Australian Housing Data Analytics Platform

AUSTRALIAN PROPERTY MARKET EXPLORER: USER MANUAL - VERSION 0.0.1

Version	Date	Note
0.0.1	22 May 2023	The creation of the APME User Manual

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1. Introduction

The Australian Property Market Explorer (APME) is an online, visual exploration tool for conducting visual analytics on data available for property markets across Australia. This tool is being developed as a part of the Australian Housing Data Analytics Platform (AHDAP) and complements the other toolkits developed by the project. At its core, APME takes a historical point dataset such as property sales, and visualises it into an interactive, easy to use interface which enables users to explore and summarise the large datasets efficiently.

2. Access

APME is available at https://apme.ahdap.org and is optimised for the Google Chrome browser. It requires a username and password for access. The authentication is done through a Central Single Sign On (SSO) managed by the AHDAP project admin. This SSO is designed in such a way that a single user account is sufficient for use with all the applications across AHDAP. A typical login screen is shown in Figure 1.
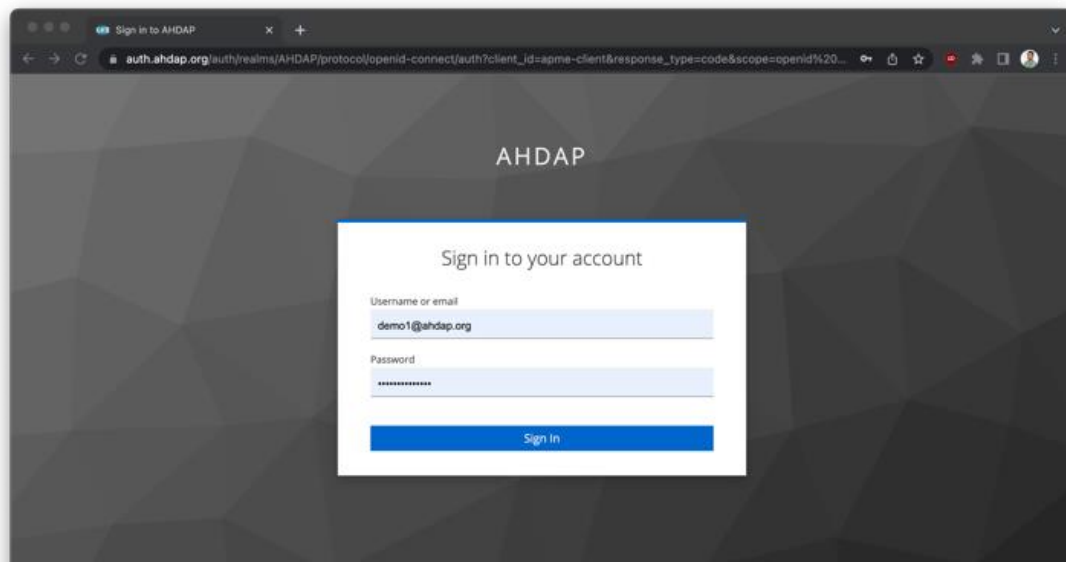

Figure 1 Login Screen – AHDAP SSO

To create a user account or to get details for a temporary demo account please contact AHDAP admin at admin@ahdap.org and login credentials will be emailed to you. If you already have a user account with AHDAP, contact admin to add access to APME to your existing account (you don't need to create another account).

3. Features

APME has two major interfaces for exploring point data:

1. Market Explorer which is a 2-Dimensional visualisation that aggregates based on ABS boundaries.
2. 3D Explorer which is a 3-Dimensional interface which aggerates based on a 250m grid.

Property sales dataset from NSW have been pre-loaded into the interface. By default, the Market Explorer is opened when first logging into the tool. Users can switch between the two interfaces using the 3D Explorer link in the top menu bar, where other links to information about the tool and logout buttons are located.

3.1. Market Explorer

The Market Explorer consists of three major components as per Figure 2:

