IESVE
Trial Support Material

www.iesve.com

ApLocate

Weather (ApLocate)

The VE uses an hourly weather data file that you can select to drive your simulations, linked to a site location.

You can select your weather at the start of a new project by quickly choosing a location and weather pre-set from the drop-down menu. This pre-set will have both design and simulation weather already selected. You can pin the files you use frequently for access on the start page. If you choose not to set the weather when you start a project, you can set it later on, or modify your selection, by using ApLocate.

ApLocate includes a wizard that will help you to set your location and select your weather.

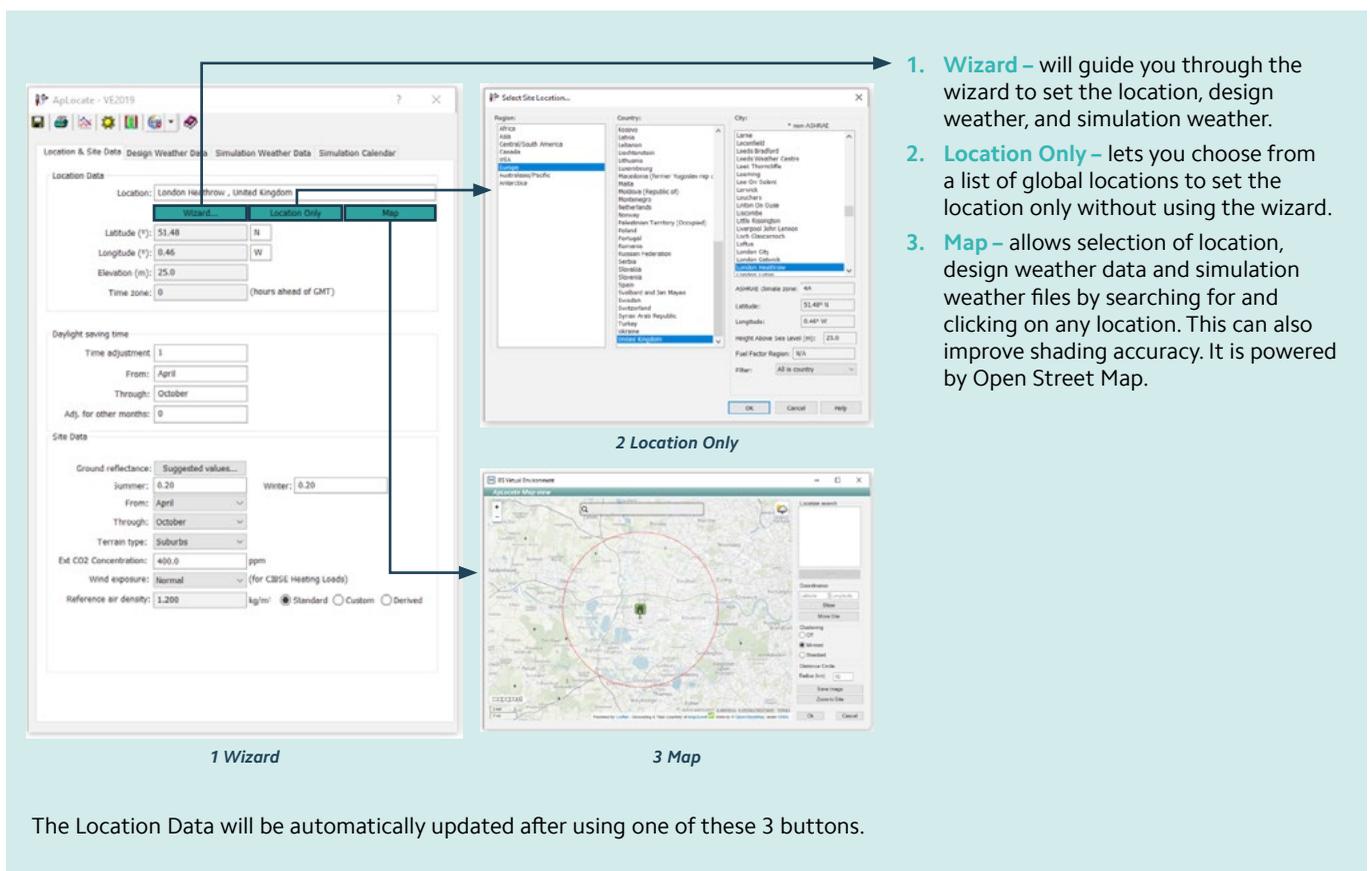**ApLocate can be accessed in different places and in different applications:**

– If you are working through a Navigator, click on the Set Location and Select Weather file step within the Navigator to access the weather selection wizard
– You can always access ApLocate through the pull-down tools menu at the top of the screen
– In certain applications (ModelIT; SunCast; Apache) you will see an icon in the toolbars to access ApLocate

When you are working in the drawing window, the location is shown at the bottom of the screen.

