dun & bradstreet

Market Insight

Geo Mapping

User Guide v1.0

D&B Market Insight

Geo Mapping

Manual Version: 1.0

Software Version: 2017 Q4

System: Training (UK & Europe)

Contents

Introduction

Understanding the geographical distribution of your customers and prospects can increase insight of your marketplace, highlight areas of untapped potential and facilitate campaign planning and execution. The Market Insight Geo module is an integration with Microsoft Bing Maps that allows you to visualize the spatial distribution of your data and export targeted selections for immediate use in your marketing campaigns. See Appendix 1 – Further Information.

Microsoft Bing Maps

Online mapping using Bing & OpenStreetMap provides street level mapping for all regions in the world. Users will need to subscribe to the online Bing Maps web service with a Bing Key. This can be arranged by contacting your Market Insight consultant. OpenStreetMap is a free service.

Microsoft Bing Maps

✎ **N.B.** This document looks at the main relationship between Market Insight and the Mapping tools. For specific functionality of the mapping software refer to the Microsoft online help.

✎ **N.B.** The examples in this document are for illustrative purposes only. You will not be able to follow these exact examples in reality unless you have the relevant licensed software and access to the Market Insight training system.
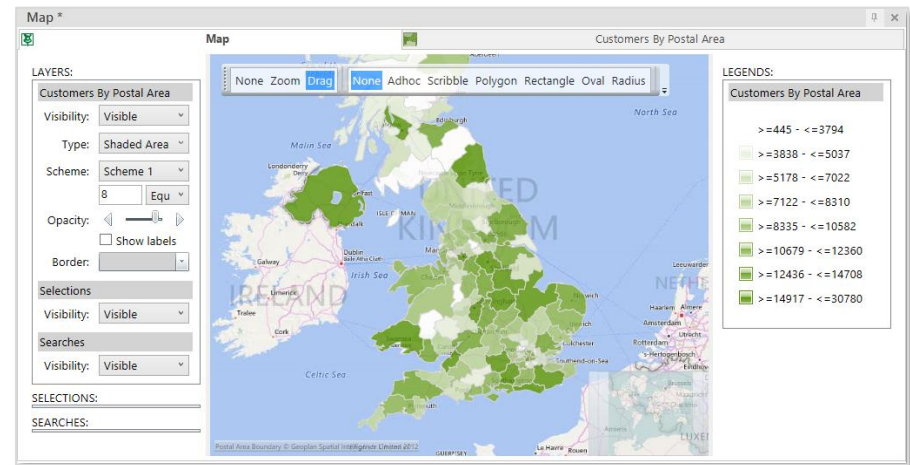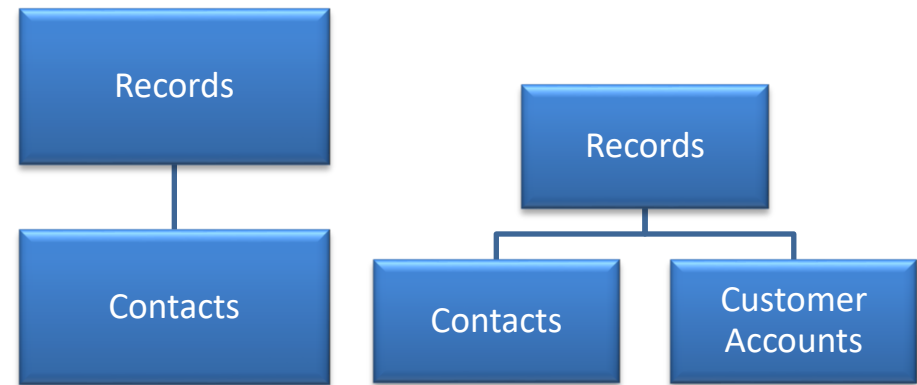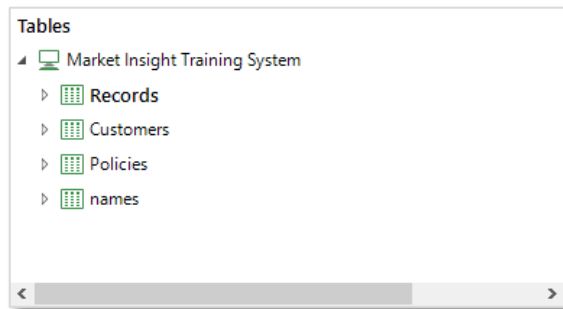
Data Structure

The structure of your Market Insight system can vary. The elements shown here are typical – each Record may be simply flagged with Customer data or can have many related Names. A Record may also have many matched Customer Accounts. The data loaded for each matched Customer Account is configurable – for example you may have multiple Transactions or Divisional Summaries or Product Summaries etc.

The detail present on each table of data depends on the Market Insight administrator. The data is arranged into folders to assist the user to navigate and find data items.

The structure used in the Training System, illustrated in this manual, uses a simple structure that has Records (organisations) with Names (contacts at the organisation). Also a subset of the Records called Customers (the Users customers) is held with a related table Policies (activity of the Users customers).

Market Insight Training Database Table Structure

Tables
- Market Insight Training System
  - Records
  - Customers
  - Policies
  - names

How to Login

To use Market Insight, you need to have an Internet connection.
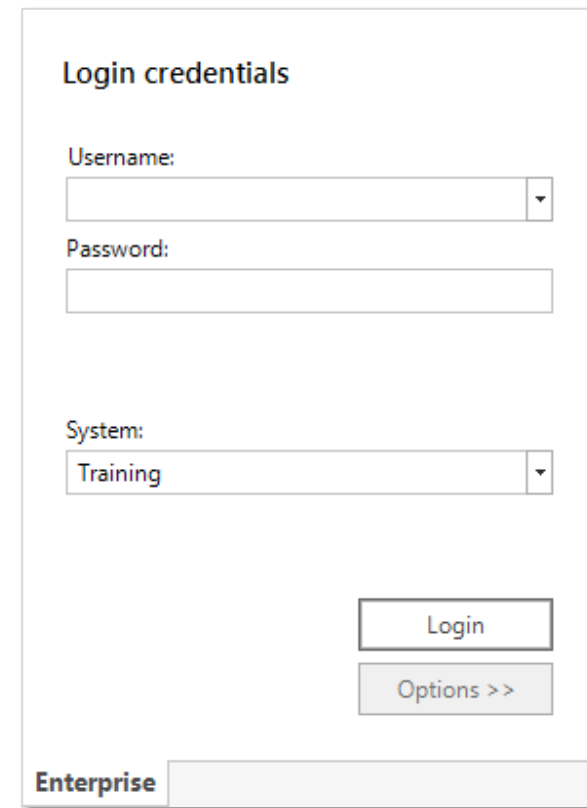
Start Market Insight by:

➢ Clicking on the **Market Insight** icon ⚂ on your desktop, or by navigating to the program using Window Explorer

In the upper left hand corner of the screen you will see a Login window that gives you the opportunity to connect to a Market Insight system containing data available to you for analysis.

Enterprise Tab

Your Market Insight system operates on a secure and resilient web connected server enabling you to access the system from any location with an Internet connection. A number of users may access the system at the same time, each of whom is authorized by a user account and password. Your Market Insight Administrator will provide you with a Username and Password.

➢ Enter your details if appropriate and click the **Login** button

Login credentials

Username:

Password:

System:

Training

Login

Options >>

Enterprise

Login Window

Map Options

You can select your Bing license and the default settings you see, from the Market Insight Options window.

