



Research Methodology

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User Guide 6

SANDWELL TRENDS: Getting the Most from Maps

Sandwell Trends Local Intelligence System (LIS) is the first port of call for data, intelligence and analysis about the people and places in Sandwell.

The system is web-based, which hopefully means that most users will be familiar with how to navigate the site – however this series of user guides has been produced to help answer the more complex questions a user may have. The sixth in the series aims to provide the user with more detailed information on how to use the Instant Atlas¹ maps on the system.

Getting Started

Sandwell Trends can be accessed from www.sandwelltrends.info, via Sandwell Council's intranet homepage, or via the Research Sandwell website (www.researchsandwell.org.uk). The Sandwell trends home page offers the user the chance to log in to the system – for the majority of users, this is unnecessary, as all pages on the system can be viewed by any level of user. However, there are two main cases when logging in would be beneficial:

- if the user wants to be able to save queries (which could then be emailed to other interested parties)
- or if the user wants to create or contribute to “Topic Pages.”

If you think you would need a log in, then contact [Research Sandwell](#) who will provide you with the appropriate access level (this is currently restricted to Sandwell Council users).

Technical Bit

As highlighted in [User Guide 1](#), you'll need to have the latest version of Adobe Flash installed to use the maps, charts or Benchmarking tools. If you don't have this, you can download it from <http://get.adobe.com/flashplayer/>

¹ The maps on Sandwell Trends are created using InstantAtlas v6 from Geowise Ltd.



So what's first?

Maps can be accessed in several ways on the system:

- Via a Topic Page (see [User Guide 5](#) for more information).
- As the result of a query (see [User Guide 2](#)).
- As part of the Benchmarking Tools (see [User Guide 4](#)).

The maps accessed from different parts of the system will vary, but the aim of this User Guide is to familiarise you with the basics of Instant Atlas maps – what features you can expect to see, and how to get the most out of the data that's presented.

As mentioned in [User Guide 2](#), there are currently two types of map templates used on Sandwell Trends. This Guide will begin by describing the features of the *Single Map*, and then will highlight the additional features of the *Profile Map*.

Firstly though, here are some key points to remember when mapping data in Sandwell Trends:

1. When you produce a map from a query, the query will load several *data series* into a map template at one time. If you were producing a chart, you could select a single *data series* to graph; however for maps, all the *data series* within a *topic* will be loaded into your resulting map.
2. A word of warning – some map queries can take a little time to load (due to the number of *data series* being loaded at once) – so don't assume your query hasn't worked if you don't see a map straight away.

When a *single map* template loads on screen, it will display the first indicator in the *topic* selected.

Elements:

The **title** at the top of the map will give the description of that indicator; the date shown; and the data *theme* (i.e. if the query shows analysis by a particular group of the population).

There are 3 **buttons** on the template:

Indicator button – click this button to display a list of the available indicators in the *data explorer* window. To change the indicator displayed in the map, click on the name of the indicator required. You may need to drill down further depending on the original map produced – just click on the further selections required. For example, if your original map was by age group, then when you click on a new indicator name, the list of available age bands will appear, and if data is available for several years, then the available dates will appear. Alternatively:

- Click '+' button in the bottom right corner of the Data Explorer to expand all the available indicators.
- Click '-' button in the bottom right corner of the Data Explorer to collapse all the available indicators back.

The date of the indicator displayed can also be changed by using the slide in the **date** component.



Zooming: Use the slider bar on the left of the map to zoom in and out. Click the zoom full icon (bottom magnifying glass) to zoom back to full extent. Alternatively, hold 'Shift' and click and drag a box on the map. The map will zoom to the area within the box drawn.

Menu: Click on the little triangle at the bottom of the map zoom slider bar to open a menu with further options for the report. These are also available via the context menu (right click mouse button) and are explained in detail later.

Area Selection: <Ctrl> and click and drag a box on the map. The map features within the box drawn will become selected and shaded orange.

Select a Geographic Area: Click on a geographic area to select it. A selected geographic area will be shaded orange. Hold down 'Ctrl' key to select multiple map features.

Tooltip: Hold your mouse pointer over an area on the map to display a tooltip with the geographic area name and indicator value.

Legend

Legend: The legend includes a key to the shadings used on the map, and a list of the map layers available. The 'key' element can be controlled by clicking on the 'pencil' icon next to the base geography name in this list. This will open the *Legend Settings* dialogue box.

Legend Settings: The items available in the Legend Settings dialog may vary depending on the data in the report and the way the report has been configured.

Border colour: The colour of the border around each geographical area on the map.

Transparency: By sliding the bar the transparency of the shaded areas in the map can be altered.

Palette: You can change the colour palette used to shade geographic areas in the map by clicking on a new palette.

Reverse palette: By checking this box you can reverse the colour palette used to shade geographic areas in the map.

No. Classes: You can increase or decrease the number of classes by clicking the Increase or Decrease buttons (labelled with black arrows). Geographic areas in the same class are given the same shade.