You can double click on it to open ApLocate.

🌐 London/Heathrow (ASHRAE Climate Zone derived)

ApLocate opens on the tab to set location and site data. You will see the default location listed as London Heathrow, and beneath it are 3 buttons to choose how you wish to proceed:

2 Location Only

1 Wizard

3 Map

1. **Wizard –** will guide you through the wizard to set the location, design weather, and simulation weather.

2. **Location Only –** lets you choose from a list of global locations to set the location only without using the wizard.

3. **Map –** allows selection of location, design weather data and simulation weather files by searching for and clicking on any location. This can also improve shading accuracy. It is powered by Open Street Map.

The Location Data will be automatically updated after using one of these 3 buttons.

For more information on site data options, go to

https://help.iesve.com/ve2019/location___site_data.htm#

Note: The selection wizard button appears on both the Location & Site Data tab, and the Design Weather Data tab. If the wizard is chosen from the Location tab, the user can change the Location, the Design Weather, and the Simulation Weather dataset. If the selection wizard is chosen from the Design Weather tab, the user can only manipulate the design weather data.

If you choose to use the wizard from the location tab, you will be guided through 4 pages:

Wizard Page 1

Wizard Page 2

The first page sets the location data. You can enter data manually, but changing anything other than the location name will result in an asterisk (*) after the site name, to indicate that it is not from an ASHRAE database. To access the ASHRAE and CIBSE location database click on select and then set your location.

You can also edit the information under Daylight saving time if required.

Click on next.

https://help.iesve.com/ve2019/location_data.htm

The option chosen on the second page will alter your further options in selecting the source of your design weather, instead of using the design weather data tab

In this example we will select the ASHRAE database.

Click on next.

https://help.iesve.com/ve2019/source_of_design_weather. htm

It is important to use data from a site close to and similar to yours, so that the impact of the weather on your building is a close match.

If you want to review the impact of predicted future weather patterns for your location, you can re-run your simulations using specialised future weather files. The software ships with some weather files pre-loaded in the library, but you can add additional weather files as/when required. These are easy to source through our **support** web page.

To access these in the IESVE, they should be copied into the weather subfolder of the Shared Content, typically *C:\Program Files (x86)\IES\Shared Content\Weather*

Thereafter, the new files are available to select on the Simulation Weather Data tab of ApLocate.

Once you have found a suitable weather file, you can select it in the Weather Wizard, and then save it as a pre-set with a description if it is a location you will use often. When you save it, you can also choose to pin the pre-set to the start page for quick access on future projects, with a brief description if required. This lets you choose pre-selected location, design weather conditions and simulation weather files when starting a new project, with a single click.

These are user pre-sets, so you can add or delete them at any time.

Once you have chosen the source for your design weather, you need to select the design weather file.
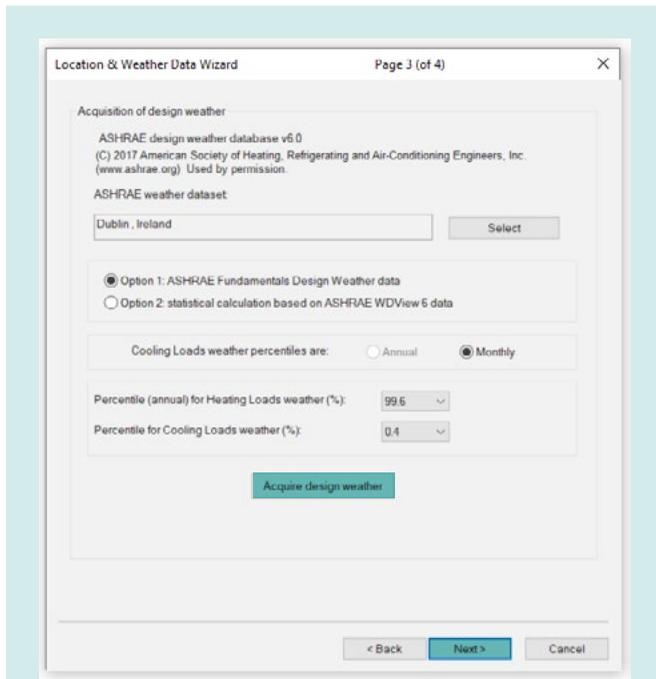
Wizard Page 3

Wizard Page 4

The third page gives you the option to choose which ASHRAE constraints you would like to use.

