

Magic

Training Manual

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Section One

Background

What is MAGIC?

MAGIC is the first web-based interactive map to bring together information on key environmental schemes and designations in one place. The acronym MAGIC stands for Multi-Agency Geographic Information for the Countryside, however its remit has now been expanded. The interactive map now includes Coastal and Marine information to assist with contingency planning, for example, as a result of an oil spill.

The project was initially funded by the Treasury's Invest to Save Budget, a joint venture with the Cabinet Office providing funds to encourage two or more public bodies to work together to improve existing or initiate new modes of service, and also by Defra.

It is now funded and maintained by Defra, with the guidance and support of its partners.

Who is involved?

MAGIC is a partnership project involving six government organisations that have responsibilities for rural policy-making and management. Although it has been designed to meet the needs of the partner organisations, the facility is available to anyone over the internet.

The MAGIC Partners include:

- CLG (Communities and Local Government)
- Defra
- English Heritage
- Environment Agency
- Forestry Commission
- Natural England
- MMO (Marine Management Organisation)

Links have also been established with other organisations, which supply data. These organisations are listed on the Data Suppliers page (<http://magic.defra.gov.uk/suppliers.html>)

What information is held?

The information you can view is split into nine topics, which are:

- Access
- Administrative Areas
- Coastal & Marine Resource Atlas
- Great Britain
- Habitat Inventories
- Landscape
- Rural Designations - Other
- Rural Designations - Statutory
- Rural Land-based Schemes

Each topic contains data of a similar nature, for example Administrative Areas includes boundaries for:

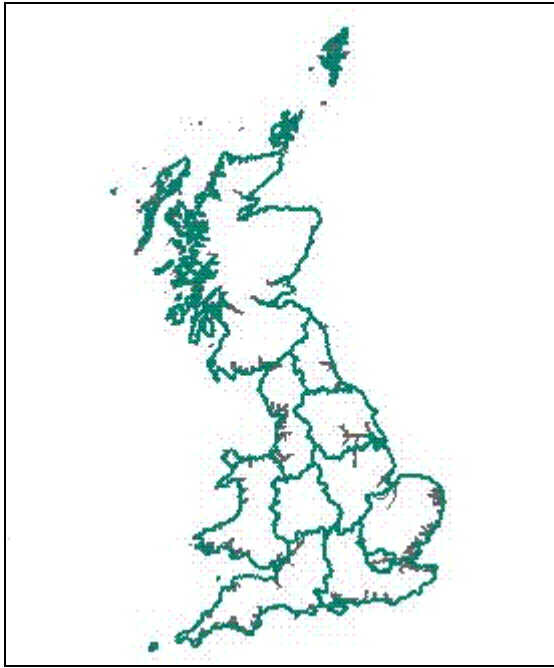
Countries, Metropolitan Districts and Unitary Authorities	NUTS3 - Counties and Groups of Unitary Authorities
NUTS1 - Government Office Regions	LAU1 - Districts and Unitary Authorities
NUTS2 - Combined Counties	Parishes
Environment Agency – Public Face Areas	Parliamentary Constituencies
Environment Agency – Water Management Areas	English Heritage Regions
Environment Agency – Public Face Regions	Forestry Commission Conservancy Boundaries
Natural England Regions	Environment Agency – Water Management Regions
	Urban Areas

The complete list of data included in each topic is available on the MAGIC website. You can view or search them by going to the Dataset Information page (<http://magic.defra.gov.uk/DataDoc/datadoc.asp>).

There is also a topic called ‘Design my Own Topic’ where you can pick and choose any of the layers.

What geographic area does it cover?

MAGIC’s primary focus is England; however some datasets that cover Scotland and Wales can be accessed via the “Design my own topic”, “Coastal & Marine Atlas” and “Great Britain” topics.



1.1 The geographic extent that MAGIC covers

Are there any limitations to the interactive map?

There are a number of important limitations imposed on the map that help to maintain the quality of service provided.

Scale Thresholds

A number of datasets have scale thresholds set. These limits have been set for one or both of the following reasons:

- To improve the speed of the application.
Some datasets are very detailed and contain many small features, such as Scheduled Monuments and Sites of Special Scientific Interest (SSSIs). Datasets such as these are not displayed at scales smaller than 1:500 000 so that the map loads as quickly as possible when opened at the full extent. If these datasets were loaded at the full extent the features would be indistinguishable from each other and would obliterate other loaded datasets.
- To display layers at appropriate scales.
Datasets are captured at a variety of scales and it is not appropriate to show this information at scales that differ greatly from the scale of capture.

Please refer to the Scale Limit webpage (http://magic.defra.gov.uk/website/magic/scale_thresholds.htm) for a list of all the scale thresholds that are used.

Watermark

Sometimes a 'MAGIC' watermark appears in the background of the map. To meet the copyright requirements of the Ordnance Survey data and ensures that the source of a printed map can be identified easily the watermark will appear at scales of 1:10,000 or larger.

Printing

While the maps can be printed, there are a number of things to consider. The scale bar is not printed with the map as the nature of the software means the scale is only approximate, not exact. Omitting the scale bar from the printed version means users cannot measure distances on the map, as they may be inaccurate. This prevents erroneous information being used in official documents.

The quality of the printed map is dependent on the printer used.

A copyright statement is printed on the map that may obscure some of the information you selected. Permission should also be sought from the owners of data displayed in the printed map before the printout is used in any official documents.

Terms of Use of the Website

Intellectual Property Disclaimer

The MAGIC application contains information which belongs to other parties. Users must ensure that any use of information does not breach the owner's copyright. If it is unclear whether any particular use is permissible a user should contact the copyright owner. The information supplied on MAGIC is updated periodically by the organisations that provide it. Users must check that any information accessed is current and addresses any specific purpose for which they propose to use it. Data supplied to MAGIC will have been captured for a specific purpose, at a scale relevant to this purpose. This does not guarantee that the data is fit for any other purpose.

General Disclaimer

The materials contained on this website are of a general, informational, nature. We have used reasonable endeavours to ensure the accuracy and completeness of the contents of the pages on this site but the information does not constitute advice and must not be relied on as such. To the fullest extent allowed by law, Defra and the MAGIC partner organisations will not be held responsible for any loss, damage, or inconvenience of any nature whatsoever caused as a result of any

inaccuracy or error within these pages. Links to other sites from these pages are for information only and Defra and the MAGIC partner organisations accept no responsibility or liability for access to, or the material on, any site which is linked from or to this site. We periodically review web links to ensure that sites can be accessed. If, however, you have difficulties accessing a site we would like to know. Please contact with full details.

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Section Two

Launching the Application

Getting Started

The interactive map is accessed from the MAGIC website, the address of which is <http://magic.defra.gov.uk>. As described in Section Four, there are a number of other facilities which can be accessed from the homepage that provide further information and support associated with the interactive map.

The interactive map can be launched either from the orange icon on the homepage, or from the 'Online Resources' dropdown menu from any page on the site.



MAGIC

About Magic ▼ Contact Us ▼ Online Resources ▼ Help ▼ What's New Site Map

Interactive Map Map Tutorial Dataset Info and Download Static Maps Training Manual Work in Progress

MAGIC

MAGIC was the first web-based interactive map service to bring together environmental information from across government. Partnership working has ensured that MAGIC has provided a sustained operational service to an extensive and diverse range of users far exceeding its original objectives and expectations of stakeholders.

Defra is the custodian of MAGIC with Natural England managing the service under the direction of a cross-government Steering Group.

Spotlight

Topic Changes

There have been some changes to the Topics in MAGIC which means some of the datasets have moved. A new Access Topic has been added and both the Land Classifications & Joint Character Areas Topics have been replaced by a Landscape Topic incorporating datasets from both topics. For a full list of the datasets now available in each topic please select a topic from the [Dataset Information and Download](#) page.

2.1 The MAGIC Homepage

Navigating through the Site

Throughout the MAGIC website there is a menu bar which offers options in drop-down lists on a Java-enabled machine. For users with different accessibility options a no-script version is available with static menus and no 'active' elements, such as drop-down lists. All pages on the site can be accessed from any other page, via this menu bar.

The interactive map has a number of elements that are used in browsing the map.

Radio Buttons

Step 2. Where do you want to go?

Note: Certain data layers will not appear at all map scales - click for [more information](#).

☐ Postcode ☐ Place ☐ Full Grid Ref - x,y ☐ Grid Ref - AB12(3)45(6) ☐ Latitude, Longitude
☐ County ☐ Government Region ☐ England ☐ Great Britain

Small round checkboxes that can be clicked on to indicate a selection, for example when selecting where you want to go on the launch page. Only one radio button at a time may be turned on.

Drop-down lists

Where there are limited options a drop-down list is provided, for example when choosing which map topic you wish to view on opening the map. Please note that in some web browsers (such as Firefox Mozilla), drop-down lists are not supported and you will need to type in your selection criteria.

Checkboxes


Unlike radio buttons, checkboxes are used where multiple choices are available, such as when selecting which layers to display when designing your own topic.

Icons

In the interactive map the tools are displayed as icons, such as the navigation tools always displayed at the bottom of the map window. Unlike desktop icons they do not need to be double-clicked to be made active: a single click selects the tool you wish to use, which turns red to show that you have selected it.




2.2 Selected 'Pan' icon

The other common icon is the information symbol,  which appears next to the dataset name in the List of Layers and Design my Own Topic windows. Clicking on this icon takes the user for the selected layer's metadata.

Hyperlinks

Hyperlinks are the most common form of navigation in most websites. They usually take the form of underlined text, which when clicked on takes the user to a new page. In MAGIC hyperlinks are used in the same way, with the addition of some images being hyperlinked. On the homepage the interactive map can be accessed by clicking on the hyperlinked orange image of the map of Britain.

Launch Page



**Interactive
Map**

New user of MAGIC?

Demonstration Map
Map Tutorial

Last Update: Wednesday 30 April 2008
[Updates to Interactive Map](#)

Note: Each dataset in MAGIC has its own version date which can be viewed in the [dataset information](#).

Step 1. What data do you wish to view? You can select to view any of the 9 different map topics, or design your own from the list of layers available. Most topics cover England only. Please click [here](#) to see which topics have GB coverage.

Administrative Areas

What's In This Topic?

Step 2. Where do you want to go? Note: Certain data layers will not appear at all map scales - click for [more information](#).

☐ Postcode
 ☐ Place
 ☐ Full Grid Ref - x,y
 ☐ Grid Ref - AB12(3)45(6)
 ☐ Latitude, Longitude
☐ County
☐ Government Region
☐ England
☐ Great Britain

I Agree to the [Terms of Use](#) of the MAGIC website. ☐

Open Map

2.2 The MAGIC Launch Page

The launch page is the first step in opening the interactive map. From here you choose the map topic you wish to view and the location you want to go to before opening the map itself.

Choosing a Map Topic

Select topic:

Select topic:

Design my Own Topic

Access
 Administrative Areas
 Coastal and Marine Resource Atlas
 Great Britain
 Habitat Inventories
 Landscape
 Rural Designations - Other
 Rural Designations - Statutory
 Rural Land-based Schemes

2.2 Map topics available

There are nine pre-set map topics to choose from, each containing layers of a similar subject (see Section One – What Information is Held?). You can select one of these, or design your own topic. Due to the number of layers that are available in the 'Coastal and Marine Resource Atlas' only 14 layers are switched on when you open the interactive map with that topic. You then need to click on the 'List of Layers' button to alter those datasets that are displayed (please refer to Section three for further details on using the 'list of Layers' button).

Design my Own Topic

In addition to the pre-set map topics, the interactive map has the facility for you to display any combination of up to 15 layers. The number of layers displayed is limited in order that the map service remains as efficient as possible.

Select up to 15 layers to include in your own map topic, then click on "Done" to proceed.

Note: Some layers will not be displayed outside certain scale limits. Click [here](#) for more information. If incorrect layers are showing once you've loaded your Saved Selection, refer to the [FAQ page](#).