1. Map Container
2. Navigation – Search & Zoom
3. Information Panel – Top Bar

The map container shows a 'slippy' map of Australia with an interactive boundary layer overlaid on top of it. The slippy map can be zoomed and panned using the mouse or touch interface like any standard online map such as google maps. By default, the State boundaries are shown. Each boundary polygon has two interactions attached to it – Click and Hover. Hovering over the polygon shows the name of the polygon in the navigation bar at the bottom. Clicking on the polygon selects it and opens the summary panel which shows the aggregated summary for the selected polygon.
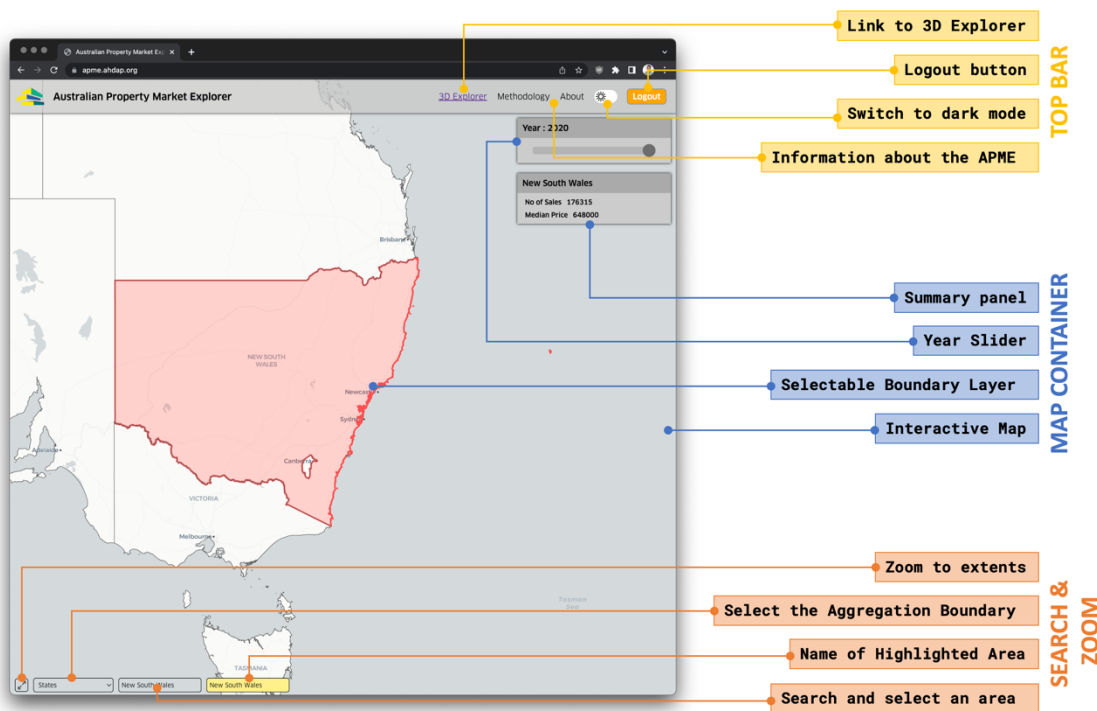

Figure 2 2D Market Explorer interface

Clicking on a selected polygon unselects it and hides the summary panel. Using the first button on the navigation panel, the viewport can be returned to its original extent. The dropdown menu can be used to choose the boundary layer to be shown on the map and the search input can be used to search and select a specific boundary. The summary panel shows aggregated statistics such as count, mean and the year slider can be used to select the year for aggregation. Please note that v0.0.1 doesn't support client or server-side storage so the map resets to initial configuration every time it is refreshed or the user switches to 3D explorer. If you want to output the map, please use the OS screenshot feature to save the current viewport.

3.2. 3D Explorer

The 3D Explorer consists of the same three major components as per Figure 3:

1. Map Container
2. Navigation – Search & Zoom

3. Information Panel – Top Bar

The 3D Explorer aggerates the dataset in 250x250m grids and visualises the volume of sales as the height of the grid and median price using the colour of the grid. The interface has two interactive map containers side by side which can be adjusted for zoom, pan and tilt using the mouse and touch as shown in Table 1. Both containers are synced by their viewport so that they show the exact same area when moved.

Table 1 Map Operations

Operation	Mouse	Touch
Zoom in/out	Scroll wheel up/down	Pinch two fingers
Pan	Left Click and drag	One finger touch and drag
3D tilt adjustment	Right click and drag	Two finger touch and drag