➢ On the menu bar click on **File → Tools → Options…**

➢ Under the **Sections** column select **Map** to see 3 further sub menus

The screen shot opposite shows the Map region options set to World for use with Bing. Other default settings such as map type, distance units, routing options can be made on the other sub menus.
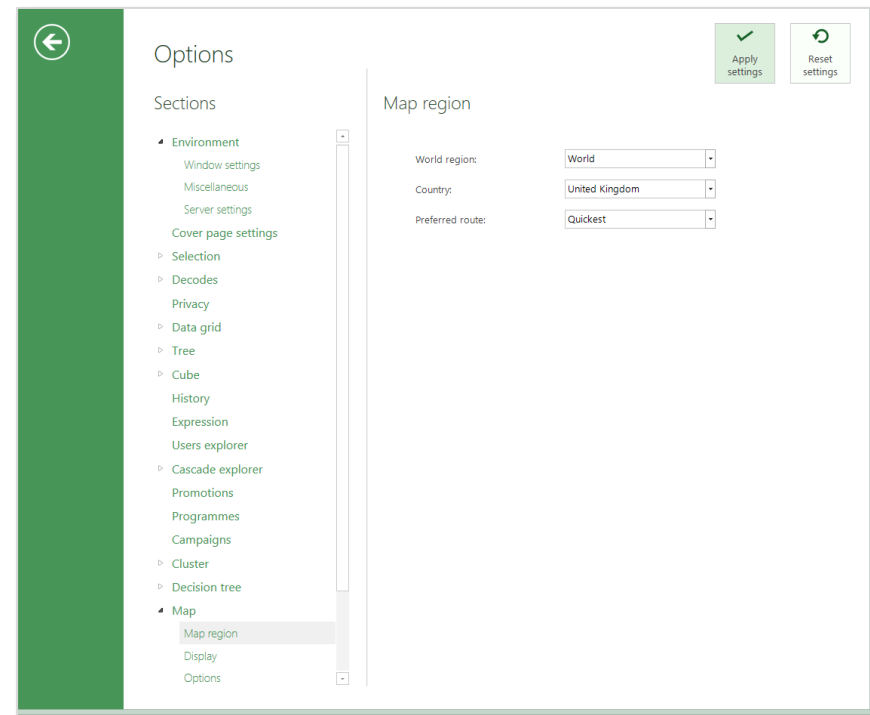
Market Insight Discoverer – Options Window

To start using your mapping tool:

➢ Open a selection window containing the records you wish to work with

➢ Drag the **Map** tool from the **Visualization** section of the **Toolbox** ribbon bar onto your selection window
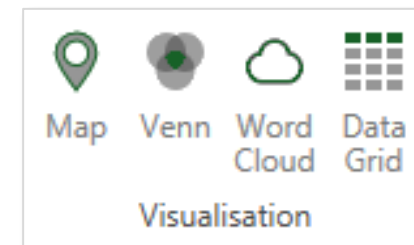
Toolbox Ribbon Bar – Map Option

Bing Maps

Shaded Map

A shaded map allows us to display records using particular geographical boundaries e.g. by Postcode Area, Postcode District or Postcode Sector in the UK This gives us the opportunity to look at the distribution of our contacts or prospects around the country.

In the following example we will display a selection of Records which are High Sales Manufacturing Industries.
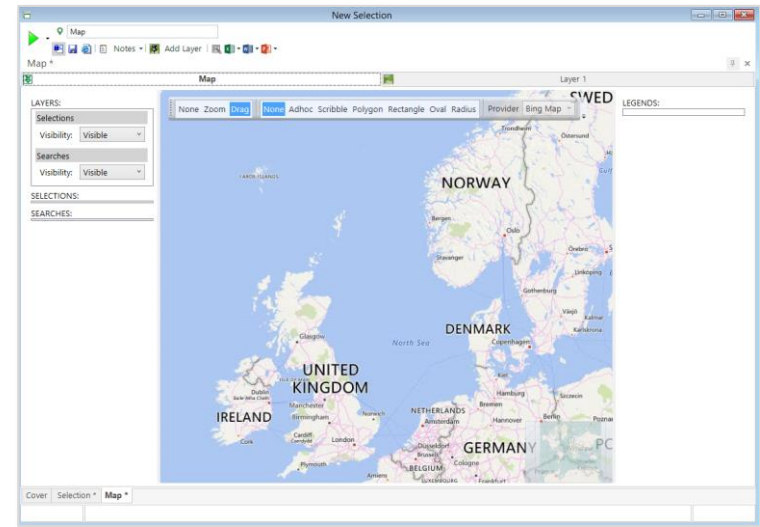

The Map Tool – Bing Map Tab

➢ Create a selection query that identifies **Records** with a **Major Industry Sector** of **Manufacturing** and **Banded Sales** of **>£10,000,000**

➢ Drag and drop the 📍 **Map** tool on top of the selection window

The Map page has two tabs; the one entitled Map currently shows the default display region and will be where the final display will be shown. The second tab, entitled Layer 1 is where we define how the results will be displayed. Multiple layers can be added to your map, which will be covered further on in this document.
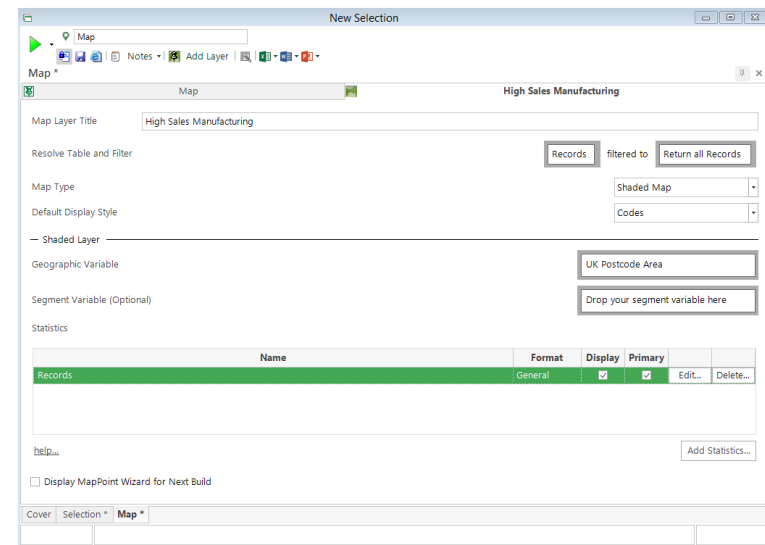
➢ Click on the **Layer 1** tab

An explanation of the options on this window is shown on the next page. For now we will just make the changes shown in the screen shot opposite i.e. drag on **UK Postcode Area** as the Geographical Variable and change the layer title.

➢ Click the ▶ **Build** button

Layer Tab – Shaded Map

Shaded Map - The Layer Tab

Map Layer Title	Enter the description to be shown on the layer tab and legend display
Resolve Table & Filter	Set the table level and any record filter here to determine the records shown e.g. Customers or Policies figures
Map Type	Choose between the Shaded and Plot Map options
Default Display Style	When viewing the Map results select to show the Descriptions or Codes for items
Geographic Variable	Drag and drop here the geographical variable to determine how the data will be shown on the Map
Segment Variable	Allows you to segment the data by the selection variable used, displayed as pie, column charts etc.
Statistics Panel	This area displays all the statistics that have been added for possible display on the map
Add Statistics…	The statistics window allows you to define which statistics will be made available in the statistics panel
Help…	Click this link to open the Market Insight Help files
Display MapPoint Wizard for Next Build	Displays the wizard each time the map is built so you can change the graph type and other options

Shaded Map – Viewing the Map

Now that the results have been calculated and displayed, we can see each State that contains records from our selection has been colour shaded. The colour shading has defaulted to 8 Equal Data Points. Options for this layer can be set in the Layers panel.

Visibility: Make the layer display visible or hidden on the map

Type: Displays the appropriate type of map from those listed

Scheme: Select a colour scheme to be applied to the shading and the type and number of ranges to use

Opacity: This allows control over how visible the layer is over the map. Moving the slider to the right makes the layer colours more solid until the map is no longer visible. Moving the slider to the left makes the layer colours more translucent until only the underlying map is visible

Show   Marking the check box will turn on the layer labels rather than
Labels: just show them when the mouse pointer hovers over an item

Border: This determines the colour used to define, in this example the Postcode Area borders. By clicking on the drop down arrow different colour options can be chosen from the palette
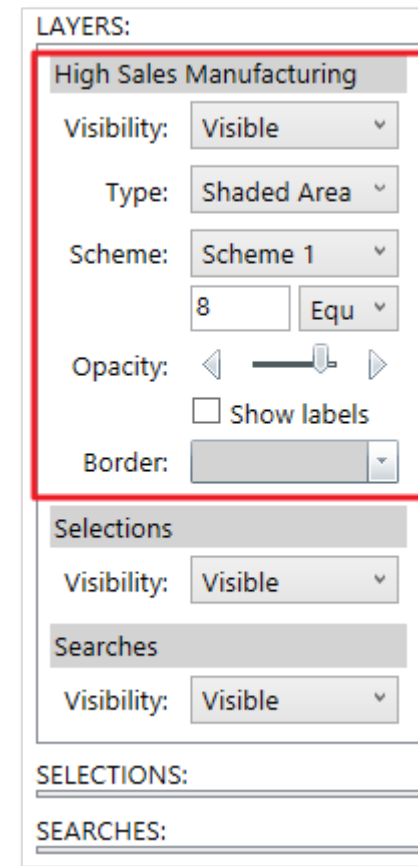
Bing Map – Layers Panel

Zoom & Drag

At the top left of the window is a group of 3 map actions. The highlighted item
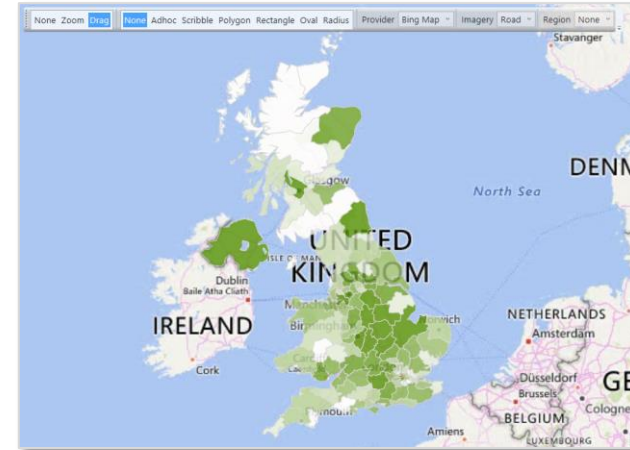is the active function.