England only

GB and Marine

<input type="checkbox"/> 2001 Settlements (England)	<input type="checkbox"/> Agricultural Land Classification - Provisional (England)
<input type="checkbox"/> Ancient Woodland (England)	<input type="checkbox"/> Areas of Outstanding Natural Beauty (England)
<input type="checkbox"/> Bathing Water Quality (England)	<input type="checkbox"/> Biosphere Reserves (England)
<input type="checkbox"/> Blanket Bog (England)	<input type="checkbox"/> Catchment Sensitive Farming Delivery Initiative 2006-2009: Priority Catchments (England)
<input type="checkbox"/> Coastal and Floodplain Grazing Marsh (England)	<input type="checkbox"/> Community Forests (England)
<input type="checkbox"/> Country Parks (England)	<input type="checkbox"/> Countryside and Rights of Way Act 2000 - Access Layer (England)
<input type="checkbox"/> Countryside and Rights of Way Act, Section 15 Land (England)	<input type="checkbox"/> Countryside Stewardship Agreements (England)
<input type="checkbox"/> Doorstep Greens (England)	<input type="checkbox"/> Energy Crop Scheme Agreements (England)
<input type="checkbox"/> English Heritage Regions (England)	<input type="checkbox"/> English Woodland Grant Scheme Work Areas (England)
<input type="checkbox"/> Environment Agency Area Boundaries (Public Face) at 1:10,000 scale (England)	<input type="checkbox"/> Environment Agency Area Boundaries (Water Management) at 1:10,000 Scale (England)
<input type="checkbox"/> Environment Agency Regional Boundaries (Public Face) at 1:10,000 scale (England)	<input type="checkbox"/> Environment Agency Regional Boundaries (Water Management) at 1:10,000 scale (England)
<input type="checkbox"/> Environmental Stewardship Agreements (England)	<input type="checkbox"/> Environmentally Sensitive Area Agreements (England)
<input type="checkbox"/> Environmentally Sensitive Areas (England)	<input type="checkbox"/> Felling Licence Agreements (England)
<input type="checkbox"/> Fens (England)	<input type="checkbox"/> Forestry Commission Conservancy Boundaries (England)
<input type="checkbox"/> Forestry Commission Woodland (England)	<input type="checkbox"/> Green Belt (England)
<input type="checkbox"/> Heritage Coasts (England)	<input type="checkbox"/> Important Bird Areas (England)
<input type="checkbox"/> Land Management Initiatives (England)	<input type="checkbox"/> Landscape Typology (England)
<input type="checkbox"/> LAU1 - Districts and Unitary Authorities (England)	<input type="checkbox"/> Less Favoured Areas (England)

2.3 List of available datasets

To design your own topic, select 'Design my own Topic' from step 1 on the launch page. A new window opens with a list of all available layers, split in to "England only" datasets and "GB and Marine" datasets. You can switch between the two types of datasets by clicking on the tabs at the top of the page. The tab in orange indicates which datasets you are looking at.

To get more information on any of the layers, click the Information icon ⓘ next to the layer name. This will take you to a new page displaying information, or metadata, about the dataset you requested. Close the window to return to the layer selection window. You may select up to 15 layers to show in your custom view, from either of the tabs. When you have selected the ones you want to display click on the 'Done' button to return to the Launch Page

There is an option to click on 'Save Selection' before you click on 'Done'. This saves the list of map layers you selected so that the next time you open the interactive map you can reload the same layers even when returning to it in a new session or at a later date. Note that you can save only one selection.

To reload a saved selection from the launch page, select 'Design my Own Topic' to open the list of available layers, then click the 'Load Saved Selection' button. Click 'Done' after the layers are automatically selected for you.

NB: Periodically you may find that the layers that are displaying when you load your Saved Selection are different to the ones you originally saved. This may happen after a [monthly update](#) when a layer has been added or removed – see the [What's New](#) section for details. The problem occurs because of how the individual layers are indexed and is unfortunately unavoidable in the current software. The only way around this is to re-save you selected layers.

Choose where you want to go

Step 2. Where do you want to go?

Note: Certain data layers will not appear at all map scales - click for [more information](#).

- ☐ Postcode ☐ Place ☐ Full Grid Ref - x,y ☐ Grid Ref - AB12(3)45(6) ☐ Latitude, Longitude
☐ County ☐ Government Region ☐ England ☐ Great Britain

2.4 Options for choosing location

You can choose any of the above options as a way of selecting your location. Click on the appropriate radio button and enter the details of the location into the text box below the radio button. When you have selected

your area read the terms of use, click to agree to them and then click on Open Map to launch the interactive map.

Postcode

Enter the full postcode into the text box, for example, LS16 5QT. When you click on 'Open Map' the postcode you entered will appear in the centre of the map, highlighted by a yellow circle.



2.5 Selected postcode

Place

Enter part or all of a place name into the text box and click on 'Open Map'. If there is more than one place that matches the criteria you entered, a list of options will be displayed before the map starts to load. Select the appropriate one from the list and the map will load. If there is only one place that matches the name you entered the map will load automatically. The place you selected will be in the centre of the map and will be highlighted with a light blue triangle.

Search Results

There are 5 locations matching your search text. Please choose a location from the list below:

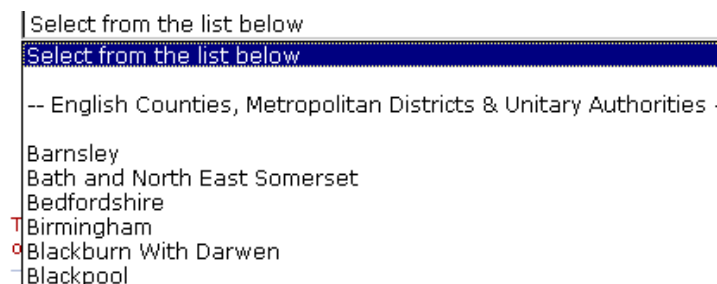
NAME	COUNTY
CLEEDOWNTON	SHROPSHIRE
LEEDON	BEDFORDSHIRE
LEEDS	KENT
LEEDS	WEST YORKSHIRE
LEEDSTOWN	CORNWALL

2.7 Placename Search Results

County

After clicking the 'County' radio button the text box will change to a drop-down list. The list is split into English Counties, Metropolitan Districts and Unitary Authorities, Scottish Council Areas and Welsh Unitary Authorities.

Scroll down the list and click on the county you want to display and click on 'Open Map'. The map and the Query/Selection Results box are displayed, with your chosen area highlighted on the map.

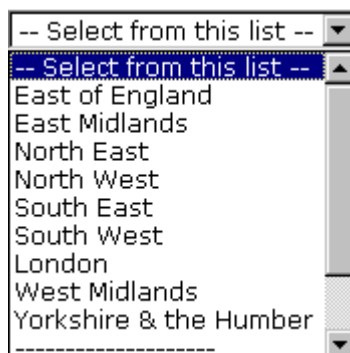


2.8 List of available counties

Please note that you will only be able to display Scottish Council Areas and Welsh Unitary Authorities if you have chosen either the "Design my own Topic", "Coastal and Marine Resource Atlas" or "Great Britain" topic.

Government Region

When the 'Government Region' radio button is clicked the text box changes to a drop-down list of the nine English Government Office regions and an option for Scotland and Wales. A Region is covered by one Government Office, which incorporates different Departments so that a wide range of policies can be delivered at a regional level. Select the region you wish to display and click on 'Open Map'. The map and the Query/Selection Results box are displayed, with your chosen area highlighted on the map.



2.9 List of Government Regions

Please note that you will only be able to choose the Scotland and Wales options, if you have chosen either the "Design my own Topic", "Coastal and Marine Resource Atlas" or "Great Britain" topics.

Full Grid Reference – x,y

Enter the full grid reference with eastings and northings (x, y) into the text box, for example 429646, 432709. Click on 'Open Map' and the map will open with the grid reference in the centre of the screen.

Grid Reference - AB12(3)45(6)

Enter the grid reference into the text box using the two-letter 100km square reference (AB) then either four digit 1km square reference (1245) or six digit 100m square reference (123456). Click on 'Open Map' and the grid reference you entered will be in the centre of the map.

Latitude and Longitude – 51.56, -2.66

Enter the latitude and longitude in decimal degrees into the text box. Click on 'Open Map' and the map will be centred on the latitude/longitude values that you entered. Note that due to the transformations required, latitude and longitude values are only accurate to around 5 metres.

England

This option will open the map up to display the whole of England. Note that some datasets will not be visible because of the scale at which England needs to be displayed. For example, Sites of Special Scientific Interest (SSSIs) will not be visible at small scale, due to the number of small features in the dataset.

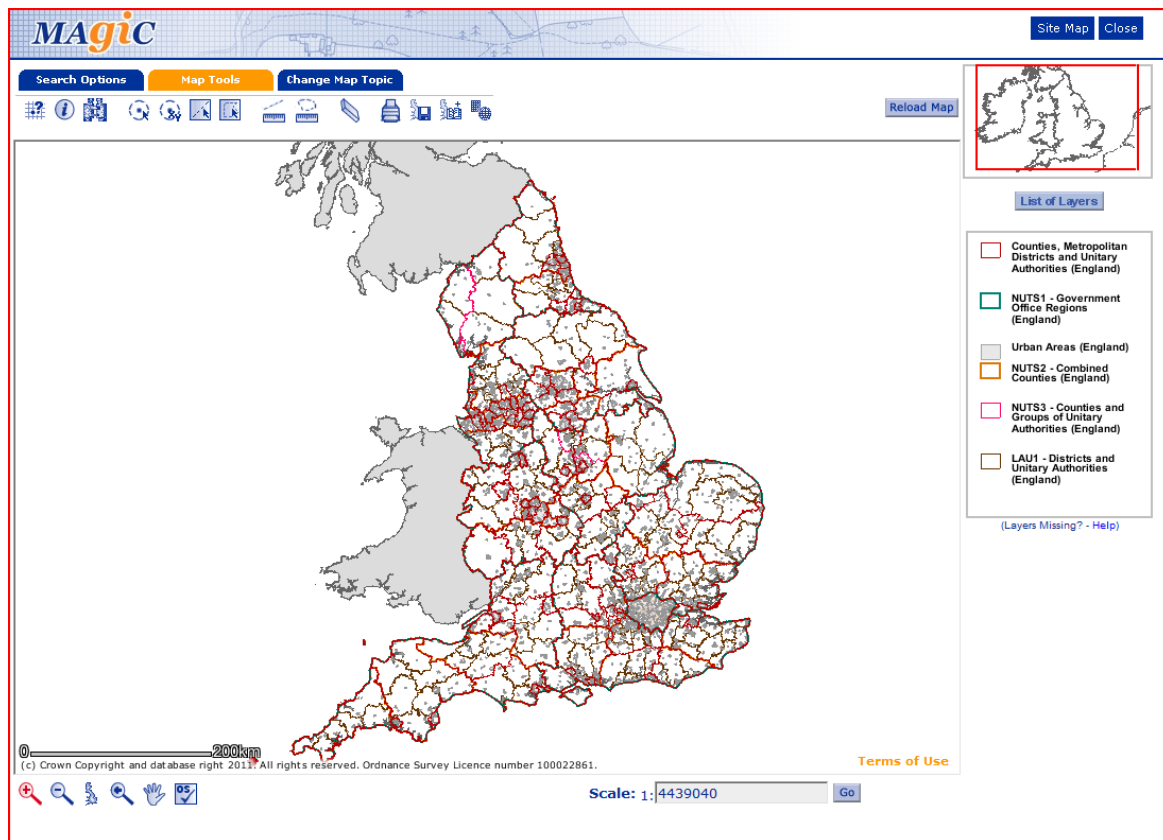
Great Britain

This option will open the map up to display the whole of Great Britain. It is only available when using the "Design my own Topic", "Coastal and Marine Resource Atlas" or "Great Britain" topic. Note that some datasets will not be visible because of the scale at which Great Britain needs to be displayed.

Section Three

Using the Application

Map Window



3.1 The map interface

The map opens in a new window with its own menus and tools. The original MAGIC window remains open, but you can also access the other resources on the site by using the links at the top of the map window.

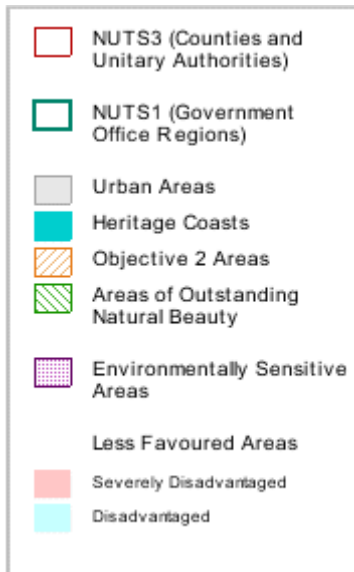
Overview Map



3.3 Overview map

The Overview Map is always displayed in the top right corner of the map window. Its main purpose is to show you the area displayed in the map window in relation to the rest of Great Britain. You can also click on the overview map to re-centre the displayed map on a different location.

Legend



3.4 Map legend

The legend is always displayed to the right of the map window, and shows those layers that have been selected and are visible at the current scale. Some layers are not displayed until the scale is large enough that they are easily distinguishable, for example Scheduled Ancient Monuments and Sites of Special Scientific Interest. See Section One ('Are there any limitations imposed on the interactive map?') for more information on the scale at which particular layers are displayed.

Scale Bar

Scale: 1:

3.5 Scale bar

The scale bar is displayed below the map window. It shows the current scale of the map you are viewing, and can be used to change the scale of the map by typing the scale into the box and clicking on the 'Go' button.