Hovering over a grid tile shows a tooltip with the aggregate statistics for the corresponding grid such as number of sales, median price etc. The top bar can be used to search and filter the data for a specific boundary (LGA, Suburb, Postcode) and type of property. These filters apply to both left and right map containers. The temporal filter – year, can be adjusted for each map container independently using the drop-down menu.
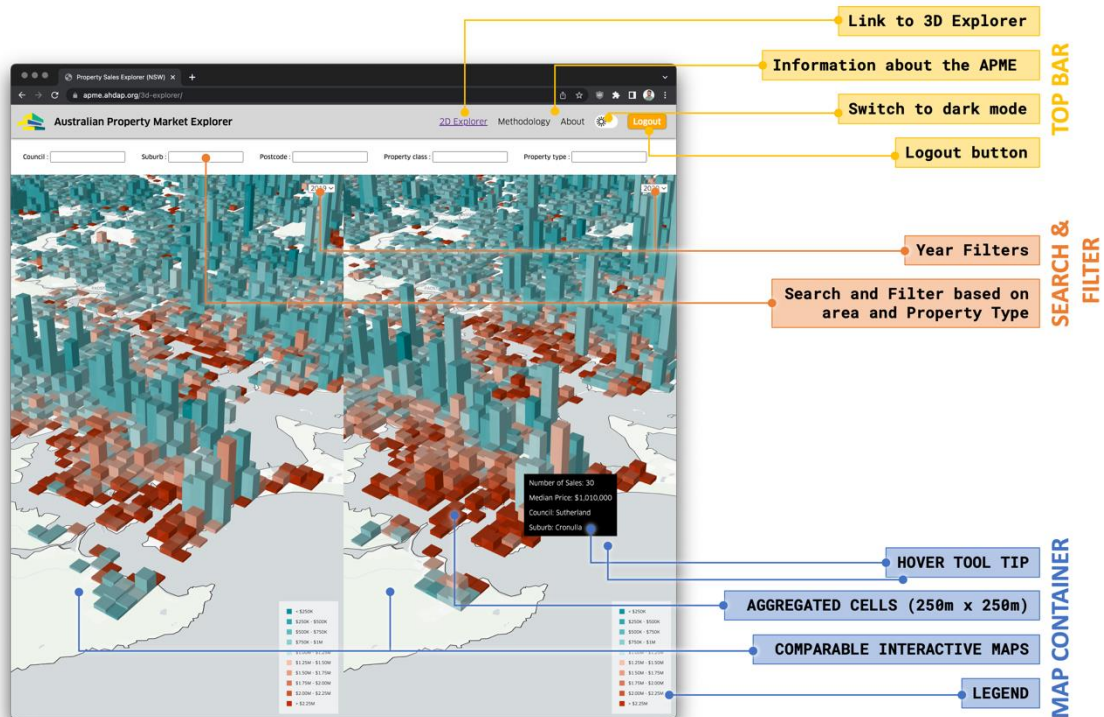

Figure 3 3D Explorer

Please note that in v0.0.1, the initial loading of the 3D Explorer takes significant time. This is a known bug, and the issue is being actively developed.

4. Troubleshooting & Support

APME is front-end native tool where most of the application logic is carried out in the users browser. The users customisations and tool state are ephemeral and APME resets to its original condition when the browser window is refreshed. If there are any issues while accessing the tool, please follow the below steps to troubleshoot.

1. Refresh the browser window.
2. Restart the browser.
3. Clear the cache and hard reload (i.e. Open the developer tools from the Chrome menu and long press the refresh button to bring up reload options as shown in Figure 4).
4. Use a different browser (APME has been developed and tested for Google Chrome).
5. Use a different computer.

If all the above steps fail, please contact the developer Bala at s.bala@unsw.edu.au with screenshots of errors in each step of troubleshooting. For login related issues contact AHDAP admin at admin@ahdap.org.
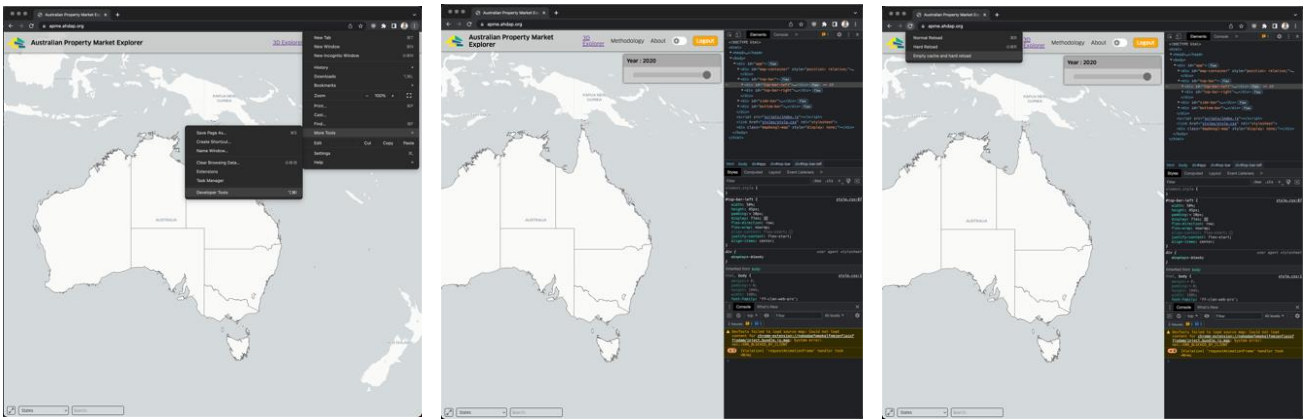

Figure 4 Clearing cache and doing a hard reload of the browser window

5. Development

The source code for the tool is available via GitHub and the development guide is available on confluence. Please contact project admin Alireza Shamakhy at admin@ahdap.org for access to both resources.