None   This keeps the map static when the mouse is moved over it

Zoom   A left drag will select an area and zoom into it

Drag   A left drag will move the map in the direction of the mouse

Bing Maps – Zoom & Drag Options

At the bottom right of the map window is a pop out control.

➢   Move the mouse pointer over the bottom right of the window to bring
       the zoom and drag function to the foreground

The zoom and drag function options are shown below:

Clicking on this symbol zooms out of the map

Clicking on this symbol zooms into the map

Clicking on this symbol will reset the zoom to its widest view

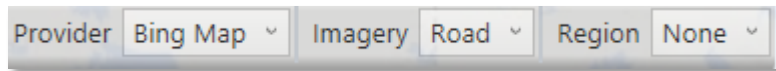Clicking on this symbol will select the default mouse action

Bing Maps – Zoom Options

Further display options can be found in the top right of the window:

Provider

No Map   No mapping functionality is displayed

Open Street Map   This free mapping service is displayed

Bing Map   This licensed mapping service is displayed

Imagery

Road   The road network is overlaid onto the Region selected

Hybrid   The road network is overlaid onto a photographic aerial view of the Region selected

Aerial   A photographic aerial view is overlaid onto the Region selected
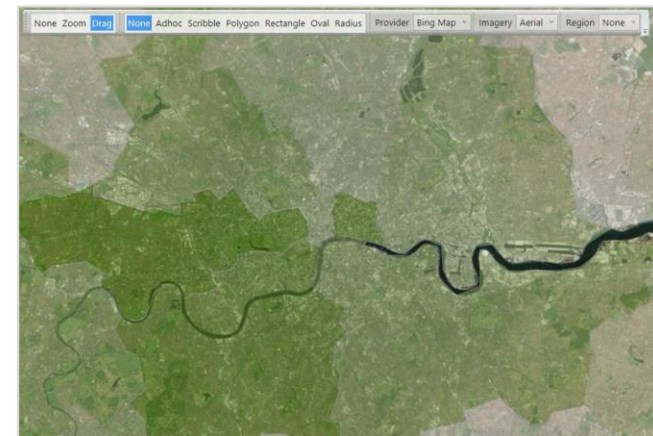
Region   Select the geographical country of focus

✏ **N.B.** To see the Imagery options more clearly on the map the Opacity level may need to be reduced.
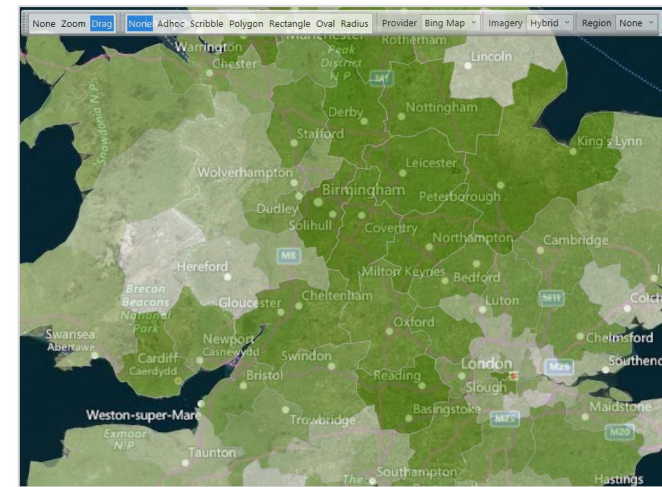
Bing Map – Hybrid View

Bing Map – Aerial View

Shaded Map – Viewing the Results

The map opposite uses **Postcode Sector**.

The results of our underlying selection have been applied through the colour shading. The legend, depending on the settings used may have a wide range of results associated with a particular colour.

To find the actual result move the mouse pointer over the Postcode Sector of interest, which will be highlighted and the tooltip will display the count.

To select results from our map we can use tools from the Drawing Tool bar at the top of the window. In this example we will use the scribble tool to find an area of interest.

➢ Click on the **Scribble** tool and then click and hold the left mouse button to draw a joined up shape

➢ An item will be entered under the Selections section of the **Layers** panel. Click and drag the 🔁 button onto the workspace to see and count the selection

✎ **N.B.** – The line drawn on the map crosses several Postcode Sectors, so how does Market Insight interpret your shape? Market Insight looks to see if your line crosses the border of a geographical variable and if it does it will include everyone in that area. So for a more accurate results use more granular variables.

✎ **N.B.** – See pg. 20 for more details on the various selection tools.
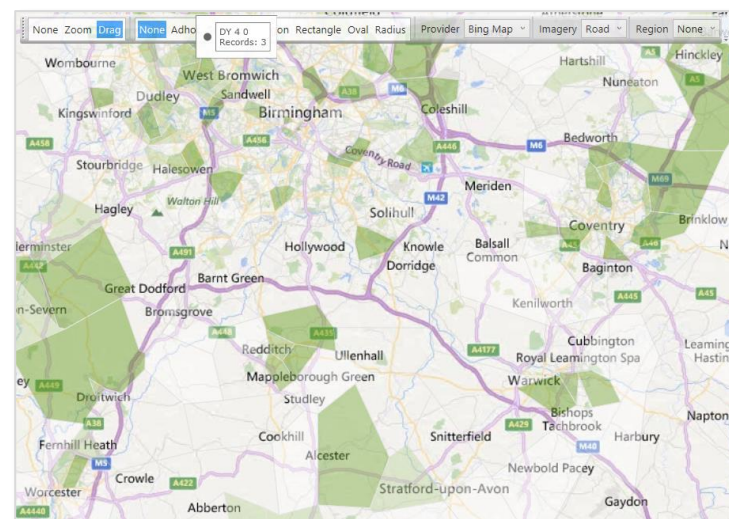
Shaded Map – Tooltip Count Display
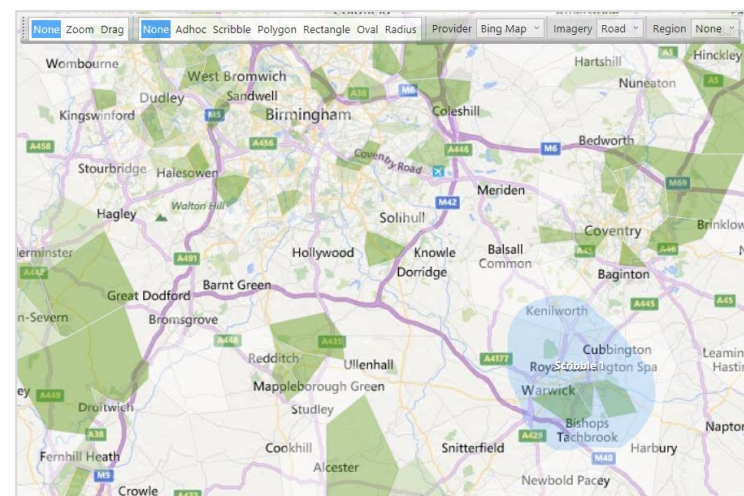
Shaded Map – Scribble Tool Selection
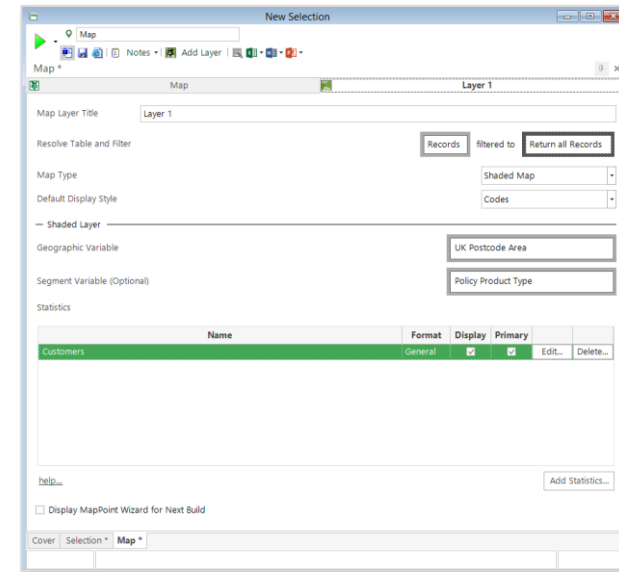
Shaded Map – Using a Segment Variable

When using the shaded map option it is possible to display segmented data from a selector variable or selection query. For example we may wish to display graphically the Policy Product Type our Records have purchased by the Postcode Area in which they are based.

