

Microclimate and Urban Heat Island Mitigation Decision-Support Tool (UHI-DS Tool)

Brief Instructions

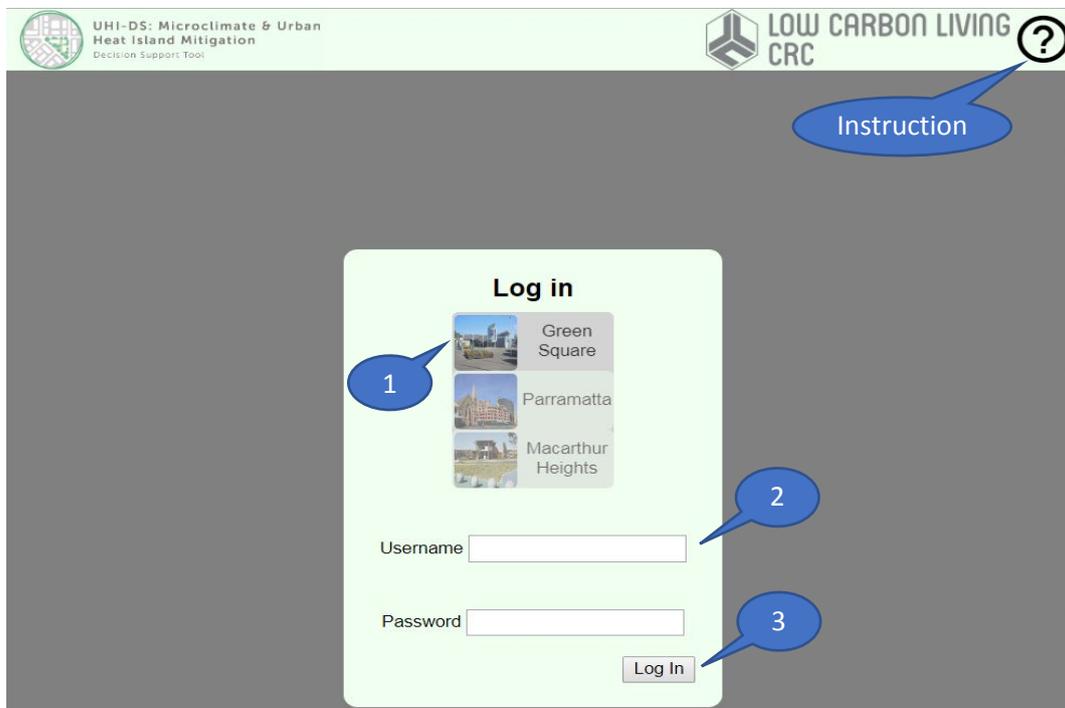
Web Browser

Google Chrome is the recommended browser for the UHI-DS Tool. Do not use Internet Explorer. Other browsers may work but are unsupported at this time.

Computer Requirement

The UHI-DS Tool is recommended to be accessed via a relatively modern computer machine with a dedicated graphics card. An old computer machine may cause error messages.

Login



STEP 1: Select a precinct from the list.

STEP 2: Input username and password (contact UHI-Index@unsw.edu.au for access).

STEP 3: Click login button to progress to the selected precinct. If an incorrect username or password is used, the page will reload.

Instruction: Click to open an instruction document.

Main User Interface

The main user interface displays the 3D precinct and buildings which are existing, under implementation and/or planned. Movement can be accomplished by:

Move camera
Rotate camera
Zoom camera

Click left mouse button and drag
Click middle mouse button and drag
Use middle mouse button



1. Existing or Planned Precinct View

Switch between the *Existing* and *Planned* precinct view. *Existing* precinct view shows the existing site, microclimate characteristics, the links to thermal video/imagery captured via drone, and land use zone and green cover data provided by the NSW Department of Planning, Industry and Environment. *Planned* precinct view provides urban heat mitigation scenario analysis for development alternatives.

A message and spinner will be shown here while the page is loading. This may take a few minutes depending on the quality of the internet connection and computer being used.

2. Development Alternatives

Development Alternatives panel provides options for *Public Realm* and *Built Form/Buildings* to explore. *Predefined Combinations of Scenarios* are also provided for urban heat mitigation analysis.

Click the *Reset to Basecase* button to undo changes to development alternatives.

3. Urban Heat Mitigation Indicators

The results of mitigation of urban overheating are measured through key performance indicators, which include Air Temperature Distribution, Universal Thermal Climate Index (UTCI), Max Air Temperature Reduction (including the average and localised). Other indicators will be provided over time.

Click a tile from the temperature overlay to see the specific temperature value.

4. Green Star Communities Information

Click *Green Star Communities* to query information of the percentage of building or landscaping elements that reduce the impact of heat island effects in the total project site area.

5. Building and City Object Information

Click *Building and City Objects* to query information of a selected building or city object. The information includes building name, type, address, roof materials, façade materials, etc.

6. UHI Mitigation Index

Click *UHI Mitigation Index* to access the separate UHI Mitigation Index page which will provide broad guidelines on mitigation strategies for selected objectives, climate regions and urban context.

7. Precinct Selector

Switch to a separate precinct.

8. Logout

Logout and return to the login screen.

9. Selection of Existing Precinct View

Select *Existing* precinct to view the existing site, microclimate characteristics, the links to thermal video/imagery captured via drone, and land use zone and green cover data provided by the NSW Department of Planning, Industry and Environment.



10. Land Use Zone or Green Cover Data

Select *Land Use* or *Vegetation* and Click the *Display* button to show or hide data of land use zone or green cover provided by the NSW Department of Planning, Industry and Environment.

11. Selection of a Neighbourhood Block on the Map

Select a neighbourhood block on the map to view the land use zone or green cover data of the selected neighbourhood block. Data may take a few seconds to load.

12. Display of Land Use Zone or Green Cover Data of the Selected Neighbourhood Block

Once a neighbourhood block is selected on the map, the corresponding land use zone or green cover data will be displayed.

Troubleshooting

- It is possible to move the 3D view such that the camera becomes stuck inside a building or zoomed out too far to relocate the precinct. In such cases reloading the page (press F5) will move the camera back to the precinct.
- On rare occasions it is possible that accessing the Login page will produce a message *500 Internal Server Error*. On such an occasion reloading the page should remove the error and allow one to access the tool.