List of Layers

It is possible to switch the layers displayed in the map on and off, through the 'Layer List' window. This can be accessed by clicking on the 'List of Layers' button above the legend. Only datasets from your pre-set map topic will appear in the list. To turn layers off, remove the tick from the box. To turn layers on, add a tick to the box. Then press the 'Refresh Layers' button. Any layers displayed in grey text are not visible at the scale at which you are currently viewing the map.

If you designed your own topic on the launch page you will only be able to turn on or off those layers included in your custom topic.



3.6 Turn layers on or off

Reload Map



3.7 Reload Map button

The Reload Map button reloads the map at the current scale, with all the layers in your chosen map topic switched on.

Navigation Tools



3.8 Navigation tools

The navigation tools located in the bottom left corner of the screen are standard to most Geographic Information Systems.

**Zoom in**

Click on this tool, then click once on the map window and your map will zoom in on the centre of the point you clicked on. This will zoom in to twice the current scale (for example, if the current scale is 1:300000, clicking once will zoom to 1:150000). To zoom in on a particular area, click once and hold the mouse button down to drag a box over that area.

**Zoom out**

Click on this tool, then to zoom out centred on any position over the map, click on that position on the map. This will zoom to half the current scale (for example, if the current scale is 1:300000, the new scale will be 1:600000). To zoom out of a particular area, drag a box over that area.

**Zoom to full extent**

Clicking this button will return the map window to the extent of Great Britain.

**Back to last extent**

Click this button to return to the previous map extent that you were viewing. Note that the application only remembers the last extent you viewed, so clicking 'Back to last extent' a second time would take you to the first extent that was displayed, effectively looping through two extents.

**Pan**

Click on this tool then move your mouse over the map. Hold down the mouse button and drag the map in any direction. When you have the map in the desired position, release the mouse button. Panning can also be carried out by clicking on your new location on the Overview map.

**Switch OS backdrop on / off**

This allows you to turn the OS backdrop off if you want to see only the layers you have selected and not the map details, and back on if you do want to see the map.

Map Options menu

Search Options**Map Tools****Change Map Topic**

The Map Options menu has three parts, which are accessed via the 'tabs' shown above the map window. The selected menu is highlighted in orange. 'Map Tools' is the default menu selected when the map window opens.

Search Options

Govt Office

This search includes nine English Government Office Regions, Scotland and Wales. Clicking on the button will open a window. Select the region you want to display from the drop-down list and click on 'Go To Region'. You will not be able to select Scotland and Wales unless you are in the "Design my own topic", "Coastal and Marine Atlas" or "Great Britain" topic.

Postcode

When you click on the button enter the full postcode you want to display, for example LS16 5QT and click on 'Go To Postcode'. This will zoom to a postcode and highlight it with a yellow dot. .

Place

Clicking on this button will open a window with a text box. Enter part or all of a place name and click on 'Go To Place'. A Query/Selection Results window will open displaying those places that best match the text you entered. Click on one of the places and the map will recentre on

County

The County search allows you to search for an English County, Metropolitan District or Unitary Authority, a Scottish Council Area or a Welsh Unitary Authority. Enter either part or the entire name of the county you want to display in the text box, or select the county from the drop-down list and click on 'Go To County'.

Grid Ref

Both full and 100m grid references can be used in MAGIC. Choosing to search for a location using the Grid Ref button enables you to enter either the 100m grid reference or the full grid reference with eastings and northings. Once you've entered the grid reference, set the scale and click on 'Zoom to Point'.

Lat / Long

The Lat/Long search allows you to zoom to a location by entering a latitude and longitude value in decimal degrees. Once you've entered the values, set the scale and click on 'Zoom to Point'. Due to the transformations required latitude and longitude values are only accurate to about 5 metres.

Map Tools**Where am I?**

This allows you to see the grid reference of a point you select on the map. Click on the tool then click on the point on the map you want the details for. A message box will appear giving both the full and 100m grid references, along with the latitude and longitude.

**Identify**

This tool allows you to find out information about any of the features shown on the map that you are viewing. Click on the tool to open an 'Identify' window and specify the layer you wish to identify features from using the drop-down menu. Move the mouse into the map window and click on the feature you want to identify. The results will be displayed in a window.

**Find**

The find tool allows you to find features in any layer by typing in their name. Click on the tool to open the 'Find' window and specify the layer you wish to identify features from using the drop down list. Enter part or the entire name in the 'with a name or attribute' text box then click 'Find Features'. A list will appear to the left of the Map window: click on the feature you want to display on the map. The map will centre on the feature you selected, highlighting it.



Site check around point

You can carry out a simple spatial query to identify whether features from one or more layers are present in a particular location. After clicking on the 'Site check around a point' icon enter the radius you want to check around a chosen point in metres, up to a maximum of 20,000 metres. Click 'Next' and then click on the point on the map that you want to check. The search may take a few minutes. On completion the map will show your search area and a report will be generated with a list of features found in the area. Please note that this tool is not available when you are in ED50 mercator projection.



Site check around grid reference

Click on the tool and select the type of grid reference you want to enter, either Grid Ref or Full Grid Ref. If you choose Grid Ref, enter the map reference using either 6 or 8 digits and start with the two letters denoting the 100km grid square. If you choose Full Grid Ref, enter the eastings and northings for the point you want to check.

For either type of grid reference, enter the radius in metres, up to a maximum of 20,000 metres, and then click 'Run Check'. The search may take a few minutes. On completion the map will show your search area and a report will be generated with a list of features found in the area. Please note that this tool is not available when you are in ED50 mercator projection.



Site check along line

You can check sites along a line on the map by clicking on the tool, tracing a line on your map and clicking the 'Run Check' button in the dialogue box. Between clicking each point of the line you are drawing you should wait for the map to refresh showing the point before clicking the next one. Please note you will only see the starting point and the last point you click as you are tracing the line. Once you have finished tracing, click on 'Run Check'. The search may take a few minutes. On completion the map will show your search line and a report will be generated with a list of features found in the area.



Site check within polygon

To search within a polygon you must be zoomed to a scale of less than 1:300,000. Click on the tool, and then trace the polygon around the area you want to check. Wait for the point you have just clicked to be drawn on the map before clicking the next point. The application automatically joins the last point with the first point so you don't need to close the polygon completely. Please note you will only be able to see the starting point and the last point you clicked as you are tracing the polygon. Click the 'Run Check' button in the dialogue box. The search may take a few minutes. On completion the map will show your search area and a report will be generated with a list of features found in the area.



Measure distance

This tool allows you to measure a distance between two points on the map with the mouse. Click on the button to open the Linear measure window and start tracing the line you wish to measure. Between clicking each point of the line you are drawing you should wait for the map to refresh showing the point before you click the next point. As you move the mouse the segment figure will be updated to show the distance from the last point you clicked. The total length and points will keep updating until you click the last point and click on 'Finish Measuring'. The measure line will appear on the screen with the total length displayed in the Linear Measure window. Please note that this tool is not available when you are in ED50 mercator projection.



Measure area

This tool allows you to measure the area of a polygon you have traced on the map. As with the 'Site Check within a Polygon' method, after clicking a point on the map you should wait for the map to refresh showing your point as a red dot before clicking again. Please note you will only be able to see the starting point and the last point you clicked as you are tracing the polygon. The perimeter and points will continually update as you click each point. Once you have drawn the polygon click on the 'Measure Area' button and the area values will update and the polygon will appear on the screen. Please note that this tool is not available when you are in ED50 mercator projection.

**Clear selected / highlighted features**

Click on this tool to remove any highlighted features, such as postcode or polygons or lines you have drawn on the map.

**Print**

To print the map that is currently displayed, click on the print button, which will open up a window with some options. Choose the size of the map you require by clicking on one of the radio buttons. You can decide whether you want to show the Legend, and (or) an Overview map on your print by clicking on the relevant check boxes. Add a title to appear on the map and click 'Create Print Page'. Copyright information is automatically added to all prints.

**Export**

To save the map currently displayed as an image on your computer, click this tool. A new browser window will open with the map in picture format. Right-clicking on the image will give you the option to 'Save Picture As' or 'Save Image As' depending on your browser. The picture can be saved to your own computer, as a Gif file.

NB: Permission from the owners of the data in an exported image must be sought if the picture is to be used in another published document. The owner of a dataset is listed in the Dataset Information section.

**Bookmark Map**

You can add the current map to your list of favourites by clicking the 'Bookmark Map' tool. You will be prompted to copy the link to the address bar of your internet browser, or to click the 'Bookmark Map' link in the dialogue box.



Change Projection

All the MAGIC topics by default allow you to view the data in GB National Grid projection. This is suitable for the majority of the topics as they only contain land based datasets for Great Britain. However, some of the marine datasets, within the "Coastal and Marine Atlas" topic, are more suited to an alternative projection (ED50 Mercator)

Within the 'Coastal and Marine Atlas' topic the 'Change projection' button will allow you to reproject from GB National Grid to ED50 Mercator. The projection you are in is indicated on the grey status bar at the bottom of the page. Once in ED50 Mercator projection you can revert back to GB National Grid simply by clicking on the "Change Projection" button again.

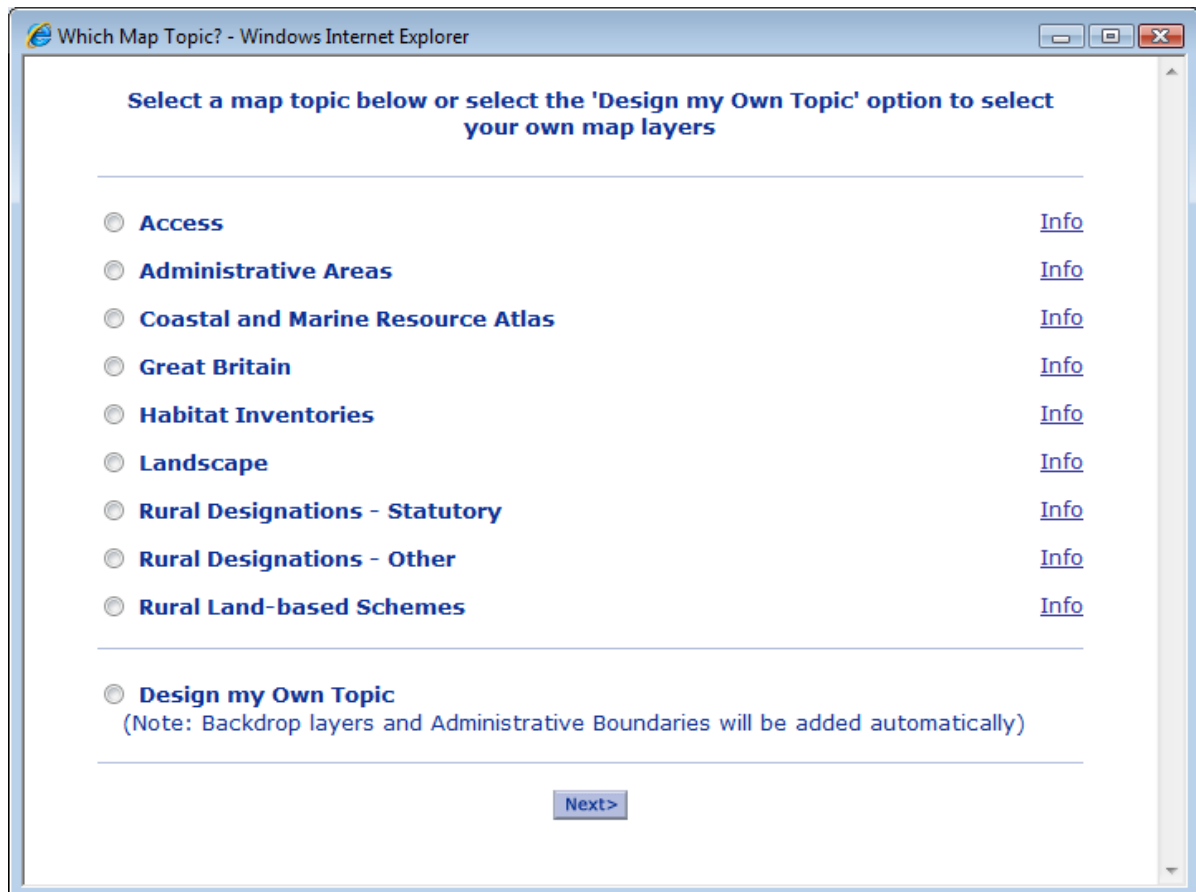
Please note that a message will appear on the screen if you are in any other topic than 'Coastal and Marine Atlas' informing you that the projection can't be changed.

Change Map Topic

Current Map Topic: **Statutory Rural Designations**

[Change Map Topic](#)

When you have loaded the interactive map it is possible to change the map topic you are viewing without having to go back to the launch page. The 'Change Map Topic' menu gives you the options of either selecting a pre-set map topic or designing your own. Clicking on the tab will display the current topic, and will give you the option to change it.



