

<b>Title</b>	NSW Urban Heat Island to Modified Mesh Block 2016
<b>Abstract</b>	<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. 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>
<b>Resource locator</b>	
<a href="#"><u>Data Quality Statement</u></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="#"><u>Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres. CSIRO Report EP173542.</u></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>

[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 & Esri Database)

Function: download

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

Name: ArcGIS Layer 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

### Unique resource identifier

**Code** b07a128b-00bf-4f07-b767-a5b27ae283f9

**Presentation form** mapDigital

**Edition** 1

**Dataset language** eng

### Metadata standard

**Name** ANZLIC Metadata Profile: An Australian/New Zealand Profile of AS/NZS ISO 19115:2005, Geographic information - Metadata

**Version** 1.1

**Dataset URI** <https://www.planningportal.nsw.gov.au/opendata/dataset/b07a128b-00bf-4f07-b767-a5b27ae283f9>

**Purpose** urban environmental planning, green infrastructure

**Status** completed

### Spatial representation

**Type** vector

**Geometric Object Type** surface

### Spatial reference system

<b>Authority code</b>	GDA94 Geographic (Lat\Long)
<b>Code identifying the spatial reference system</b>	4283
<b>Spatial resolution</b>	3 m
<b>Additional information source</b>	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>	Environment
<b>Keyword set</b>	
<b>keyword value</b>	<p>HUMAN-ENVIRONMENT-Urban-Design</p> <p>HUMAN-ENVIRONMENT-Livability</p> <p>HUMAN-ENVIRONMENT-Planning</p> <p>CLIMATE-AND-WEATHER-Extreme-weather-events</p> <p>CLIMATE-AND-WEATHER-Temperature</p> <p>CLIMATE-AND-WEATHER-Climate-change</p> <p>HUMAN-ENVIRONMENT-Structures-and-Facilities</p>
<b>Originating controlled vocabulary</b>	
<b>Title</b>	ANZLIC Search Words
<b>Reference date</b>	2008-05-16
<b>Geographic location</b>	
<b>West bounding longitude</b>	150.270996
<b>East bounding longitude</b>	152.006836
<b>North bounding latitude</b>	-34.597042
<b>South bounding latitude</b>	-32.87036

<b>NSW Place Name</b>	Sydney Greater Metropolitan Area, Greater Sydney Region
<b>Vertical extent information</b>	
<b>Minimum value</b>	-100
<b>Maximum value</b>	2228
<b>Coordinate reference system</b>	
<b>Authority code</b>	urn:ogc:def:cs:EPSG::
<b>Code identifying the coordinate reference system</b>	5711
<b>Temporal extent</b>	
<b>Begin position</b>	2015-10-01
<b>End position</b>	N/A
<b>Dataset reference date</b>	
<b>Date type</b>	creation
<b>Effective date</b>	2018-07-01
<b>Date type</b>	publication
<b>Effective date</b>	2019-04-03
<b>Resource maintenance</b>	
<b>Maintenance and update frequency</b>	notPlanned
<b>Contact info</b>	
<b>Organisation name</b>	Department of Planning, Industry and Environment
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<b>Responsible party role</b>	pointOfContact

**Lineage** 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.

### Constraint set

**Use constraints** This data is provided under a Creative Commons Attribution 4.0 licence <http://creativecommons.org/licenses/by/4.0> Attribute 'Office of Environment and Heritage (OEH)' in publications using this data.

**Limitations on public access**

**Scope** dataset

### Completeness Commission

**Date type** publication

**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.

### Completeness Omission

**Date type** publication

**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.

### **Conceptual Consistency**

**Date type** publication

**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.

### **Topological Consistency**

**Date type** publication

**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.

### **Absolute External Positional Accuracy**

**Date type** publication

**Effective date** 2019-03-12

**Explanation** Positional accuracy is described in the attached methodology report.

### **Non Quantitative Attribute Accuracy**

**Date type** publication

**Effective date** 2019-03-12

**Explanation** Attribute accuracy is described in the attached methodology report.

## Responsible party

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<b>Responsible party role</b>	pointOfContact

## Metadata point of contact

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<b>Responsible party role</b>	distributor

**Metadata date** 2019-03-08

**Metadata language** eng