➢ Using a blank selection drag on a **Map** tool and change the **Layer 1** tab to reflect the options in the screen shot opposite

➢ Click the ▶ **Build** button

The default display uses a sized pie chart to show the categories of the variable. The legend indicates the colour coding used to identify each of the segments.

The chart used can be changed by going to the Layers panel on the left of the screen, and making a selection from the Type drop down menu.

🖉 **N.B.** Moving the mouse pointer over a chart on the map will display the count for each category of the variable used. If a specific segment of the pie chart is touched by the mouse pointer the name and percentage of that segment will be displayed.

Layer Tab – Occupation as the Optional Segment Variable

Bing Map – Display of a Segment Variable Results

Shaded Map – Adding Statistics

As well as displaying values e.g. the number of Customers on a map, you can also generate and display a calculated statistic for those people being represented on the map.

Let's use the example the previous example. We can now amend this example to optionally display the total profit from each of these Policy Product Types per Postcode Area.

➢ Click on the **Layer** tab

➢ Click on the **Add Statistics…** button to display the **Statistics** window

➢ Click on the radio button **Specify other Table, Variable or Expression**

➢ We can now drag on the **Policy Premium** variable and select the statistic we want to apply (in this example **Sum**)

➢ Click **OK**

➢ Within the **Statistics** panel change the **Primary Statistic Sum(Policy Premium)**

➢ Click the ▶ **Build** button

When we move the mouse pointer over a chart, the tool tip that is displayed now shows the Sum cost Per Policy type in each Postcode Area.
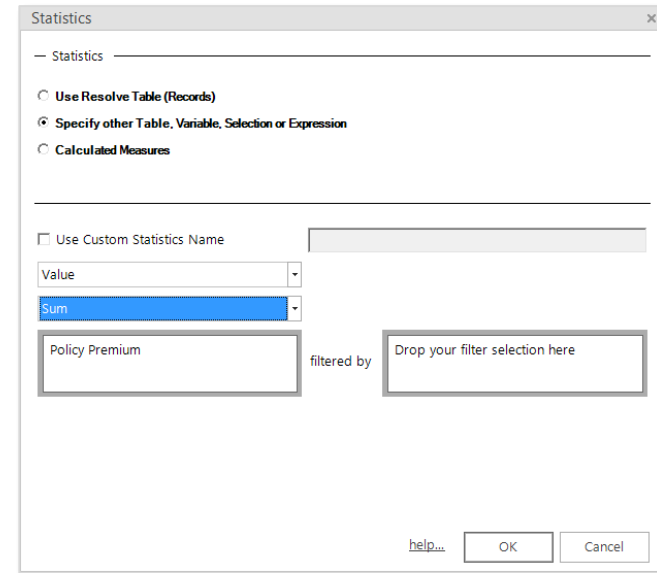
Statistics Window – Summing the Profit Value for People
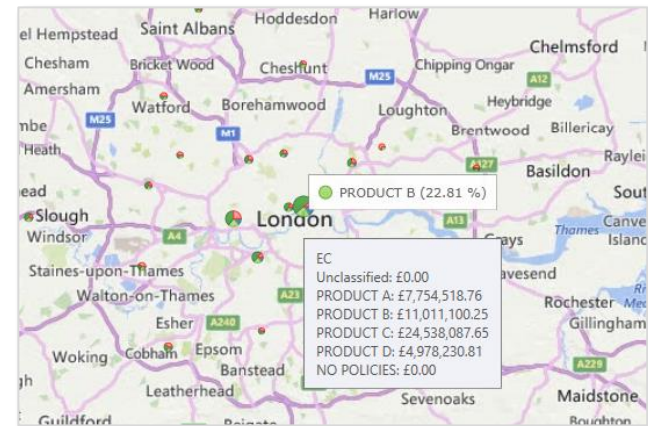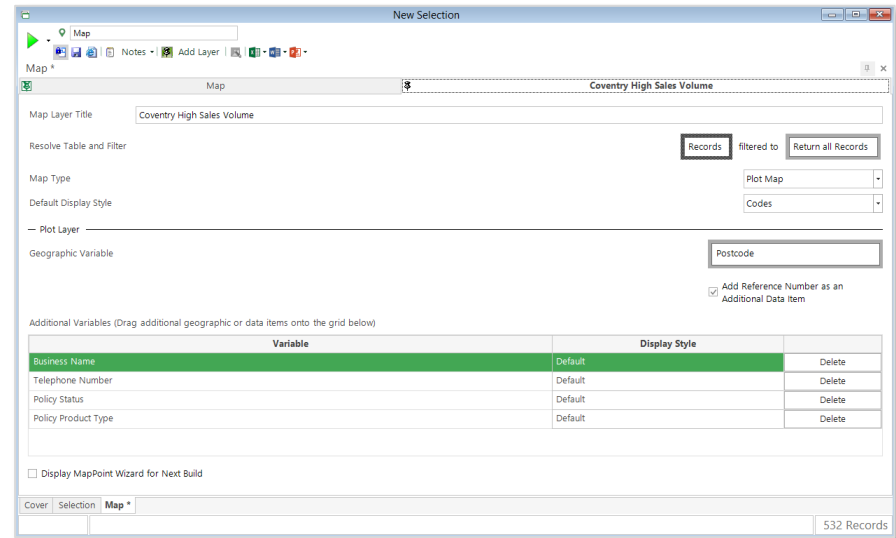

Sum of Division 1 Spend

Plot Map

A plot map allows us to display records using a more precise geographical boundary e.g. by UK Postcode. This gives us the opportunity to look at the location of smaller groups of customers or prospects around the country.

In the following example we will display a selection of **Records** with **High Sales Volume** from the **Coventry Postcode Area.**

> ➢ Create a selection query that identifies **Records** with **High Banded Sales (>£10,000,000)** in the **Coventry UK Postcode Area (CV)**

> ➢ Drag and drop the 📍 **Map** tool on top of the selection window

> ➢ Click on the **Layer 1** tab

> ➢ Change the **Title** to **High Sales Volume Coventry**

> ➢ Complete the window as shown opposite

> ➢ Click the ▸ **Build** button

An explanation of the options on this window are shown on the next page.

Layer Tab – Plot Map

Additional Variables – Display Style

Plot Map - The Layer Tab

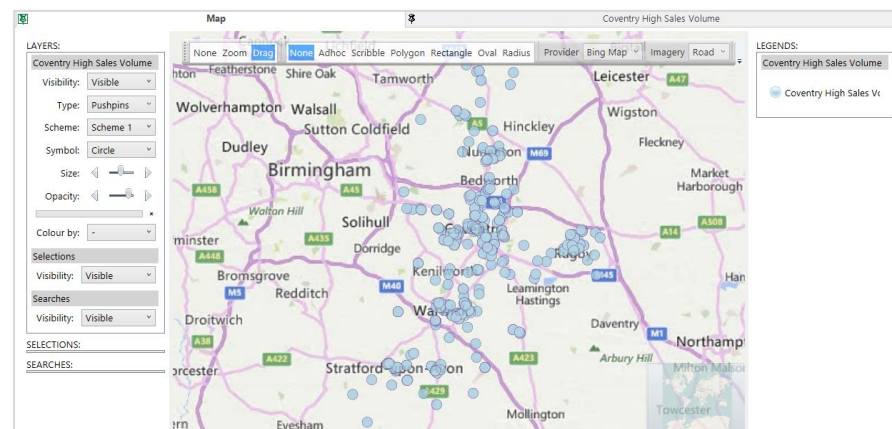|	
Map Layer Title	Enter the description to be shown on the layer tab and legend display
Resolve Table & Filter	Set the table level and any record filter here to determine the records shown e.g. People or Household figures
Map Type	Choose between the Shaded and Plot Map options
Default Display Style	When viewing the Map results select to show the Descriptions or Codes for items
Geographic Variable	Drag and drop here the geographical variable to determine how the data will be shown on the Map; in this case use latitude and longitude as discussed on the previous page.
Add Reference Number	This allows a selection to be dragged off the map listing the DUNS
Additional Variables	Information for these variables can be accessed for records displayed on the map
Display MapPoint Wizard for Next Build	Displays the wizard each time the map is built so you can change the graph type and other options

Plot Map – Viewing the Map

To get a closer or different view of the Map use the functions described on pgs. 8 & 9.
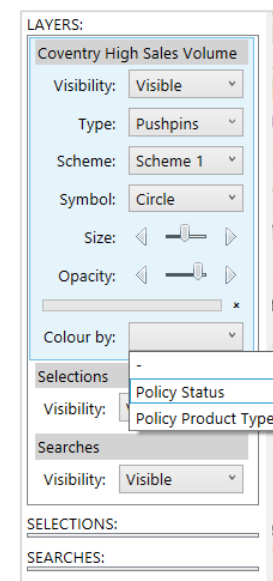
The screen shot opposite shows the map centred over Coventry.

