

Title	NSW Urban Heat Island to Modified Mesh Block 2016
Abstract	<p>The Urban Heat Island (UHI) dataset measures the effects of urbanisation on land surface temperatures across Sydney Greater Metropolitan Area for the Summer of 2015-2016.</p> <p>UHI shows the variation of temperature to a non-urban vegetated reference, such as heavily wooded areas or national parks around Sydney.</p> <p>Derived from the analysis of thermal and infrared data from Landsat satellite, the dataset has been combined with the Australian Bureau of Statistics (ABS) Mesh Block polygon dataset to provide a mean UHI temperature that enables multi-scale spatial analysis of the relationship of heat to green cover.</p>
Resource locator	
<a href="#">Show on SEED Web Map</a>	<p>Name: Show on SEED Web Map</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Display dataset on SEED's map</p> <p>Function: download</p>
<a href="#">Data Quality Statement</a>	<p>Name: Data Quality Statement</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Data quality statement for NSW Urban Heat Island to Modified Mesh Block 2016</p> <p>Function: download</p>
<a href="#">Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres. CSIRO Report EP173542.</a>	<p>Name: Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres. CSIRO Report EP173542.</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>This report describes the generation of land surface temperature (LST) and urban heat island (UHI) estimates for major Australian urban centres. The research that led to this report was undertaken as part of Horticulture Innovation Australia (HIA) project NY16005 "Where Should All The Trees Go?", in collaboration with RMIT, CSIRO Data61 and the University of Western Australia. A similar methodology was used for this dataset. Citation: Devereux D and Caccetta PA (2017) Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres. Report CSIRO Data61, Australia.</p> <p>Function: download</p>
<a href="#">User guide for OEH urban heat and green cover datasets</a>	<p>Name: User guide for OEH urban heat and green cover datasets</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>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).</p> <p>Function: download</p>
<a href="#">Download Package</a>	<p>Name: Download Package</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Data (Shapefile &amp; Esri Database)</p> <p>Function: download</p>
<a href="#">ArcGIS Layer</a>	<p>Name: ArcGIS Layer files for mapping Urban Heat Island and Heat Vulnerability Index</p>

[files for mapping Urban Heat Island and Heat Vulnerability Index](#)

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

Description:

Layer files for symbology when using ArcGIS/ArcMap v. 10.x for displaying the dataset. The compressed file (zip) contains two layer files, one for each Urban Heat Island (manual classification of temperature ranges) and Heat Vulnerability Index (discrete attribute classes 0 to 5). Temperature ranges for UHI map degrees Celsius deviation from the reference, and include less than 0 (i.e., cooler than reference), 0 to 3 degrees warmer, 3 to 6 degrees warmer, 6 to 9 degrees warmer and warmer than 9 degrees from the reference. Two colour variations of the layer file are included.

Function: download

[ArcGIS REST Service - Urban Heat Island](#)

Name: ArcGIS REST Service - Urban Heat Island

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 - Urban Heat Island](#)

Name: WMS - Urban Heat Island

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

[Land surface temperature and urban heat island estimates for Australian urban centres 2015/16](#)

Name: Land surface temperature and urban heat island estimates for Australian urban centres 2015/16

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

Description:

imagery data source for NSW/Metropolitan Urban Heat Island data. Land surface temperature (LST) maps, and urban heat island (UHI) maps, for Australian urban centres, calculated over summer 2015/16. Generated as part of an investigation into changes in urban greenspace.

Function: download

## Unique resource identifier

Code 97815860-d840-4e67-8f73-1bfc665cb310

Presentation form Map digital

Edition 1

Dataset language English

## Metadata standard

Name ISO 19115

Edition	2016
Dataset URI	<a href="https://datasets.seed.nsw.gov.au/dataset/97815860-d840-4e67-8f73-1bfc665cb310">https://datasets.seed.nsw.gov.au/dataset/97815860-d840-4e67-8f73-1bfc665cb310</a>
Purpose	urban environmental planning, green infrastructure
Status	Completed
<b>Spatial representation</b>	
Type	vector
Geometric Object Type	surface
<b>Spatial reference system</b>	
Code identifying the spatial reference system	4283
Spatial resolution	3 m
Additional information source	The UHI attribute value is based on the average difference in Land Surface Temperature (LST) to baseline LST (non-urban vegetated reference). The COType (cluster/outlier type) was generated by Anselin Local Moran's using ArcGIS.
<b>Topic category</b>	
<b>Keyword set</b>	
keyword value	HUMAN-ENVIRONMENT-Urban-Design HUMAN-ENVIRONMENT-Livability HUMAN-ENVIRONMENT-Planning CLIMATE-AND-WEATHER-Extreme-weather-events CLIMATE-AND-WEATHER-Temperature CLIMATE-AND-WEATHER-Climate-change HUMAN-ENVIRONMENT-Structures-and-Facilities
<b>Originating controlled vocabulary</b>	
Title	ANZLIC Search Words
Reference date	2008-05-16
<b>Geographic location</b>	
West bounding longitude	150.270996
East bounding longitude	152.006836
North bounding latitude	-34.597042
South bounding latitude	-32.87036
NSW Place Name	Sydney Greater Metropolitan Area, Greater Sydney Region
<b>Vertical extent information</b>	

Minimum value	-100
Maximum value	2228
<b>Coordinate reference system</b>	
Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711
<b>Temporal extent</b>	
Begin position	2015-10-01
End position	N/A
<b>Dataset reference date</b>	
<b>Resource maintenance</b>	
Maintenance and update frequency	Not planned
<b>Contact info</b>	
Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	<a href="mailto:data.broker@environment.nsw.gov.au">data.broker@environment.nsw.gov.au</a>
Web address	<a href="https://www.nsw.gov.au/departments-and-agencies/dcceew">https://www.nsw.gov.au/departments-and-agencies/dcceew</a>
Responsible party role	pointOfContact
<b>Lineage</b>	The dataset was developed through a contract with the Royal Melbourne Institute of Technology (RMIT). Data was developed following the methodology for "Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres", from Commonwealth Science and Research Organisation (CSIRO) (Report EP173542). The processed Landsat 8 imagery was integrated with the modified Mesh Block polygon dataset with the assistance of Western Australia University. The modified Mesh Block consists of the ABS Mesh Block polygons modified with road and rail features from the NSW Digital Cadastral Database to add infrastructure.
<b>Limitations on public access</b>	

Scope	dataset
<b>DQ Completeness Commission</b>	
Effective date	2019-03-12
Explanation	The dataset has complete coverage for the 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 SUA in the Greater Sydney Region and the Local Government Areas within it.
<b>DQ Completeness Omission</b>	
Effective date	2019-03-12
Explanation	There is no obvious completeness omissions with the dataset. An explanation of potential omissions is explained in the attached CSIRO Report.
<b>DQ Conceptual Consistency</b>	
Effective date	2019-03-12
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. Other possible conceptual consistency matters may be addressed in the attached CSIRO Report.
<b>DQ Topological Consistency</b>	
Effective date	2019-03-12
Explanation	There are no obvious topological inconsistencies in the dataset. An explanation of potential inconsistencies is explained in the attached CSIRO Report.
<b>DQ Absolute External Positional Accuracy</b>	
Effective date	2019-03-12
Explanation	Positional accuracy is described in the attached methodology report.
<b>DQ Non Quantitative Attribute Correctness</b>	
Effective date	2019-03-12
Explanation	Attribute accuracy is described in the attached methodology report.

## Responsible party

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

## Metadata point of contact

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Responsible party role	pointOfContact

**Metadata date** 2024-09-17T00:14:56.113685

**Metadata language**