Classifiers: Select a classifier from the drop-down. This will decide how the ranges are calculated. The options are shown below: [With the exception of standard deviation, class breaks are calculated on-the-fly and will update if you change the number of classes].

Equal Interval: The intervals between class breaks are equal. The advantage of the equal-interval classification is that many map users will find it simple to understand. However, only the minimum and maximum data values are used when determining class breaks for the intervals (rather than the way the data is spread).

Quantile: Each class in the legend contains an approximately equal number of geographic areas. Advantages of the quantile classification are that it is appropriate for ordinal data (as data are rank-ordered) and it can help make map comparisons (assuming that the same number of classes is used for all maps). A disadvantage is that it does not consider how the data are distributed. If the data distribution is highly skewed, data values will be forced into the same class (either the lowest or highest) where this may not be appropriate. This may give a false impression that there is a relatively normal data distribution.



Natural Breaks: Data are assigned to classes based upon their position along the data distribution relative to all other data values. Values are assigned to classes such that the variances within all classes are minimized whereas the variances between classes are maximized. The advantage of this classification is that the data distribution is explicitly considered for determining class breaks. However, map users may not understand the classification method used and class breaks may not be immediately intuitive.

Continuous: Each geographic feature is shaded a different shade using a continuous scale. This legend type is useful for identifying extremely high or low values. Where an indicator has only a small number of unique data values (say 5 or less) this may be the most appropriate legend type to apply.

Standard Deviation: Class breaks reflect the number of standard deviations from the data average (or mean). Geographic areas are classified according to how many standard deviations above or below the average their indicator value falls. You can't change the number of classes for this legend type.

Highlighting and Selecting: Hold your mouse pointer over a class in the legend to highlight the geographic features that fall into that class. Click a class to select the geographic features that fall within that class.

Contextual layers: Many maps will allow 'contextual' layers to be added. These are additional geographic boundaries or points which can be overlaid on the map. Simply click on the green square next to the layer you'd like to add. To remove a layer, click on the green square again.

Data Table

Select: Click the name of a geographic area to select it. A selected geographic feature will be shaded orange.

Adjust column width: Hold your mouse pointer over the divider between column headers and lateral arrows will appear. Click and drag the divider to adjust column width.

Sort Columns: Click a column header to sort the table ascending/descending. This is the easiest way to find, for example, the area with the lowest rank for each indicator.

Magnifying Glass Icons: Click the magnifying glass icon next to an area name to make the map zoom to that geographic area.

Notes: Click on the notes symbol  to access further information on the type of geographic area displayed.

Scroll: Horizontal and vertical scroll bars will be available if data cannot be viewed within the table dimensions.

Comparator Table

This table lists any comparison geographies that have been included in the report, together with their values for the indicator displayed. Comparison values may be displayed in charts when you hold your mouse pointer over a comparison geography name.

Data Series Graph

Bars: For numeric indicator values there is a bar representing each geographic area listed in the data table. The height of the bars is proportional to the values in the data table. Bars are displayed in the same order as the features are sorted in the data table and shading is linked to the legend.



- To select, click a bar to select the corresponding geographic area on the map. A selected bar will be shaded orange. Alternatively, hold 'Ctrl' to select multiple bars or 'Shift' to select a range of bars. You can also drag a box to select multiple bars on the chart. Holding the 'Ctrl' key and clicking on a selected bar allows you to deselect it.

Error Bars: The bar chart may display error bars representing the lower and upper confidence limits associated with indicator values. These give an indication of whether the differences between indicator values are statistically significant.

Comparison Values: The data series graph can also display values for comparison geographies. Where available, these are shown using a horizontal line across the chart.

Tooltip: Hold your mouse pointer over a bar to display a tooltip with the geographic area name and value. It might also show the lower and upper confidence limit values of error bars.

Time Series Graph

If data is available over more than one time period, then a time series graph will be shown. This is a line graph. At least one area on the map needs to be selected for time series data to display. You can compare two areas over time by selecting one, and then moving the mouse over another. This will be shown in a different colour on the time series graph and data series graph. If you want to compare several areas over time, you can make multiple selections using <ctrl> click on the map, but these will all be shown in the same colour on the time series graph. Hovering over the line will tell you which line represents which area.

Context Menu (right click mouse button):

Clear Selection: This option allows you to deselect all geographic features that are currently selected.

Clear Comparison Selection: This option allows you to deselect all comparison geographies.

Filter Selection: This option allows you to create a filter from the geographic features that are currently selected.

Clear Filter: This option allows you to clear a filter that has been applied.

Print Preview: This option allows you to print either the full InstantAtlas dynamic report or individual components of the report. You can also decide if you want to print the dynamic report in Vector or Bitmap format. If you want any layers to have transparency (e.g. if you have background mapping switched on) you should choose to print in Bitmap format. If you do not require transparency of you may choose the Vector format which provides best quality.

You have the options to have the buttons within the InstantAtlas dynamic report showing in your printed output. You can also choose to have the images and the background appear in the printed output by checking or un-checking the respective boxes.

Export: This option allows you to export the full InstantAtlas dynamic report or individual components of the report in either JPEG or PNG format.