The Layer options are as follows:

Plot Map – High Sales in Coventry Postcode Area

Visibility   Make the layer display visible or hidden on the map

Type   Select the type of pushpin to display

Scheme   Select a colour scheme to be applied to the shading and the type and number of ranges to use

Symbol   Select the type of symbol to represent the pushpin

Size   This control allows the pushpins to be increased or decreased in size

Opacity   This allows control over how visible the layer is over the map. Moving the slider to the right makes the layer colours more solid until the map is no longer visible. Moving the slider to the left makes the layer colours more translucent until only the underlying map is visible

Colour by   This will colour code the pushpins by an additional variable selected from the list

Plot Map – Colour by

Plot Map – Viewing the Results

To select results from our map we can use tools from the Drawing Tool bar at the top of the window. In this example we will use the scribble tool to find an area of interest.

➢ Click on the **Scribble** tool and then click and hold the left mouse button to draw a joined up shape

➢ An item will be entered under the Selections section of the **Layers** panel. Click and drag the 🖱 button onto the workspace to see and count the selection
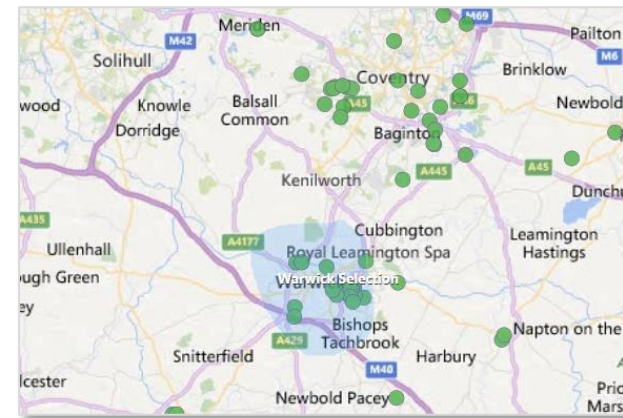
The selection we have just made on the map can be renamed for easier reference.

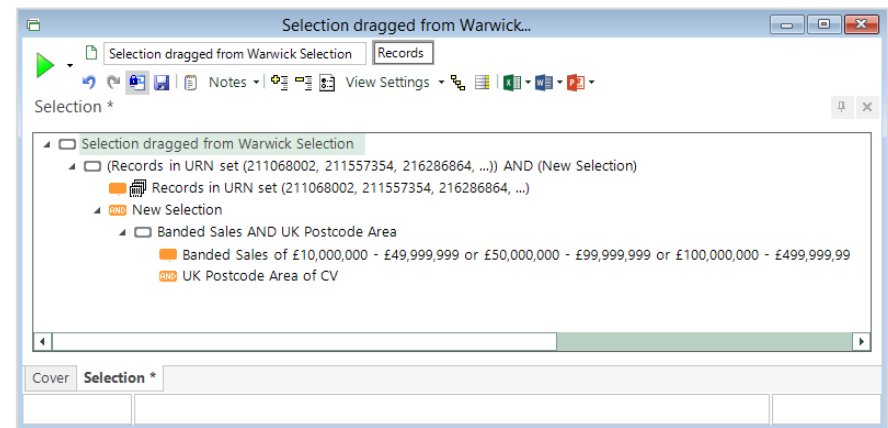➢ Rename the selection from **Scribble 1** to **Warwick Selection**

To remove the selection permanently from the map click on the Delete button on the relevant selection row, under the selections heading.
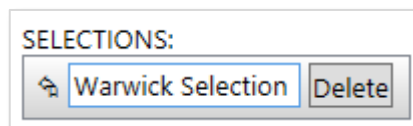
🖉 **N.B.** See pg. 20 for more details on the various selection tools.

Plot Map – Scribble Tool Selection

Selection

When setting the options on the Layer tab variables were added to the Additional Variables panel. This will allow the information for the records to be displayed on the map.

> Move the mouse pointer over a pushpin to see information for that record

If the pin represents a single record, a balloon will appear with the DUNS and the relevant variable information for that record.

If the pin represents more than one record, a window will appear listing the postcode for each of those records.
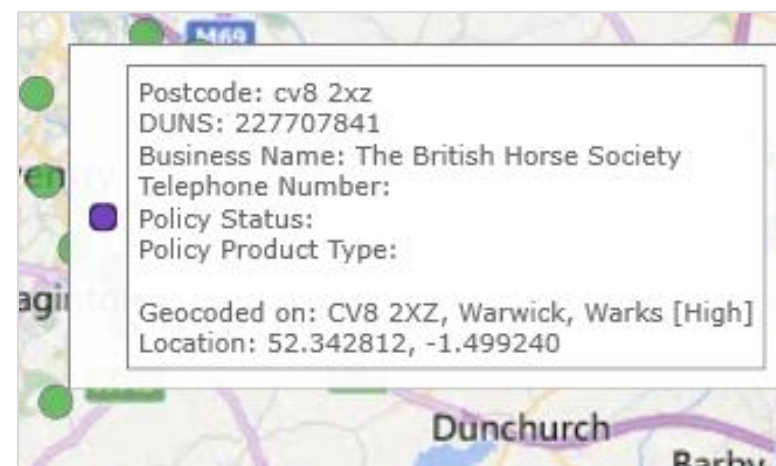
Plot Map – Show Information

Plot Map – Create DriveTime Zone

It is possible to use this function to find Sites who live within a determined area calculated upon the number of minutes or the distance it takes to drive from a given point.

Using the **Plot Map** from the last example, create a drive time zone of 20 minutes from Birmingham Airport.

> Right click on the map and select **Search…** , from the pop up menu, for your centre point

> Type **Birmingham Airport** into the **Location** box and click **OK**

If necessary we can be more specific with our starting point by using a Postcode.

> Right click on the location

> Select **DriveTime…**

> Set the DriveTime to 20 minutes and click **OK**

You can now find out how many Records on the Market Insight system are within this 20 minute drive time by:

> An item will be entered under the Selections section of the **Layers** panel. Click and drag the ⚑ button onto the workspace to see and count the selection

The result will be all the records, in the underlying selection, shown on the map which can be reached within a 20 minute drive from Birmingham Airport.
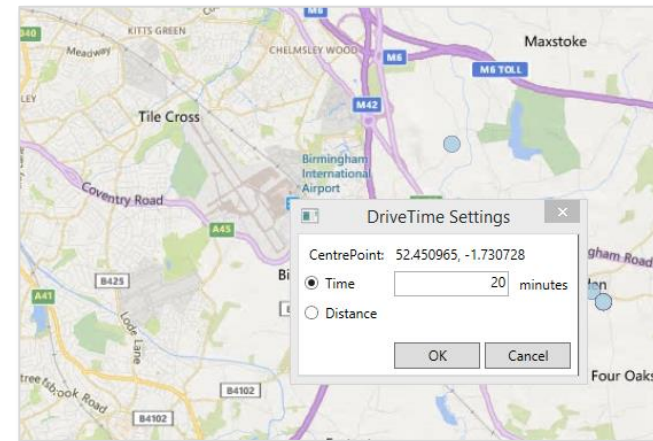
DriveTime Settings Window

DriveTime Zone Display

Multiple Layered Maps

It is possible to create Maps with multiple layers. These layers can be either shaded or plot maps using different selections. To show the two maps created earlier on the same map page:

➢ Redisplay the shaded **Map** of **Records** which are **High Sales Manufacturing Industries.**

➢ Click the ![Add Layer] button to apply a second set of settings to your **Map**

To investigate where Live Policies are held:

➢ Create a **Customer** Level Selection of **Policy Status - Live**

➢ Drag the selection onto the **Return all People** filter box of **Layer 2**

➢ Use the settings shown in the screenshot.

This has to be applied in this way because the underlying selection window still holds the High Sales Manufacturing Industries query used on the shaded map.

➢ Apply all the other settings as previously

➢ Click on the ▶ **Build** button to see the results

The result is a display that now shows a shaded map of Records with High Sales in Manufacturing, with pushpins indicating where Customers with Live Policies are located.

