh Block 2016. It includes all Local Government Areas (Councils) in this Region. The NSW Urban Vegetation Cover to Modified Mesh Block 2016 is a vector polygon dataset at sub-meter accuracy, developed through a contract with the Royal Melbourne Institute of Technology (RMIT). The dataset is derived from the overlay of the NSW Urban Vegetation Cover 2016 raster imagery dataset with the Australian Bureau of Statistics (ABS) Mesh Block, modified with the road and railroad datasets of the NSW Digital Cadastral Database. The vegetation cover raster imagery dataset was produced as a digital surface model through a reclassification of high resolution (30 cm) digital aerial photography analysed using Commonwealth Science and Industry Research Organisation's (CSIRO) Urban Monitor methodology. The analysis was conducted by CSIRO in 2018. Attention was provided to ensure minimal cloud coverage on the aerial photographs, and as a result, the flight date extends many months across 2016 to capture acceptable imagery for the full project study area extent. Quality control of the data was conducted continuously throughout the development of the data and included inspection of results and integrity testing. The Urban Vegetation Cover 2016 was overlayed with the ABS Mesh Block and the road and railroad dataset of the NSW Digital Cadastral Database (extraction dated 1/11/2016). The vegetation raster cover classification distinguishes six classes by analysing the spectral signature and elevation differences from the height of the feature to ground level - grass (less than 0.5 metres), shrub (0.5 to 3 metres), trees (3 to 10 metres, 10 to 15 meters and greater than 15 metres) and non-vegetation. Integration of the raster data with mesh block polygons was performed with the assistance of Western Australia University. This process analysed the vegetation composition within each area and derived a quantum of each vegetation class in square metres and a percent of each class by polygon. The final product was delivered to OEH to the data specifications.

Limitations on public access

Scope	dataset

DQ Completeness Commission

Effective date	2019-01-15
Explanation	The dataset has complete coverage for the Greater Sydney Region subset of the designated Significant Urban Area of Sydney Greater Metropolitan Area. This includes the major urban, urban, peri-urban and other urban areas of the included Local Government Areas. The dataset has complete coverage for the Greater Sydney Region and the Local Government Areas within it, with the exception of outlying, largely rural areas of Hawkesbury and Wollondilly LGAs. It also includes areas that share a boundary with the Greater Sydney Region, so that there is ensured full inclusion.

DQ Completeness Omission

Effective date	2019-01-15
Explanation	The dataset has complete coverage for the designated Significant Urban Area of Greater Sydney Region. As such it does not provide complete coverage to LGAs which have rural areas or large areas devoted to national parks. This is largely defined as the outlying areas of Hawkesbury and Wollondilly LGAs located on the periphery of the Greater Sydney Region. This is because of the limits of the extent and completeness omissions of the Urban Vegetation Cover 2016 raster dataset. Therefore, the dataset cannot provide complete land cover/vegetation cover analysis for every LGAs in the study area.

DQ Conceptual Consistency

Effective date	2019-01-15
Explanation	Local Government Area users of the data will need to double check that their known boundaries are correctly identified. In the dataset, the LGA name that is given to a Modified Mesh Block may be inaccurate, due to the modified Mesh Blocks boundaries not nesting within the LGA boundaries completely. The LGA boundaries were overlaid with the Modified Mesh Blocks polygons and the LGA names were assigned to the Mesh Block with the greatest area within it. Note 2017 LGA boundaries were used. The knock on effect is that the Mesh Block may not correspond to the correct District. This issue most likely occurs with more rural Mesh Blocks at the boundaries, such as near Campbelltown, Wollondilly or Sutherland. It may also occur where roads form a boundary between LGAs. As adequate data validation was performed, this issue is likely minor and not affecting every LGA.

DQ Topological Consistency

Effective date	2019-01-15
Explanation	The dataset is deemed correct and consistent to the parameters of the Urban Monitor methodology, and the consistency of the NSW Digital Cadastral Database and ABS Mesh Block dataset.

DQ Absolute External Positional Accuracy

Effective date	2019-01-15
Explanation	98% of the features are expected to be within 2% of their true size and shape.

DQ Non Quantitative Attribute Correctness

Effective date	2019-01-15
Explanation	Non-quantitative attributes are deemed to be accurate as of the date of the review (15/01/2019) and by explanations provided in the source datasets.

Responsible party

Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Metadata point of contact

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Metadata date

2024-02-26T12:46:30.761574

Metadata language