3.9 Options for changing the map topic

Select the topic you wish to view or 'Design my Own Topic' Click on next and the new topic will load into the map window and the layers list will appear for you to switch layers on and off. The 'Coastal and Marine Resource Atlas' will only have 14 preset layers switched on. You may wish to alter those that are ticked in the layers list window.

Section Four

Other Facilities

Web Site

The address for the website is <http://magic.defra.gov.uk/> and along with the interactive map there are a number of other resources. These resources provide additional facilities and information along with support to the interactive map. They can be accessed from the menubar on any page.

Dataset Information and Download Facility

This facility can be accessed from the 'Online Resources' menu or from a button on the home page. It holds metadata for the datasets included in the interactive map.

Search for dataset:	<input type="text"/>	Go
OR Select Topic:	Administrative Areas ▼	Go
OR Select Dataset:	2001 Settlements (England) ▼	Go
OR Select Organisation:	Communities and Local Government ▼	Go

4.1 Dataset information search facility

You can search for a particular metadata document using 4 methods. Users can enter part or the entire name of the dataset in the 'Search for Dataset' field, or select a topic, dataset or organisation from the dropdown lists, to bring up a subset of MAGIC datasets that fit the criteria you requested. A 'Search Results' window will open, with a list of possible datasets. Click on the one you wish to view metadata for.

Dataset Information: Areas of Outstanding Natural Beauty (England)	
This dataset can be downloaded from http://www.qis.naturalengland.org.uk/pubs/qis/qis_register.asp	
Name	Areas of Outstanding Natural Beauty (England)
Map Topic(s)	Rural Designations - Statutory
Abbrev Name	AONB
Theme	AONBs are designated areas where protection is afforded to protect and manage the areas for visitors and local residents. By using this data you are accepting the Terms of Use for Natural England's Information and Data as published at: http://www.naturalengland.org.uk/copyright . If you wish to use the data for commercial purposes you should contact Natural England's Enquiry Service, tel: 0845 600 3078, email: enquiries@naturalengland.org.uk .
Labelling Convention	Numerical code identifying each individual AONB
Definition	Individual AONB boundaries
Domain of Use	England
Owner	Natural England
Version	
Version Date	01/09/2010
Parent	Not Applicable
Child	Not Applicable
Responsible Authority	Natural England
Frequency of Supply	Irregular
Source	Mixed scale paper mapping
Scale	Mixed small, medium and/or large scales
Data Capture Process	Heads-up digitising

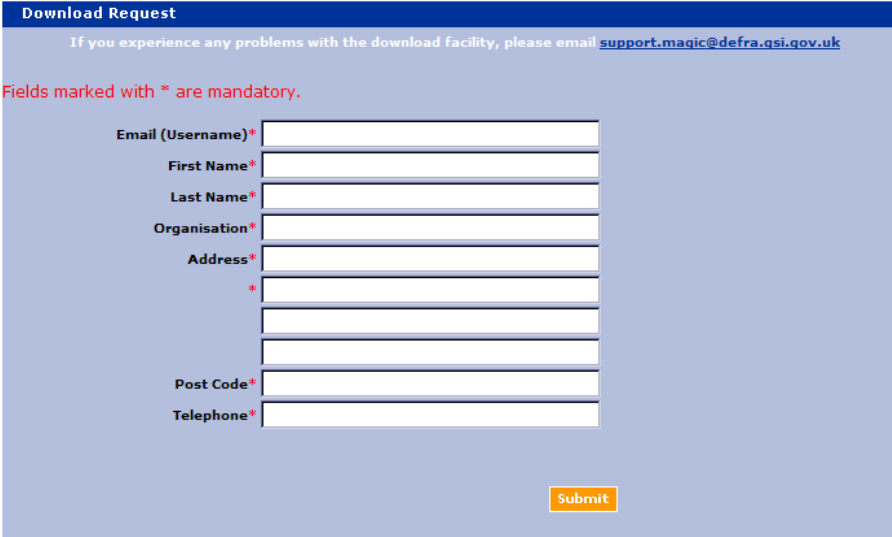
4.2 Results of a dataset information search

Information is displayed in a table showing all the information currently held for the dataset, under the following fields:

- Name
- Map Topic (s)
- Abbreviation
- Theme
- Labelling convention
- Definition
- Domain of use
- Owner
- Version
- Version date
- Parent
- Child
- Responsible Authority
- Frequency of supply
- Source
- Scale
- Data capture process
- Quality
- Positional accuracy
- Precision
- Measurement
- Unit of measure
- Dimension
- Other Information
- Comments

In addition to viewing the metadata, some of the datasets are available to download directly from the MAGIC website. If there are two buttons available at the top of the metadata page, 'New User' and 'Existing User' then you can download this dataset from the website.

If you are a new user to the download facility, click on 'New User' and this will allow you to register for the facility. This involves supplying your name, organisation, address, contact details and email address. If you have already registered then click on 'Existing User' and enter your e-mail address, which is your username.



The screenshot shows a web form titled 'Download Request' with a blue header. Below the header, a message states: 'If you experience any problems with the download facility, please email support.magic@defra.qsi.gov.uk'. A red note indicates 'Fields marked with * are mandatory.' The form contains the following fields, each with a red asterisk indicating it is mandatory:

- Email (Username)*
- First Name*
- Last Name*
- Organisation*
- Address* (consisting of three stacked input boxes)
- Post Code*
- Telephone*

A yellow 'Submit' button is located at the bottom right of the form area.

4.3 Dataset download new user registration form

After registering or logging on as an existing user, users must complete the Download Request form stating the reason for use of the data, the date by which the data will be used and the format they require the data in (either Shapefile for use in ESRI products or TAB for use in Mapinfo). Users must also accept the licence agreement and Fair Processing Notice by ticking the 2 checkboxes before they can download the data.

Download Request

If you experience any problems with the download facility, please email support.magic@defra.qsi.gov.uk

How will the data be used? *

Until when will the data be used? *
Date please (dd/mm/yyyy)

Select available format

Terms and conditions

BEFORE YOU CHECK ON THE "I Agree" BOX AT THE END OF THIS DOCUMENT AND DOWNLOAD THE DATA, YOU MUST CAREFULLY READ THE TERMS AND CONDITIONS OF THIS LICENCE. BY CHECKING THE "I Agree" BOX AND BY ACCESSING THE DATA YOU WILL BE DEEMED TO BE BOUND BY THE TERMS OF THIS LICENCE. IF YOU DO NOT WISH TO BE BOUND BY THE TERMS OF THIS LICENCE THEN PLEASE CLICK THE "Cancel" BUTTON NOW.

1 Licence

Defra grant you a non exclusive non-transferable licence (without the right to sublicense) to copy and use the Data which is derived from Ordnance Survey data in accordance with the terms of this licence agreement.

You may only use the Data for your own internal business use, that is use of Data for the internal administration and operation of your business and not for


4.4 Download request – licence agreement

When the form has been completed click the Submit button. A window will open giving details of the format and size of the file about to be downloaded. Click on the filename to start the download.

Dataset Information and Download Facility

Click on the filename below to download the data you have requested	
Filename	magalc_shp.zip
Size	8.65 Mb

Note: You will need to unzip this file. If you do not have unzip software, visit <http://www.winzip.com> to download Winzip.

 [Download another dataset](#)

If you experience any problems downloading this dataset please [contact us](#).

4.5 Download the file

A dialogue box will open asking you to Save or Open the file. Click Save and specify the location. When it has been downloaded the dataset can be opened using the appropriate GIS software.

Those datasets that aren't available for download from the MAGIC website often provide some details at the top of the metadata form of another website download facility or a contact e-mail address.

Static Maps

A number of static maps have been produced for individual datasets, where the data is not always visible in the interactive map, for example where scale thresholds are imposed on datasets that are too large to be viewed at the regional or national scale. These maps can be accessed from 'Online Resources' on the menubar.

A regional map can be produced by selecting the dataset you wish to view at step 1 and the region at step 2. This option is only available for English regions.

Static Maps - Regional

1 Select the map layer you wish to view:

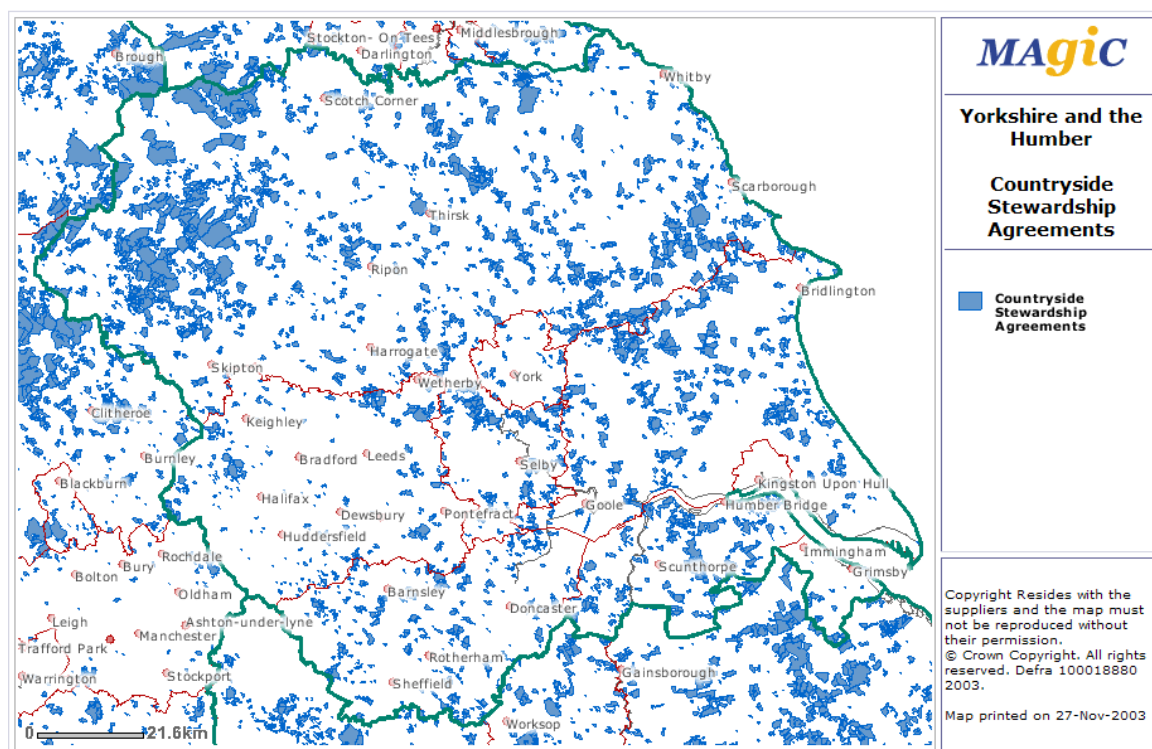
- ☒ 2001 Urban Settlements
- ☐ Agricultural Land Classification (Provisional)
- ☐ Ancient Woodland
- ☐ Biosphere Reserves
- ☐ Common Land
- ☐ Countryside Stewardship Agreements
- ☐ English Nature Management Agreements
- ☐ Environmentally Sensitive Area Agreements
- ☐ Forestry Commission Woodland
- ☐ Grassland Inventory
- ☐ Green Belt
- ☐ Important Bird Areas
- ☐ Local Nature Reserves
- ☐ National Inventory of Woodland and Trees
- ☐ National Nature Reserves
- ☐ National Trust boundaries (indicative only)
- ☐ Nitrate Sensitive Areas
- ☐ Nitrate Vulnerable Zones
- ☐ Organic Farming Scheme Agreements
- ☐ Ramsar Sites
- ☐ Scheduled Monuments
- ☐ Sites of Special Scientific Interest
- ☐ Sites of Special Scientific Interest Units
- ☐ Soilscape
- ☐ Special Areas of Conservation
- ☐ Special Protection Areas
- ☐ Woodland Grant Schemes
- ☐ Woodland Trust Sites

2 Choose a region by clicking on the map or select from the drop-down list:



4.6 Regional static map selection

This produces a map that can be printed or pasted into another document.



4.7 Regional static map output

National maps are available for England and GB maps are available for Great Britain, in PDF format. They can be downloaded by clicking on the appropriate image. Maps are available in black and white or colour.

Static Maps - National

Select the map you wish to display. All maps are available as either colour or black and white PDF documents. You will need [Adobe Acrobat](#) to view these documents.