✎ **N.B.** To select from a particular layer, ensure all other layers are set to Hidden. See pg. 20 for more details on the various selection tools.
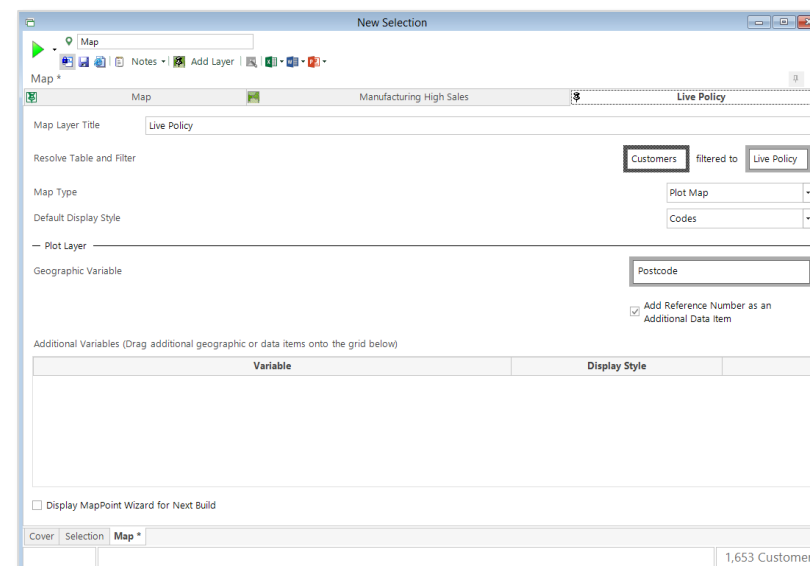
Settings to Show Layered Map
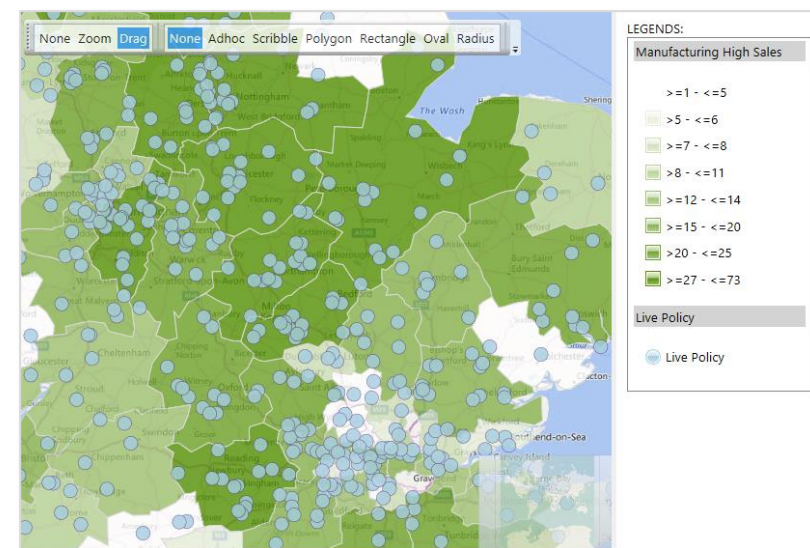
Layered Map Display

Selecting from the Map

|	
Adhoc	Select or deselect by clicking on individual regions on the map e.g. records displayed by Postcode
Scribble	Select an area of the map by clicking, holding and dragging the pointer over the desired area
Polygon	Click on the map and every subsequent click will join the previous point to the new point, until you have identified the area
Rectangle	A click and drag will draw a rectangle in any direction from the point where you clicked
Oval	A click and drag will draw an oval in any direction from the point where you clicked
Radius	A click and drag will draw a circle radiating from your click point, the tooltip indicates the radius distance
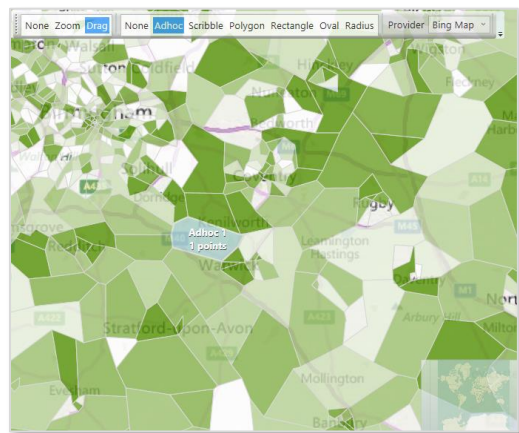
Adhoc Selection
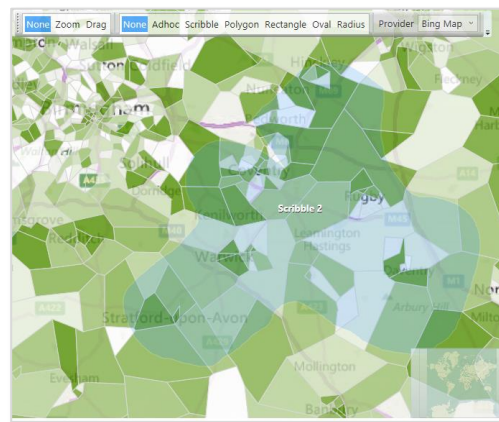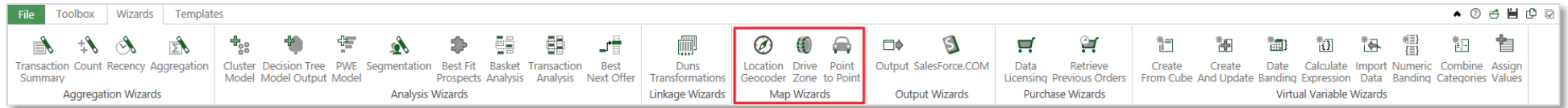

Scribble Selection

Radius Selection

Map Wizards

This group of wizards interacts with Bing Maps or Microsoft MapPoint to allow you to identify records in relationship to time and distance, using geographical variables. The result of these wizards will create a Virtual Variable, which will appear in the System Explorer.

Wizards Ribbon Bar – Map Wizards Section

Drive Zone Wizard

The Drive Zone wizard provides a quick way to group records by their distance (or drive time) from a specific point. When grouping records by distance, the distance "as the crow flies" is used.

Example

Create a Selector virtual variable of 30 minute Drive Zones based from the central point of East Midlands Airport to see where existing Records are located in terms of drive time from the airport.

➢ Click the **Drive Zone** wizard icon

➢ **Settings** – Set the **World Region** to **World** and the unit to measure distance. Click **Next**

➢ **Centre Point** – Enter the centre point, this could be a postcode or town name. If you have multiple centre points it is possible to drag a file containing them onto the drop zone box at this stage. In this example use East Midlands Airport Postcode **DE74 2SA**. Click **Next**

➢ **Select Geographic Match Variable** – Drag on the geographical variable that will be used to plot the points from the centre point **UK Postcode District**. Click **Next**

➢ **Time or Distance** – Determine if you are going to create a variable based upon drive time or distance – **Use Distance as the Crow Flies**
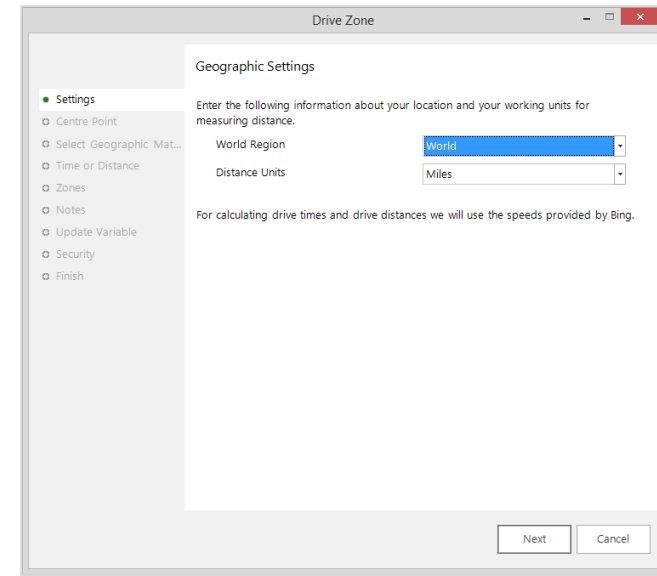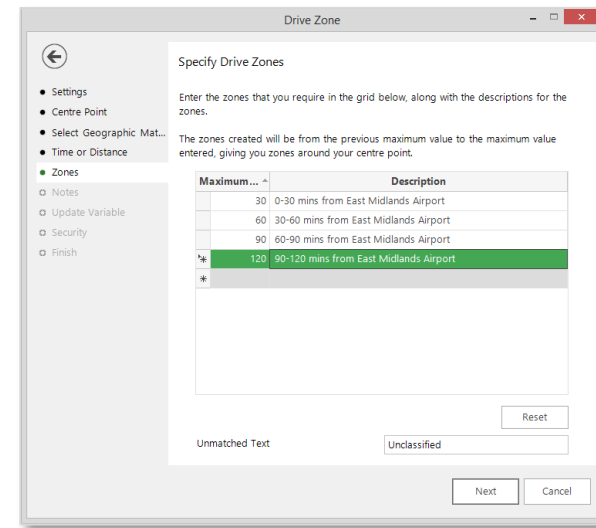
Drive Zone Wizard - Settings
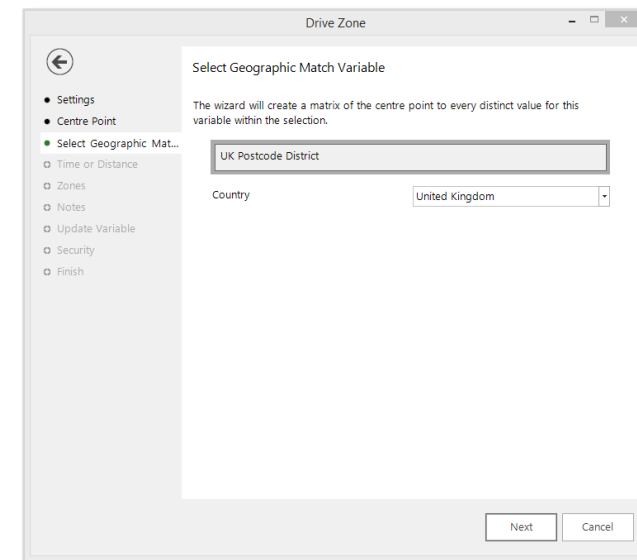
Drive Zone Wizard - Select Geographical Match Variable