Reset Layout: This option allows you to return to the original layout of the InstantAtlas dynamic report.

Add Text: This option opens a text editor window that allows you to add custom text to the report. Different styles for the text can be defined before it is added. Once in the report, the text can be dragged to a different position. The 'Remove All' button of the text editor window deletes all custom text. Single text elements can get removed by selecting and pressing the 'Delete' key on your keyboard.



Add Shape: This option opens a shape editor window that allows you to add custom shapes to the report. Different styles for the shape can be defined before it is added. Once in the report, the shape can be dragged to a different position. The 'Remove All' button of the shape editor window deletes all custom shapes. Single shapes can get removed by selecting and pressing the 'Delete' key on your keyboard.

Screen Captures

As well as printing or exporting via the Context Menu, you can capture an InstantAtlas report as a screen capture.

Make sure the graphics are as large as possible and then hold down Ctrl-Alt-Prnt Scrn on your keyboard. Open another application, such as Word or Power Point, and paste (hold down Ctrl-V on your keyboard) the screen grab. You can then edit the graphics (crop, resize, sharpen, etc) as required.

So what's different about a profile map?

The screenshot shows the InstantAtlas interface for indicator NI001. It features a map on the left, a data table in the center, and a spine chart on the right. A red circle labeled 'Buttons' points to the top navigation bar containing 'Indicator', 'Map Leg...', 'Time', 'Filter', and 'Help'. Another red circle labeled 'Spine Chart' points to the chart area on the right. The data table shows values for various age groups in Tipton.

Indicator	Area	Value	Chart
15-24: 2008/09	Tipton	66.7	
25-34: 2008/09	Tipton	100	
35-44: 2008/09	Tipton	73.1	
45-54: 2008/09	Tipton	0	
55-64: 2008/09	Tipton	100	
65-74: 2008/09	Tipton	66.7	
75-84: 2008/09	Tipton	100	
85-94: 2008/09	Tipton	100	
95+: 2008/09	Tipton	No Data	
All: 2008/09	Tipton		

There are 5 **buttons** on the template:

Indicator button – this acts in exactly the same way as on the single map. Click this button to display a list of the available indicators in the *data explorer* window.



Map Legend button – this displays the map legend. When you click on it, the legend will appear over the data table and the data series graph. The legend can then be customised in the same way as it can on a single map. To hide the legend, just click on the map legend button again.

Time button – This will display a time series graph in place of the data series graph, where data over time is available. Click on the time button again to hide the time series graph.

Filter Button and Help Button – these both act in the same way as on the single map.

Spine Chart

The spine chart displays cross-indicator information (i.e. a profile) for any selected area(s). It does this using text, symbols and proportional bars. A legend is shown at the bottom of the chart. Select a geographic feature in the map, data table or bar chart to make it appear in the spine chart. It is possible to select further features by holding down the <Ctrl> key and clicking them. The selected area(s) will be shaded orange and the geographic feature name(s) will be displayed in the spine chart. The proportional bars will show in a different colour for each different geographic feature.

The proportional bars represent the indicator values or a percentage difference between the indicator value and a regional/national comparator. Where available, comparator values (such as for Sandwell) are shown as a dot. You can scroll the chart to see indicators that are listed further up or down. By clicking on a row in the spine chart you can change the indicator being shown in the map and bar chart. At the bottom of the spine chart you will find '-' and '+' buttons. These will collapse and expand all the themes in the chart – individual themes can be collapsed and expanded by clicking on the indicator name on the spine chart.

Some trickier datasets

[User Guide 2](#) described how to query a number of “trickier” datasets. Maps for these datasets vary little from the templates described previously, but just for clarification:

1. **Index of Multiple Deprivation.** This dataset produces a profile map. This profile includes a few extra buttons, which allow you to link to IMD publications produced by Research Sandwell and [Communities and Local Government](#) (CLG).
2. **Job Seekers Allowance Claimants (JSA).** This dataset produces a single map.
3. **Annual Business Inquiry (ABI).** Maps aren't available for this dataset.
4. **Mosaic Grand Index.** This dataset produces a profile map.
5. **Annual Household Income.** This dataset produces a profile map.

What can I do with the results of my map query?

As described earlier in this User Guide, the results of a map query can be exported as an image to use in reports or presentations or printed directly. It can also be saved as a screen capture. However, as a logged-in user, when you produce a map, you can save your query by clicking on the *save query* button, and can then send a link to that query to others that you think may be interested in what you've found. (By clicking on the *send query* button, outlook will open with the link already pasted in). When the recipient receives the email, they can click on the enclosed link, and directly access the map that you've just produced.



How do I find out further information?

You can access further Instant Atlas help from any map on Sandwell Trends by clicking on the help button, or you can visit the [geowise website](#) to access their user guides.

Further User Guides are available from the homepage of Sandwell Trends. These include:

- [Sandwell Trends – overview](#)
- [Interactive Tools - charts, maps and tables](#)
- [How do I find 2001 Census data?](#)
- [How do I use the Benchmarking tools?](#)
- [Publications and Topic Pages](#)

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