Agri-Environment Scheme Uptake (England) Colour (11529 Kb) Black & White (11525 Kb)	Agricultural Land Classification - Provisional (England) Colour (3750 Kb) Black & White (3337 Kb)	Ancient Woodland (England) Colour (1392 Kb) Black & White (1388 Kb)
Areas of Outstanding Natural Beauty (England) Colour (431 Kb) Black & White (441 Kb)	Biosphere Reserves (England) Colour (267 Kb) Black & White (263 Kb)	Catchment Sensitive Farming Delive Initiative 2006-2009: Priority Catchments (England) Colour (697 Kb) Black & White (492 Kb)
Coastal BAP Priority Habitats (England) 	Country Parks (England) 	Countryside and Rights of Way Act 2000 - Access Layer (England)

4.8 National static maps

Online Help

A full Online Help section is available from the Help menu. This explains all aspects of the interactive map; including detailed descriptions of how to use the map tools as well as some worked examples.

The screenshot shows the 'Find' tool interface within the MAGIC application. On the left is a navigation pane with a tree view containing items like 'How to use the Launch Page', 'Application Interface', 'Navigation Tools', 'Map Tools', 'Where Am I?', 'Identify', 'Find', 'Site Check', 'Site Check Around a Point', 'Site Check Around Grid Reference', 'Site Check Along a Line', 'Site Check Within a Polygon', 'Measure Distance', 'Measure Area', 'Clear Selection', 'Print', 'Export Image', 'Bookmark Map', 'Change Projection', and 'Search Options'. The 'Find' item is selected.

The main content area is titled 'Find' and contains the following text: 'The find tool allows you to find features in any layer by typing in their name. Click on the tool and specify the layer you wish to identify features from using the drop down list. Enter part or all of the name in the 'with a name or attribute' text box then click 'Find Features'.'

Below the text are two input fields: 'Find me a feature in:' with a dropdown menu showing 'Sites of Special Scientific Interest (GB)', and 'with a name or attribute:' with a text box containing 'Dee Estuary'. A 'Find Features' button is located below these fields.

Below the input fields, a paragraph states: 'A list will appear in the Map window: click on the feature you want to display in the map. If the feature you wish to identify crosses a country boundary then the feature may appear twice in the list as some of the layers are made up of three separate datasets (one from England, one from Scotland and one from Wales) - please refer to the [FAQ](#) page for more details.'

The results section is titled 'Sites of Special Scientific Interest (GB)'. It includes a note: 'As this feature crosses a national border, attributes from each country are listed. Please click [here](#) for more information.'

Below the note is a table with the following data:

Name	Reference	Hectares	Citation
DEE ESTUARY	1002349	5241.25	1000595

Below this table is another table with the following data:

SSSI Code	Name	Cartesian Area (Ha)	Northings	Eastings	Scale	Last Notified	First Notified	Area (square metre)
31WHJ	DEE ESTUARY / ABER AFON DYFRDŴY	13681.09	379040	321419	2500	Thu, 17 Jun 1999 00:00:00 UTC	Sat, 1 Jan 1972 00:00:00 UTC	SPHERICAL


Below the tables, a paragraph states: 'When the map opens it will automatically zoom to the feature you selected, highlighting it.'

At the bottom of the main content area is a small map showing the location of the feature, with labels for 'Horn Bank', 'Mackinac Island', 'Moreton', and 'Stanton'.

4.9 Online Help facility

Map Tutorial


The map tutorial is designed to assist users who are not familiar with Geographic Information Systems (GIS). It provides worked examples to allow users to become more familiar with the tools and information available in MAGIC with step-by-step instructions on performing the more common tasks, such as displaying layers, moving around the map and performing site checks. The tutorial can be opened from the homepage or by going to the Help menu and selecting Map tutorial.

 Multi-Agency Geographic Information for the Countryside

Online Resources ▼ Help ▼ Contact Us ▼ About MAGIC ▼

Map Tutorial

The map tutorial contains worked examples to allow you to gain familiarity with the Interactive Map and to learn about the different functions. If you require more information at any point, please refer to the [Online Help](#).

 [Interactive Map](#)

To access the Interactive Map, follow the link from the MAGIC home page or from the 'Online Resources' menu on any page. This takes you to the initial page where you choose which layers you wish to view on the map and the area that you are interested in viewing.

Task 1 | Task 2 | Task 3 | Task 4 | Task 5 |

Task 1: Opening the Map


When you open the Interactive Map you can load one of the prepared 'map topics' or design your own topic containing your own choice of map layers. From the opening page, we will open a map centred on the grid reference SE2581 containing the following layers:

- Areas of Outstanding Natural Beauty
- Environmentally Sensitive Area Agreements
- Heritage Coasts
- Less Favoured Areas
- Objective 2 Areas
- Scheduled Monuments
- Sites of Special Scientific Interest
- Special Protection Areas
- Woodland Grant Schemes

To do this:

1. In Step 1, 'Which map topic do you wish to view?', from the drop-down list, select 'Design my Own Topic'
2. A window should pop up, prompting you to select your map layers. Select the layers listed above.
3. When you have selected your layers, click on 'Save Selection'. (You can now bring up the same selection next time by clicking on 'Load Selection').
4. Click on 'Done' when you have selected your layers.
5. In Step 2, 'Where do you want to go?' click on the radio button alongside 'Grid Ref - AB12(3)45(6)' to indicate that you are entering a grid reference and in the text box enter the text "SE2581".
6. Now click on 'Open Map' and the map should begin loading in a new window.

The map may take a minute or so to load.

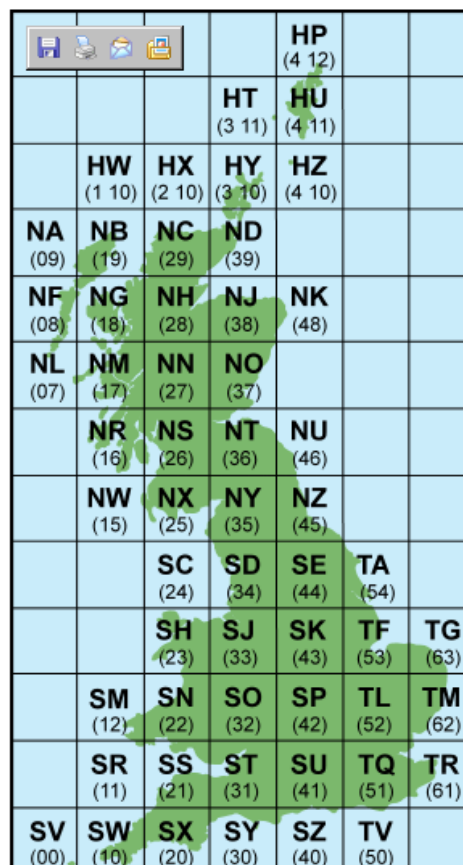
 [Top](#)

4.10 The map tutorial

Working with Maps

A guide for using grid references and Ordnance Survey data is included in the Help menu describing how grid references are constructed and when to use them.

2. The 100km squares for Great Britain



				HP (4 12)		
			HT (3 11)	HU (4 11)		
	HW (1 10)	HX (2 10)	HY (3 10)	HZ (4 10)		
NA (09)	NB (19)	NC (29)	ND (39)			
NF (08)	NG (18)	NH (28)	NJ (38)	NK (48)		
NL (07)	NM (17)	NN (27)	NO (37)			
	NR (16)	NS (26)	NT (36)	NU (46)		
	NW (15)	NX (25)	NY (35)	NZ (45)		
		SC (24)	SD (34)	SE (44)	TA (54)	
		SH (23)	SJ (33)	SK (43)	TF (53)	TG (63)
	SM (12)	SN (22)	SO (32)	SP (42)	TL (52)	TM (62)
	SR (11)	SS (21)	ST (31)	SU (41)	TQ (51)	TR (61)
SV (00)	SW (10)	SX (20)	SY (30)	SZ (40)	TV (50)	

4.11 Working with maps – a guide to using grid references

Other information

The web site is being continually updated with new information for users, including links to other organisations that may be of interest or that have contributed in some way to MAGIC, frequently asked questions and a glossary of terms used in GIS and the interactive map.

Users can find out more about the background to the project by visiting the Project Documentation section, where all documentation produced as part of the development of the project are available in PDF format. Links to the partner organisations are also included.

The MAGIC Project Team welcomes all feedback, comments and suggestions, which can be sent by email to support.magic@defra.gsi.gov.uk.

Section 5

Examples

Launching the Application

Example 1: Design your own topic

In this worked example you will select a list of layers to display in the interactive map and save the selection for future use.

On the launch page, select ‘Design my Own Topic’ from the list of topics in Step 1.

Click the checkbox next to each of the following layers to select them:

Areas of Outstanding Natural Beauty (England)
Heritage Coasts (England)
Objective 2 Areas (England)
Sites of Special Scientific Interest (England)
Woodland Grant Schemes (England)

Environmentally Sensitive Areas (England)
Less Favoured Areas (England)
Scheduled Monuments (England)
Special Protection Areas (England)

<input type="checkbox"/> 2001 Settlements (England)	<input type="checkbox"/> Agricultural Land Classification - Provisional (England)	<input type="checkbox"/>
<input type="checkbox"/> Ancient Woodland (England)	<input checked="" type="checkbox"/> Areas of Outstanding Natural Beauty (England)	<input type="checkbox"/>
<input type="checkbox"/> Bathing Water Quality (England)	<input type="checkbox"/> Biosphere Reserves (England)	<input type="checkbox"/>
<input type="checkbox"/> Blanket Bog (England)	<input type="checkbox"/> Catchment Sensitive Farming Delivery Initiative 2006-2009: Priority Catchments (England)	<input type="checkbox"/>
<input type="checkbox"/> Coastal and Floodplain Grazing Marsh (England)	<input type="checkbox"/> Community Forests (England)	<input type="checkbox"/>
<input type="checkbox"/> Country Parks (England)	<input type="checkbox"/> Countryside and Rights of Way Act 2000 - Access Layer (England)	<input type="checkbox"/>
<input type="checkbox"/> Countryside and Rights of Way Act, Section 15 Land (England)	<input type="checkbox"/> Countryside Stewardship Agreements (England)	<input type="checkbox"/>
<input type="checkbox"/> Doorstep Greens (England)	<input type="checkbox"/> Energy Crop Scheme Agreements (England)	<input type="checkbox"/>
<input type="checkbox"/> English Heritage Regions (England)	<input type="checkbox"/> English Woodland Grant Scheme Work Areas (England)	<input type="checkbox"/>
<input type="checkbox"/> Environment Agency Area Boundaries (Public Face) at 1:10,000 scale (England)	<input type="checkbox"/> Environment Agency Area Boundaries (Water Management) at 1:10,000 Scale (England)	<input type="checkbox"/>
<input type="checkbox"/> Environment Agency Regional Boundaries (Public Face) at 1:10,000 scale (England)	<input type="checkbox"/> Environment Agency Regional Boundaries (Water Management) at 1:10,000 scale (England)	<input type="checkbox"/>
<input type="checkbox"/> Environmental Stewardship Agreements (England)	<input type="checkbox"/> Environmentally Sensitive Area Agreements (England)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Environmentally Sensitive Areas (England)	<input type="checkbox"/> Felling Licence Agreements (England)	<input type="checkbox"/>
<input type="checkbox"/> Fens (England)	<input type="checkbox"/> Forestry Commission Conservancy Boundaries (England)	<input type="checkbox"/>
<input type="checkbox"/> Forestry Commission Woodland (England)	<input type="checkbox"/> Green Belt (England)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Heritage Coasts (England)	<input type="checkbox"/> Important Bird Areas (England)	<input type="checkbox"/>
<input type="checkbox"/> Land Management Initiatives (England)	<input type="checkbox"/> Landscape Typology (England)	<input type="checkbox"/>
<input type="checkbox"/> LAU1 - Districts and Unitary Authorities (England)	<input checked="" type="checkbox"/> Less Favoured Areas (England)	<input type="checkbox"/>
<input type="checkbox"/> Local Nature Reserves (England)	<input type="checkbox"/> Lowland Calcareous Grassland (England)	<input type="checkbox"/>
<input type="checkbox"/> Lowland Dry Acid Grassland (England)	<input type="checkbox"/> Lowland Heathland (England)	<input type="checkbox"/>
<input type="checkbox"/> Lowland Meadows (England)	<input type="checkbox"/> Lowland Raised Bogs (England)	<input type="checkbox"/>
<input type="checkbox"/> Millennium Greens (England)	<input type="checkbox"/> Moorland Linc (England)	<input type="checkbox"/>
<input type="checkbox"/> National Character Areas (England)	<input type="checkbox"/> National Forest (England)	<input type="checkbox"/>
<input type="checkbox"/> National Inventory of Woodland and Trees (England)	<input type="checkbox"/> National Nature Reserves (England)	<input type="checkbox"/>
<input type="checkbox"/> National Parks (England)	<input type="checkbox"/> National Trails (England)	<input type="checkbox"/>
<input type="checkbox"/> National Trust Properties (England)	<input type="checkbox"/> Natural Areas (England)	<input type="checkbox"/>
<input type="checkbox"/> Natural England Regions (England)	<input type="checkbox"/> Nitrate Sensitive Areas (England)	<input type="checkbox"/>
<input type="checkbox"/> Nitrate Vulnerable Zones (England)	<input type="checkbox"/> NUTS2 - Combined Counties (England)	<input type="checkbox"/>
<input type="checkbox"/> NUTS3 - Counties and Groups of Unitary Authorities (England)	<input type="checkbox"/> Objective 1 Areas (England)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Objective 2 Areas (England)	<input type="checkbox"/> Organic Farming Scheme (England)	<input type="checkbox"/>
<input type="checkbox"/> Parishes (England)	<input type="checkbox"/> Parliamentary Constituencies (England)	<input type="checkbox"/>
<input type="checkbox"/> Protected Wreck Sites (England)	<input type="checkbox"/> Purple Moor Grass and Rush Pasture (England)	<input type="checkbox"/>
<input type="checkbox"/> Ramsar Sites (England)	<input type="checkbox"/> Reedbeds (England)	<input type="checkbox"/>
<input type="checkbox"/> Registered Battlefields (England)	<input type="checkbox"/> Registered Common Land (England)	<input type="checkbox"/>
<input type="checkbox"/> Registered Parks and Gardens (England)	<input type="checkbox"/> Scheduled Monuments (England)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Sites of Special Scientific Interest (England)	<input type="checkbox"/> Sites of Special Scientific Interest Units (England)	<input type="checkbox"/>
<input type="checkbox"/> Soilscape (England)	<input type="checkbox"/> Special Areas of Conservation (England)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Special Protection Areas (England)	<input type="checkbox"/> Town or Village Greens (England)	<input type="checkbox"/>
<input type="checkbox"/> Traditional Orchards - Provisional (England)	<input type="checkbox"/> Undetermined Grassland (England)	<input type="checkbox"/>
<input type="checkbox"/> Upland Calcareous Grassland (England)	<input type="checkbox"/> Upland Experiment Areas (England)	<input type="checkbox"/>
<input type="checkbox"/> Upland Hay Meadows (England)	<input type="checkbox"/> Upland Heathland (England)	<input type="checkbox"/>
<input type="checkbox"/> Walking for Health (England)	<input type="checkbox"/> WES Agreements (England)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Woodland Grant Schemes (England)	<input type="checkbox"/> Woodland Trust Sites (England)	<input type="checkbox"/>