➢ **Zones** – Determine the zones to be created. Enter the information as shown opposite to calculate half hourly zones from the centre point. Click **Next**

➢ **Notes** – Add Optional Notes. Click **Next**

➢ **Update Variable** – Type the description name for the variable – [centrepoint] **East Midlands Airport**. Click **Next**

➢ **Security** – This step is only visible if you are running an Enterprise system and you have ticked the **Modify Security Attributes** box in the previous step. Click **Next**

➢ **Finish** – This step will tell you how many records have been updated. Click **Finish**

Drive Zone Wizard - Zones

The virtual variable is now available for you to select individual or consecutive 30 minute drive zones from East Midlands Airport.

The Unclassified category in this example will be all Records with Postcode Districts over 120 minutes from East Midlands Airport.

Suggested Uses

• Identify customers/prospects within a certain distance from a retail outlet
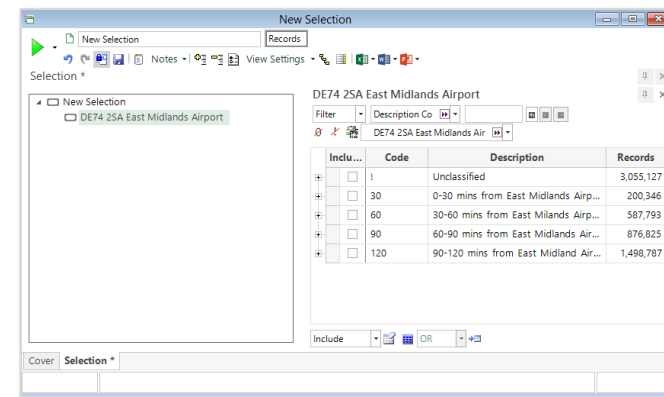
Selection Window – East Midlands Airport Drive Zones Virtual Variable

Location Geocoder Wizard

The Location Geocoder wizard gives us the opportunity to create Latitude and Longitude Virtual Variables. For a given group it will calculate the Latitude and Longitude for each distinct value for a geographical variable within the selection.

Example

Create the Latitude and Longitude variables to allow you to find the Records, by Postcode exhibiting particular characteristics

➢ Click the ⊘ **Location Geocoder** wizard icon

➢ **Selection** – Drag on a selection at the **Records** with **Banded Sales** of **£1,000,000,000+**. Click **Next**

➢ **Geographical Match** – Set the **World Region** to **World** and drag on a geographic variable (**UK Postcode Area**) which can be a place or part of a postcode that can be evaluated to a single point

➢ Tick the box **Geographical variable is either part or whole of a Postcode/postcode**. Click **Next**

➢ **Folders** – Select or create a folder where you want to place your Virtual Variable. Leave the default for the **Others** folder. Click **Next**

➢ **Notes** – Enter optional notes. Click **Next**
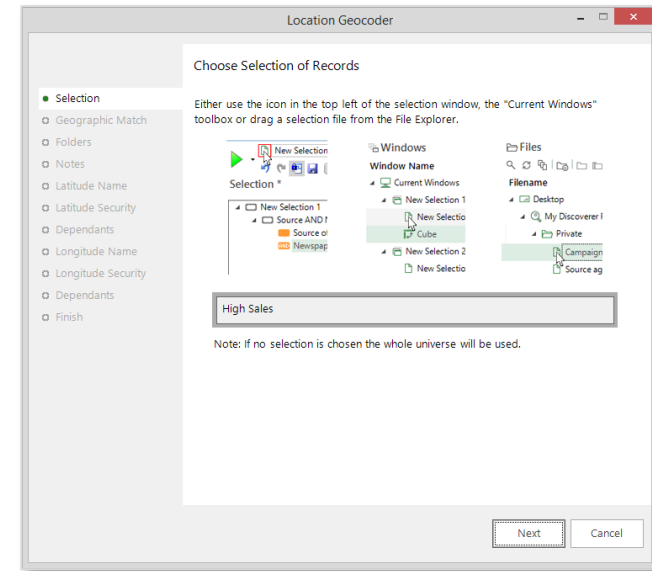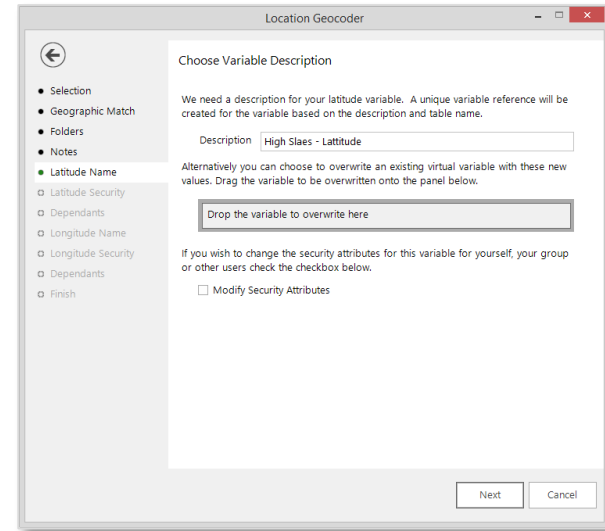

Location Geocoder Wizard - Selection
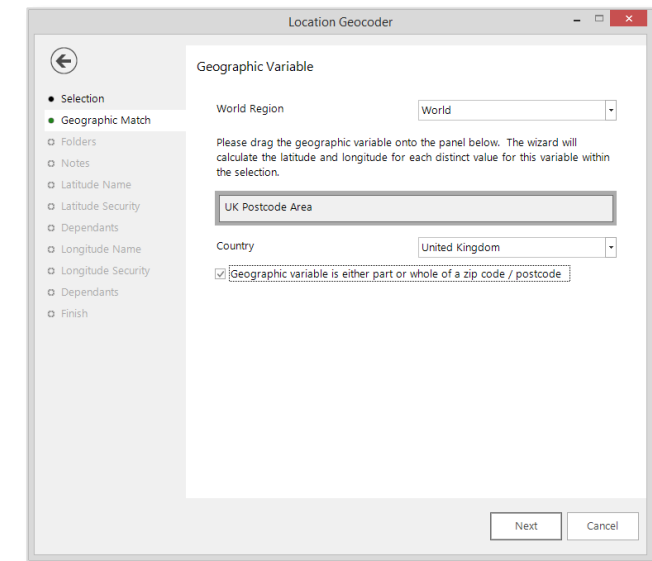
Location Geocoder Wizard - Geographic Match

➢ **Latitude Name** - Type the description name for the Latitude variable – **High Sales - Latitude**. Click **Next**

➢ **Longitude Name** - Type the description name for the Longitude variable – **High Sales - Longitude**. Click **Next**

➢ **Finish** - This step will tell you how many records have been updated. Click **Finish**

✎ **N.B. Security** - This step is only visible if you are running an Enterprise system and you have ticked the **Modify Security Attributes** box on the Latitude Name or Longitude Name steps. It allows you to select security options for yourself, groups you belong to or anyone else.