Then you can click on **acquire design weather**. You should get a message "Design weather successfully acquired." Then you are able to click on **next**.
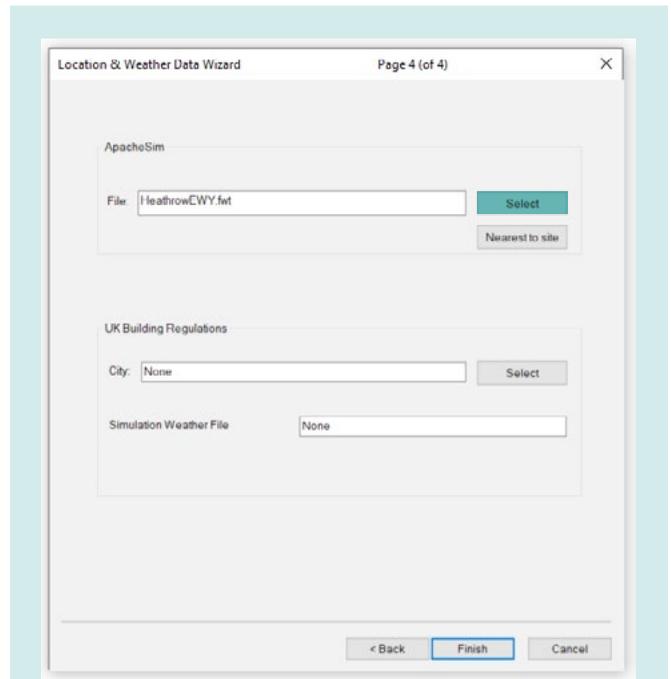
This tab replicates the Simulation Weather Data tab.

It lets you choose your simulation weather file.

The top file listed will be the one closest to your chosen site, but you can see what else is available nearby, for example TRY or other composite weather files, by clicking on the **Select** button.

You can add to the available files as described above.

The final tab gives the option to modify the simulation calendar, which defaults to taking the year from the weather file. This is useful to align weekdays and holidays if other data is linked into the model, especially if working in a leap year.

Click on the save icon before exiting ApLocate.

You should see the location information at the bottom of your screen update to the new location chosen.

Simulation Weather File Options

Access a variety of different weather files from other sources, through our website, at https://www.iesve.com/support/weatherfiles

Some of the Different Weather File Sources Include:

WEATHERSHIFT
Provides the option to submit any current simulation weather file and apply WeatherShift™ process to generate files that represent the given location in a future time period using predicted climate change scenarios.

CIBSE 2006 WEATHER FILES (FOR UK BUILDING REGULATIONS):
CIBSE TRY & DSY datasets are required to run simulations using ApacheSim method in VE Compliance.

These datasets are owned by CIBSE and each user requires a license to use them.

IES acts as an agent for CIBSE and the licence to use the data may be purchased on our website.

CIBSE 2016 WEATHER FILES
Purchase CIBSE 2016 updated simulation weather files for 14 UK Locations. Test Reference year (TRY) and Design Summer Year (DSY) available based on current weather data and future predicted climate change data (UK Climate Impacts Programme).

METEONORM
METEONORM can produce weather files for almost any location in the world.

Both TMY files and recorded historical weather files are available.

A complete weather set for your chosen location is generated by compiling data from multiple sources, and interpolating as required, to improve reliability.

PROMETHEUS WEATHER FILES
The PROMETHEUS project has produced a number of future weather files (.epw format) which can be used to 'future-proof' buildings against predicted climate change. The files were created using the UKCP09 weather generator. The weather files are currently available for 45 locations, 3 time periods and 2 emissions scenarios.

AUSTRALIA WEATHER FILES
A selection of EPW weather files for 78 locations in Australia can be found on the Energy Plus website.

AGRÉMENT SOUTH AFRICA
Authorised weather files for use in energy compliance simulations in line with the National Building Regulations of South Africa and Agrément South Africa's Energy Software Protocols (SANS 10400-XA Item 4.3).

ATHENIUM ANALYTICS (FORMERLY WEATHER ANALYTICS)
Options to purchase weather data for individual locations as either AMY or TMY.

Data is available for any global location using a 30km x 30km grid and is provided as both .csv and .epw

ENERGY PLUS WEATHER FILES (EPW)
A selection of EPW weather files for more than 2,100 locations can be found on the Energy Plus website.

These come from a variety of sources, and compilation methodologies, which are listed on their website.