5.1 Selected layers

When you have selected the layers, click ‘Save Selection’. Click on ‘Done’ when you have selected your layers to return to the launch page.

Example 2: Choosing where you want to go – Grid Reference – AB12(3)45(6)

Having chosen the map topics you want to display, you will now select the location to go to by entering the grid reference.

Two types of grid reference are used in MAGIC: the full grid reference which uses Eastings and Northings, and the short grid reference that identifies the grid squares your chosen location falls in. This example uses the latter method.

Click on the radio button next to 'Grid Ref – AB12(3)45(6)' to indicate that you are entering a grid reference. In the text box enter the grid reference SE2581:

Step 2. Where do you want to go?

Note: Certain data layers will not appear at all map scales - click for [more information](#).

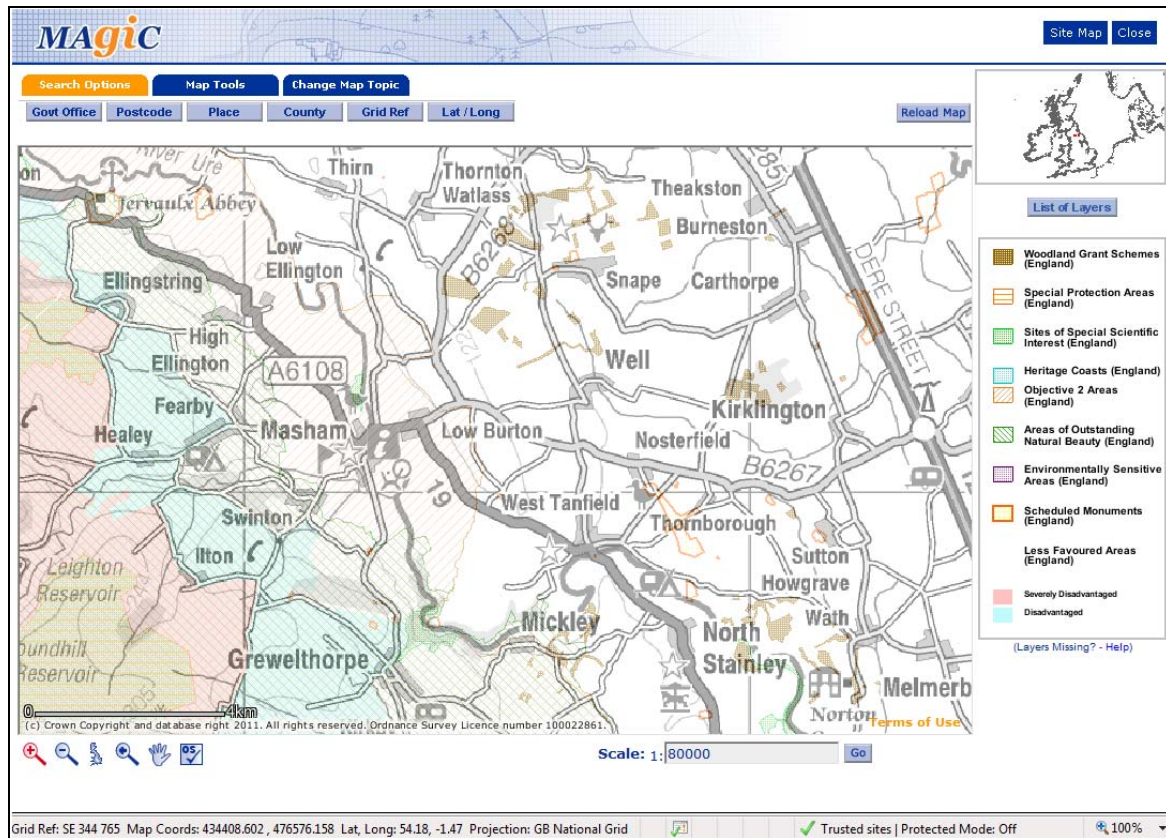
- ☐ Postcode ☐ Place ☐ Full Grid Ref - x,y ☐ Grid Ref - AB12(3)45(6) ☐ Latitude, Longitude
☐ County ☐ Government Region ☐ England ☐ Great Britain

I Agree to the [Terms of Use](#) of the MAGIC website. ☐

[Open Map](#)

5.2 Enter grid reference to go to

Next, read the terms of use, click to agree to them and click the 'Open Map' button to view your selected map topics and location.



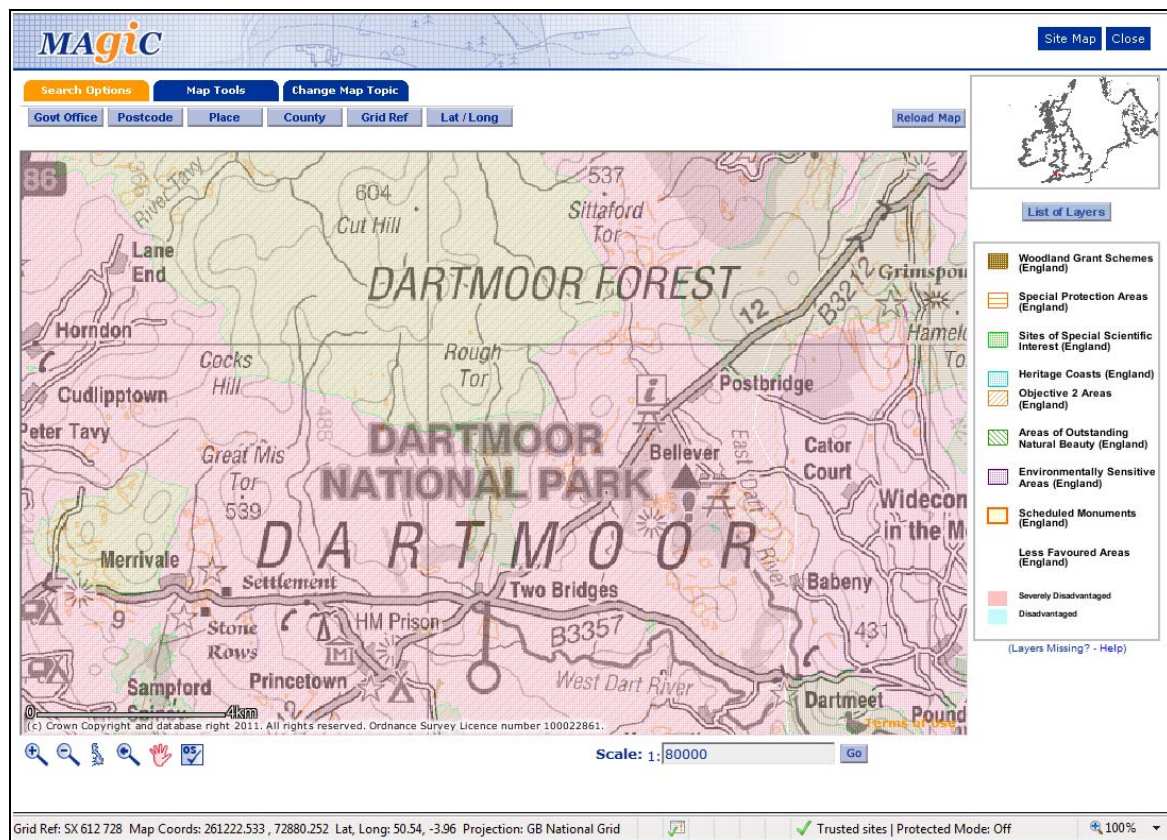
5.3 The open map at grid reference with selected layers

Using the Interactive Map

Example 3: Changing the information displayed using the Overview Map and List Layers option

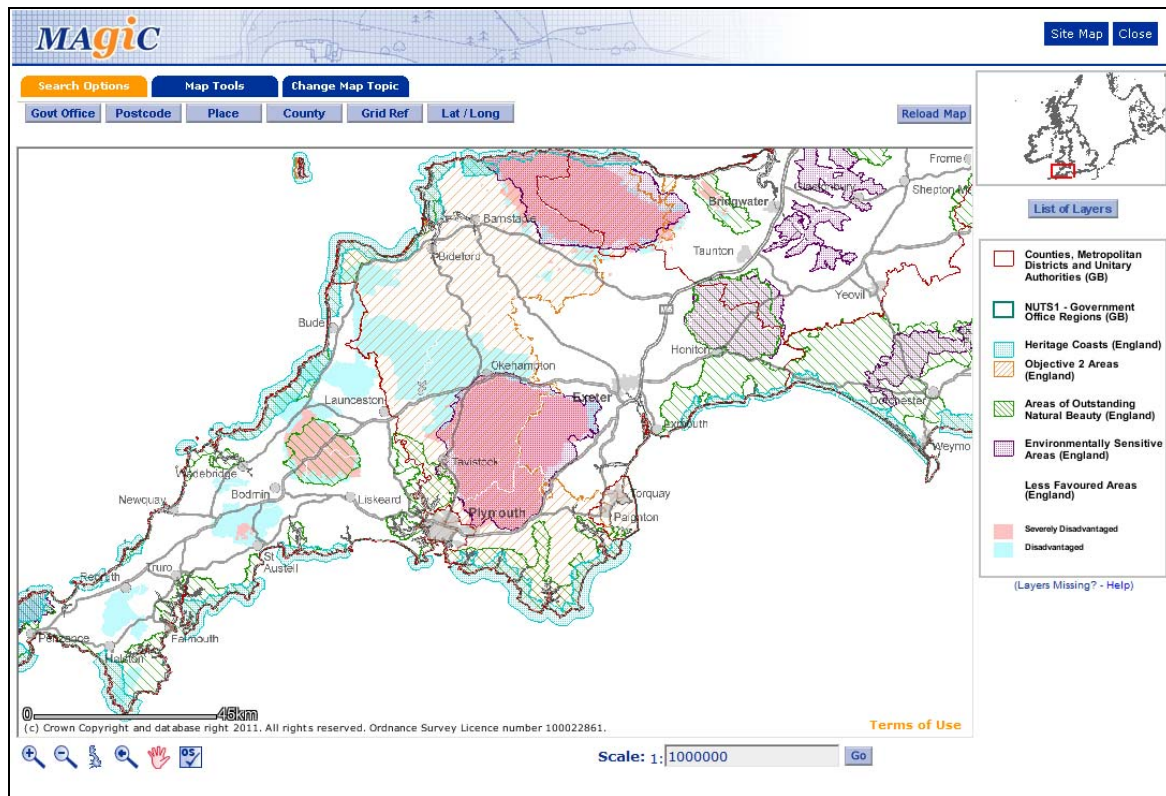
In this exercise you will change the location and layers displayed in the map window using the overview map and scale bar, and by turning layers on and off with the List Layers facility.