Suggested Uses

• Identify locations using latitude and longitude information

Location Geocoder Wizard – Latitude Name
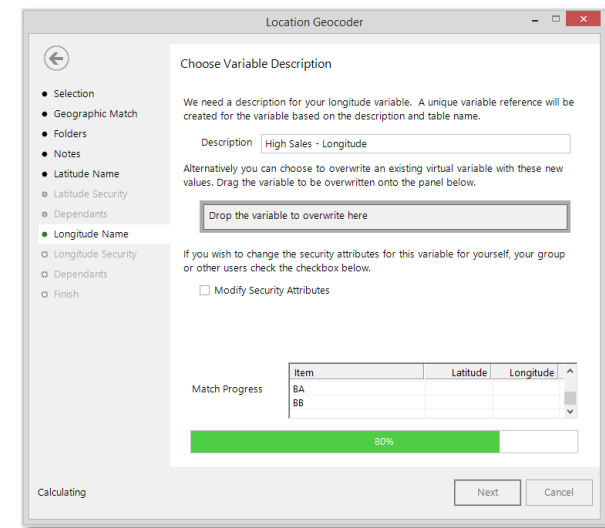
Location Geocoder Wizard – Longitude Name
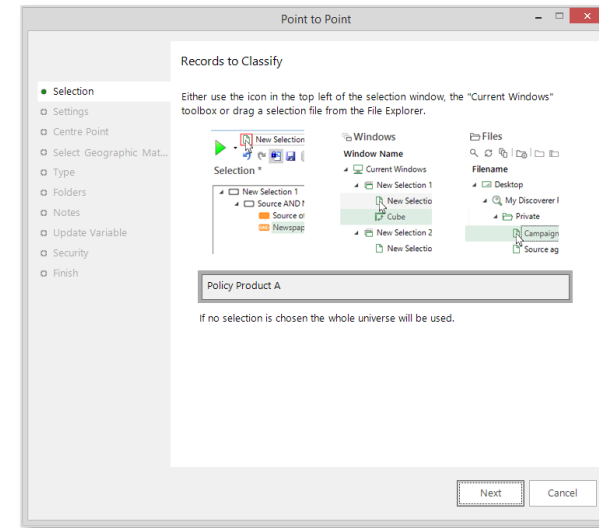
Point to Point Wizard

The Point to Point Wizard provides a way to record the drive time or distance between a selection of records and a specified centre point as a virtual variable.

Example

Create a Numeric virtual variable to find the number of customers with Policy Product A, by distance from Warwick to various Postcodes.

➢ Click the 🚗 **Point to Point** wizard icon

➢ **Selection** – Drag on a Selection to find **Customers** with a **Policy Product of A** from the **West Midlands**. Click **Next**

➢ **Settings** – Set the **World Region** to **World** and the preferred unit and route options. Click **Next**

➢ **Centre Point** – Enter your centre point (**Warwick**) which can be a place or part of a postcode that can be evaluated to a single point. You also have the opportunity to drag on a file if you have multiple centre points. Click **Next**

➢ You may find at this point a pop up window appears to confirm the entry you made. Select the correct location

➢ **Select Geographic Match** – Drag on the geographical variable (**Postcode**) so that a calculation can be made between the centre point (Warwick) and the centre points of each geographical area as limited by the selection

Tick the box **Geographical variable is either part or whole of a Postcode/postcode**. Click **Next**
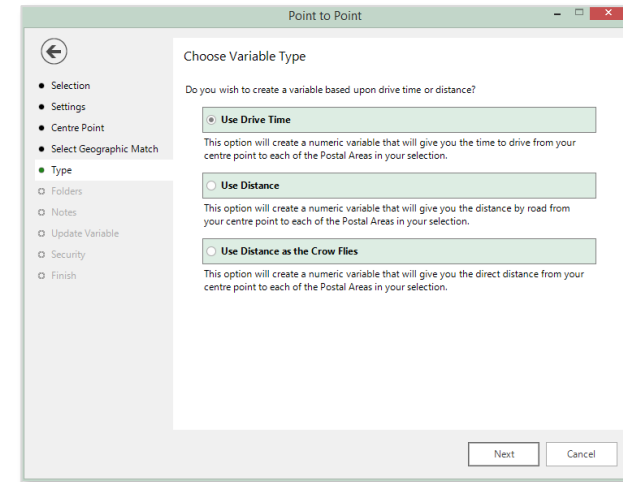

Point to Point Wizard - Centre Point
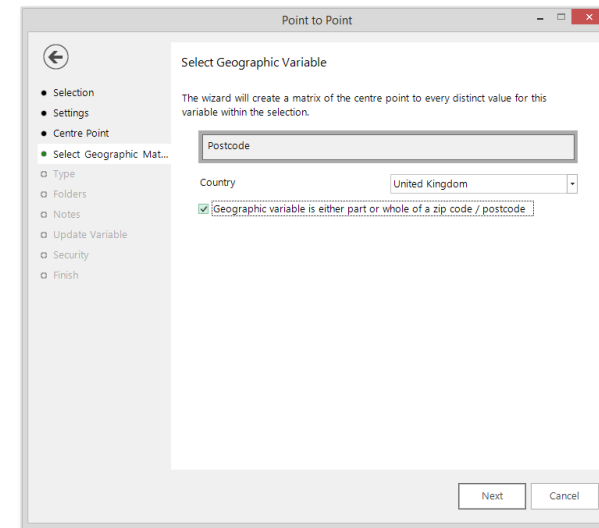
Point to Point Wizard - Select Geographic Match

➢ **Type** – This step allows you to decide if the variable created will be based upon drive time or distance. Select the **Use Drive Time** radio button.

➢ **Folders** - Select or create a folder where you want to place your Virtual Variable. Leave the default for the **Others** folder. Click **Next**

➢ **Notes** - Enter optional notes. Click **Next**

➢ **Update Variable** - Type the description name for the variable – **Warwick Point to Point**. Click **Next**

➢ **Security** - This step is only visible if you are running an Enterprise system and you have ticked the **Modify Security Attributes** box in the previous step

➢ **Finish** - This step will tell you how many records have been updated. Tick the **Show new variable as a selection** box. Click **Finish**

You can now make distance selections in the numeric variable by typing in the free form box. E.g. 2-100 will return customers within a Postcode, between 20 and 100 miles from the central point of Warwick.

Suggested Uses

- Identify distance/time between retail outlet and customers

- Calculate average time travelled by customer segments – drop the variable onto a cube and use the average function to see breakdown of customer groups

Point to Point Wizard - Type
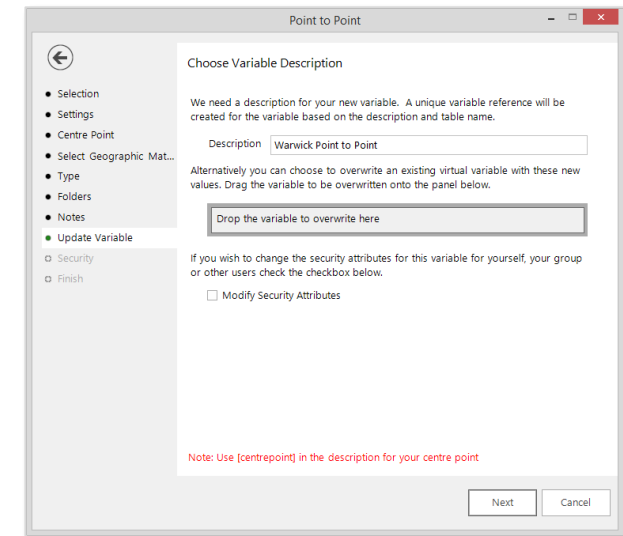
Point to Point Wizard - Update Variable

Appendix 1 – Further Information

Market Insight Geo Module

This license comes with the OpenStreetMap free service.   To use Microsoft Bing Maps, the online mapping service, you will need a Bing key, which can be obtained through Apteco. To use Market Insight with Microsoft MapPoint you will need to have a licensed copy of this software and have it installed on the machine with which you are accessing your Market Insight system.

Boundary Files

To apply data to your online maps you will require boundary files, also known as shape files. Apteco can provide basic UK shapes; Postal Area, Postal District and Postal Sector.

Various boundary files are available and some nations e.g. Australia make these available free of charge.

A broader range of boundary files, can be purchased from commercial organizations such as MapMechanics – www.allmapdata.com

Other commercial providers are available.

Bing Maps

A Bing key gives you access to the geocoding functionality of the software and gives you a potential worldwide display, with the appropriate boundaries. Bing maps gives you access to the majority of MapPoint functions except for the Mapping Wizards.

www.bing.com

OpenStreetMap

As OpenStreetMap is a free service and without the addition of Bing Maps, will only allow you to display thematically shaded maps, with the appropriate boundary files being available. With a Bing Maps key, OpenStreetMap can display the geocoding functions on its map display.

www.openstreetmap.org