Click on the Overview Map on a point in England not currently covered by the red indicator box.



5.4 Changing the location displayed by clicking on the overview map

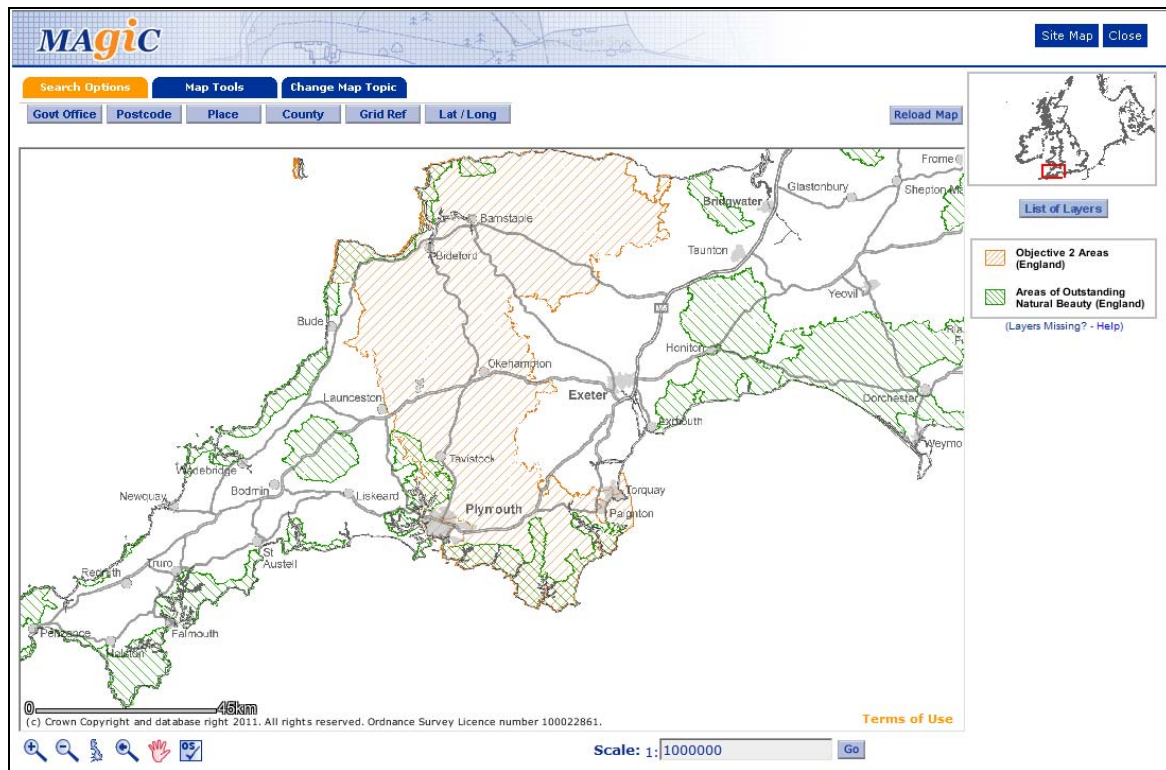
When the map has reloaded click in the Scale Bar and change the scale to 1000000 and click Go. When the map has refreshed, note that some layers that were previously visible have been turned off. The red box has also enlarged to cover the area now displayed in the map.



5.5 Changing the map scale to display different layers

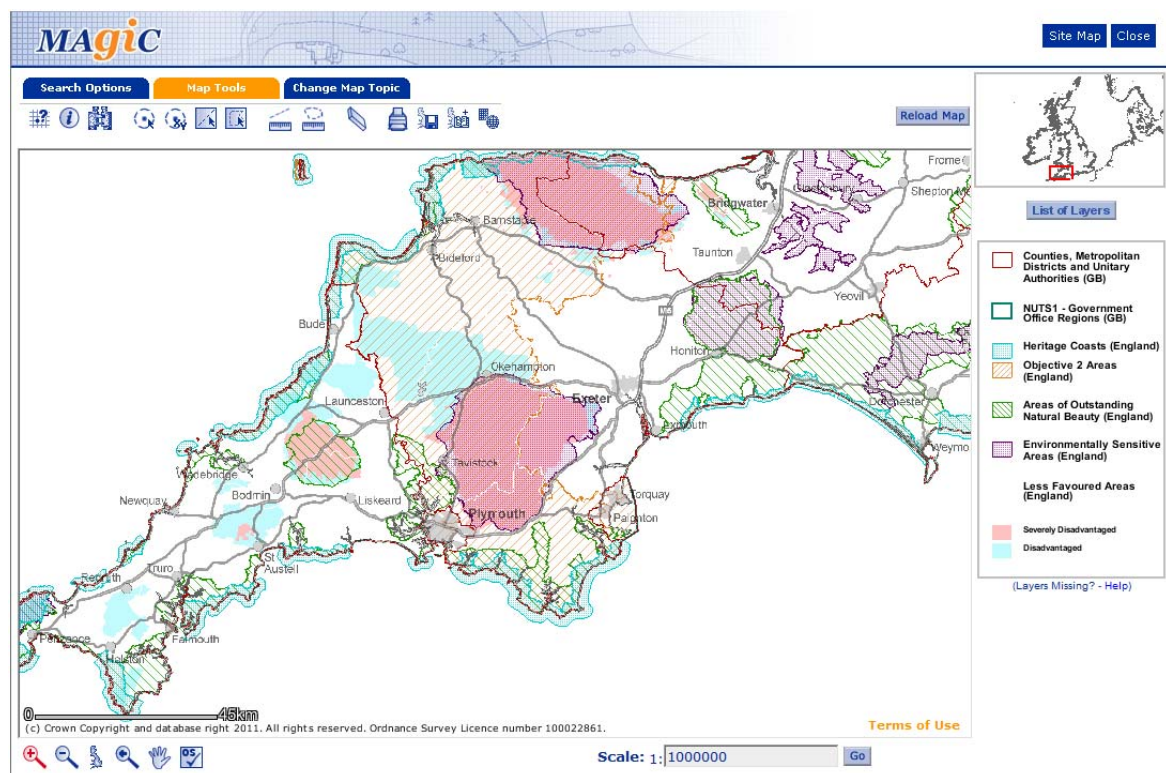
Click on the 'List of Layers' button to display the list of layers in order to turn off ones you don't want to view. A number will be listed in grey text – these don't need to be turned off, as they are not displayed at this scale. Click on the checkbox next to all layers except Objective 2 areas and Areas of Outstanding Natural Beauty – these are the only ones that will be displayed.

Click 'Refresh Layers', and then close the list of layers by clicking the 'Hide List' button. The list can be hidden before the map has finished refreshing as it is in a separate window.



5.6 Turning off layers to reduce the information shown

To restore all the layers that were turned off in step 3, click on the 'Reload Map' button.



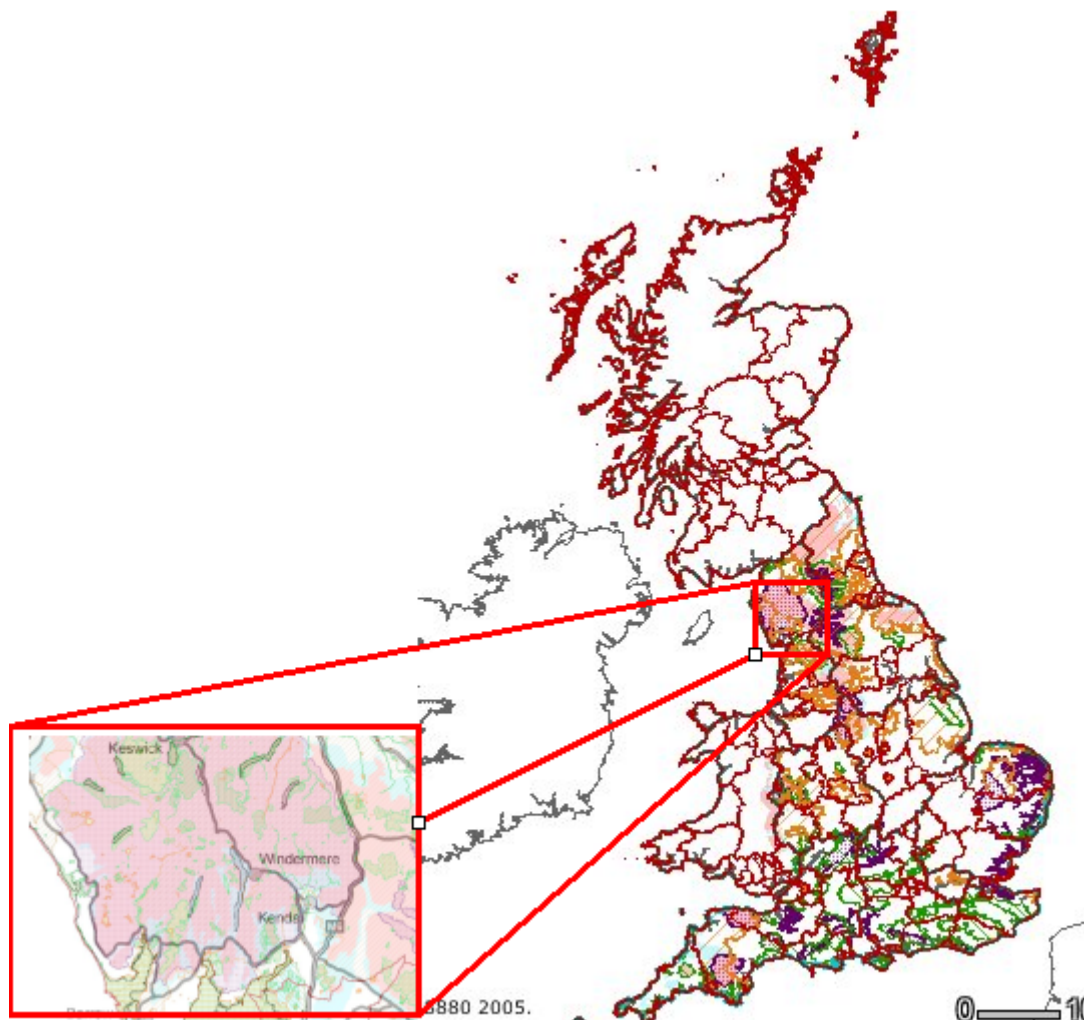
5.7 The restored map

Example 4: Using the Navigation Tools

You should still have the map open after the last exercise. Click the 'Full Extent' button to display the whole country.

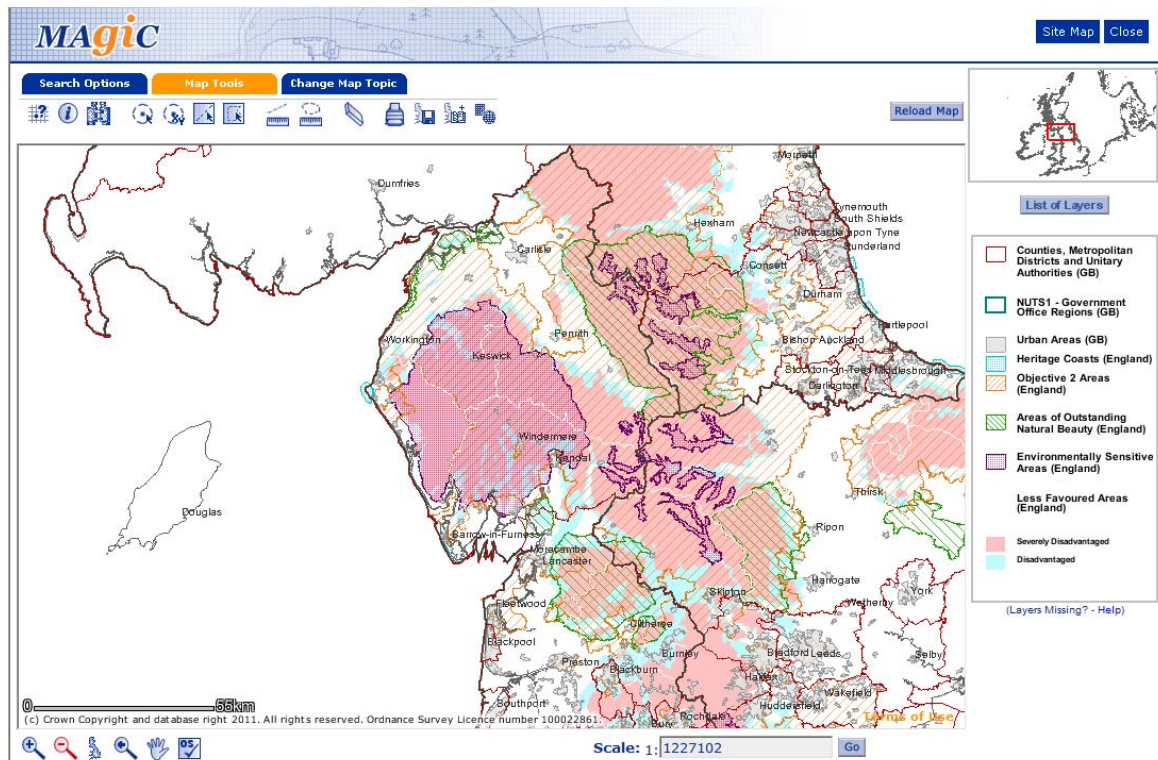
1. Zooming in and out

To zoom in on the county of Cumbria, click on the 'Zoom in' tool. Click on the map and, holding the left mouse button down, drag a box over the area you want to zoom in on.



5.8 Box around area to be zoomed in on, with results (not displayed like this in MAGIC)

Click on the 'Zoom Out' tool and click once on the map, without holding the mouse button down. In this way you can zoom out to twice the scale you are currently displaying. In the same way, clicking once with the 'Zoom In' tool zooms in to half the scale of the current display.



5.9 New display after zooming out

Now return to the map your previous view by clicking the 'Back to last extent' button.

2. Panning

Zoom in on an area that includes Brough, Cumbria and the horseshoe-shaped area of the Pennine Dales Environmentally Sensitive Area (ESA) to the south-east of Brough.

Which dale is covered by the horseshoe-shaped area of the ESA? The name of the dale should be displayed on the OS basemap.

.....

Using the 'Pan' tool, move the map until you can see Settle (due south of Brough).

Example 5: Identifying and finding features

This exercise will use some of the tools in the Map Options menu to identify and find features on the map.

1. Displaying a grid reference

Your map should be displaying Settle and the Forest of Bowland, with layers selected in your own map topic displayed. If you turned off any layers in Example 4 you will need to turn them back on to do this exercise.

Using the 'Where am I?' tool, find out the grid reference for the Scheduled Monument directly north of Settle, near Stainforth. Note down both the full and short grid references. (Tip: click on the centre of the polygon that shows the location of the Monument.

Short grid ref:.....

Full grid ref - Eastings:.....Northings.....

2. Identifying a feature

Now find the name of the monument using the 'Identify' tool. Click on the tool and a new window will open asking which layer you want to identify a feature from.

If it isn't already selected, choose 'Scheduled Monuments' from the list, then click on the feature on the map.

What is the name of the Scheduled Monument?

.....

3. Finding a feature

Change the map topic displayed to 'Rural Designations – Statutory' using the 'Change Map Topic' tool.

Using the 'Find' tool, find Shapwick Heath SSSI. Click on the tool and in the new window select 'Sites of Special Scientific Interest' from the list of layers.

In the text box below it, enter part or the entire name. If you enter part of the name, a list of sites matching your entry will be displayed – for example, entering 'Shap' will return Shap Fells and Shapwick Grange Quarry as well as Shapwick Heath.

Select the appropriate one from the list by clicking on the underlined name. The map will automatically zoom to the feature, which will be highlighted in light blue.

What is the full and short grid reference of Canada Farm near the western end of the site?

Short grid ref:.....

Full grid ref - Eastings:.....Northings.....

Example 6: Performing Site Checks

Site checks can be carried out on points, grid references, lines or within polygons.

1. Site check around a point

Click the 'Site check around a point' tool. When the window opens, enter a radius of 10000 metres in the appropriate box and click 'Next'.

Now click on Canada Farm. The check will take a few moments. A new window will open listing all the features from the current map topic that have been found around the farm. A red hashed circle on the map will show the area searched.

How many National Nature Reserves are within 10000 metres of Canada Farm?

.....

How many different designations do the Somerset Levels & Moors have (i.e., features where the Name field is Somerset Levels & Moors)? What are they?

.....

.....

2. Site check around a grid reference

Click the 'Site check around a grid reference' tool. In the new window that opens, click on the Full Grid Ref button.

Using the full grid reference of the Scheduled Monument found in Step 1 of Example 5; enter the eastings and northings in the appropriate boxes.

In the Radius box, enter 10000 then click the 'Run Check' button. The site check will take a few moments.

A new window will open listing the features found around the grid reference that you entered, with a red hatched circle around it on the map.

What are the names of the two Special Areas of Conservation that fall within a 10000 metre radius of the Scheduled Monument?

.....

.....

How many Local Nature Reserves are within the circle?

.....

3. Site check along a line

Using the Place search tool display Thetford in Norfolk. In the Scale Box change the scale to 300000. This is the lower scale limit for performing a site check along a line. Move the map until you can see both Thetford and Diss.

Click on the 'Site check along a line' tool. When the new window giving the instructions has opened, click on the map at the point you want the line to start. Use the centre of the circle that shows Thetford's location as your starting point.

Wait for the map to refresh and for your point to be highlighted with a red dot, then click on the centre of Diss as the end point for your line (the middle of the circle showing where the town is). In the instructions window click the 'Run Check' button.

Which Site of Special Scientific Interest does the line intersect?

.....

What is the area of the Breckland Environmentally Sensitive Area?

.....

4. Site check within a Polygon

Using the County search tool, display Devon then zoom in to Dartmoor Environmentally Sensitive Area (ESA) in the south of the county. In the Scale Box change the scale to 300000, the lower limit for performing a site check within a polygon. Centre the map using the pan button, so that you can see Okehampton, Exeter, Torquay and Tavistock.

Click the 'Site check within a Polygon' tool. When the window has opened giving instructions, click on the map at Okehampton. This is the start point of the polygon you will draw. Click on Exeter as the next point. Continue clicking points on the map at Torquay and Tavistock to form a rough square. Note that you need to wait for the red dot to appear for each point you click before clicking on the next one.

When you have clicked the last point in the polygon, go to the instruction window and click 'Run Check'. You don't need to close the polygon yourself as the first and last points clicked will automatically be joined.

When was Dartmoor designated a National Park?.....

How many Special Protection Areas fall within the polygon?.....

Example 7: Changing the Map Topic

Click on the 'Change Map Topic' menu tab to display the current map topic, and then click on the 'Change Map Topic' button. This opens a list from which you can select a pre-set map topic, or design your own. Select 'Great Britain' and click 'Next'.

The list of layers included in the map topic is displayed at the same time as the map is refreshed. When you have reviewed the list of layers, click 'Hide List' to close the window.

Using the appropriate map tools, identify the RSPB reserve located due north of Kings Lynn in Norfolk.

What is the name of the reserve?

.....

List the environmental designations that cover the reserve:

.....

.....

.....

.....

.....

Example 8: Using the measuring tools

Two measuring tools are available: one to measure distances and the other to measure the area of a polygon. It should be noted that due to the nature of the interactive mapping software all measurements are indicative only and should not be used for official purposes.

1. Measure distance

Zoom to Bempton Cliffs RSPB Reserve using the appropriate means then click on the Measure Distance tool. When the dialogue box has popped up click on the western end of the reserve – this will be the start point of the line you will measure.

To find out the length of the reserve, click at each major change in direction of the cliff-face. For example, your second point may be at Crab Rocks, your third at Scale Nab, your fourth at the headland before Cat Nab, and so on until you reach the end of the reserve. If you make a mistake click on the 'Delete Last Point' button to undo your last click.

Each time you click the red indicator dot will move to the last point you clicked. In the dialogue box the Segment figure is displayed showing you how far from your last point you are, until you click on a new point. The Total figure is updated with the total distance measured so far after you click on a point. The number of points you have clicked will also be displayed.

When you have finished measuring click the 'Finish Measuring' button in the dialogue box – this will update the interactive map so that it displays in red the line along which you have measured.

What is the approximate length of the RSPB Reserve, to the nearest 100m?

.....

Click 'Close Window' when you have finished using the Measure Distance tool.

2. Measure Area

Change the map topic to 'Rural Designations - Other' and find Sissinghurst Castle which is a Registered Park and Garden. To measure the area of the feature (highlighted in light blue) click on the Measure Area tool.

Click on points on the perimeter of the highlighted area to define the polygon that you want to measure. As with the Measure Distance tool, a red dot indicates the last point you clicked and moves each time you click a new point. The length of the perimeter is displayed in the dialogue box along with the number of points you have clicked. If you make a mistake click the 'Delete last point' button.

Note that you do not have to click on the start point to close the polygon – the interactive map automatically closes it for you when you click the 'Measure Area' button in the dialogue box. The area is displayed in hectares and square kilometres in the dialogue box and the perimeter of the polygon is highlighted in red on the interactive map.

As with the Measure Distance tool, it is important to remember that the area given is only an indicative figure and should not be used for official purposes.

What is the approximate area of Sissinghurst Castle?

.....

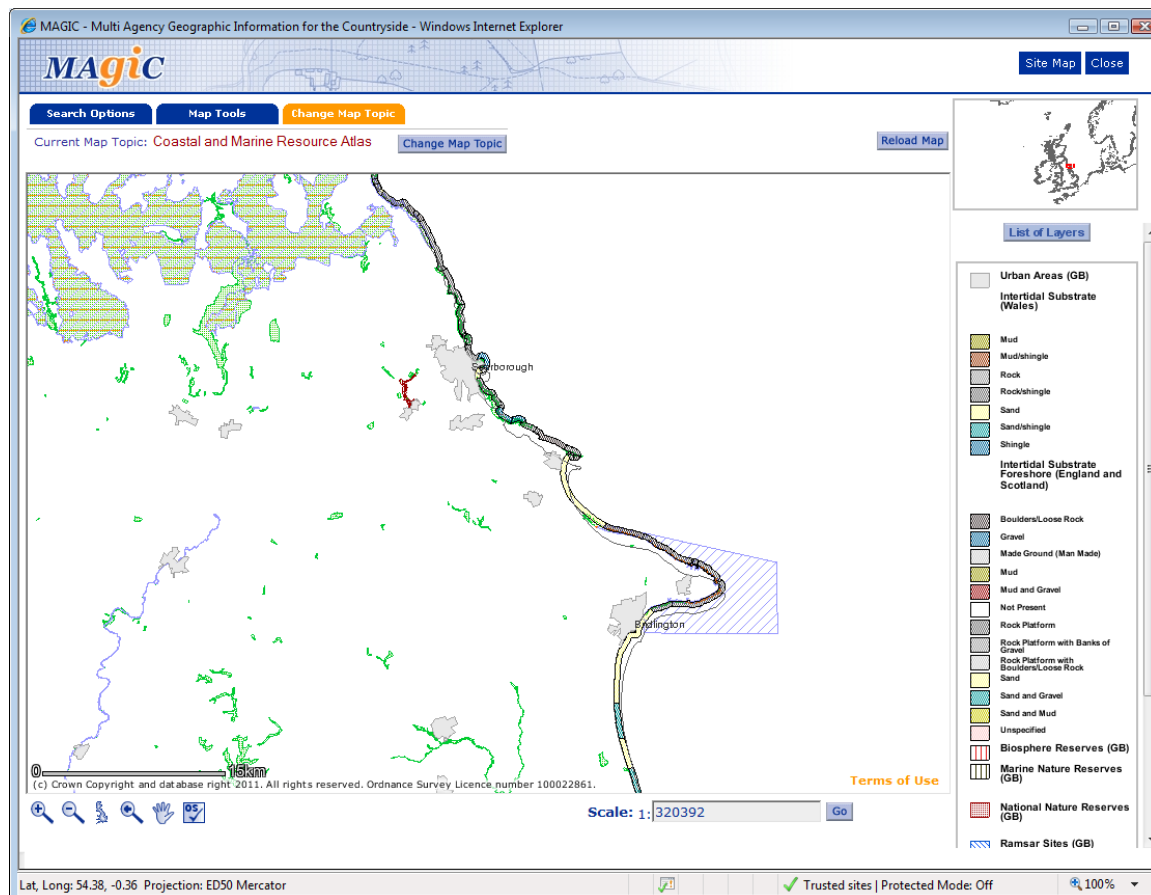
You can compare your results to the actual area of the feature by using the Identify tool to display more details of Sissinghurst Castle.

Coastal and Marine Resource Atlas

Example 9: Viewing Marine Data

Marine data was added to MAGIC to assist with contingency planning for events such as an oil spill.

Change the map topic to 'Coastal and Marine Resource Atlas' and reproject the map to ED50 Mercator. Note that the projection you are in is indicated in the grey status bar at the bottom of the map.



5.10 ED50 Mercator Projection

Due to the large number of layers available in this topic, only a default 14 layers are switched on when you load it up.

Click on 'List of Layers' to view these layers. Switch the 2 intertidal substrate layers off and turn the 2 Atlantic White Sided Dolphin layers on. Click on 'Refresh Layers' and close the list of layers.

Due to the scale threshold set on these 2 datasets you may need to zoom to a different scale before they appear. Enter 11000000 into the scale bar and click 'Go'. The datasets should now appear.