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# Demonstration of GIS and online versions of environmental sensitivity mapping

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Minerals: Britain and the World

# www.mineralsUK.com

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## Environmental sensitivity mapping

Environmental sensitivity mapping provides a strategic overview of the environmental and cultural assets in a region. It is a technique that was developed to integrate numerous datasets into a single composite layer in a GIS. It uses a transparent methodology to provide the user with an easy to understand visual overview of these assets. Environmental sensitivity mapping is a rapid, objective and straightforward method of identifying areas which may be particularly sensitive to development.

Environmental sensitivity mapping has a number of applications in land-use planning for minerals and other forms of development. It may be used both to aid, and explain decision-making. It can form part of the Strategic Environmental Assessment process and, more specifically, can be used in the environmental appraisal of plans and policies for aggregates provision.

**Find out more below**

[Environmental sensitivity mapping - an overview](#)

[View the online GIS](#)

[Flexibility](#)

[Method used to create the environmental sensitivity layer](#)

[What are environmental and cultural assets?](#)

[Consultation and feedback](#)

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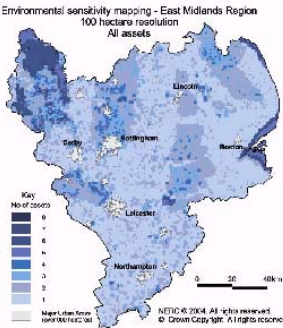
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## Environmental sensitivity mapping — overview

### What is environmental sensitivity mapping?

Environmental sensitivity mapping is based on the number of environmental or cultural assets at a given location. It is analogous to a density map, whereby the higher the number of environmental and cultural assets in an area, the darker the colour on the map. Within a GIS, it is possible to weight or score different assets depending on their importance or significance. The environmental sensitivity map can then be based on the total score, rather than the total number of assets. You can get a list of all the environmental and cultural assets at a particular location by simply clicking on the area of the map that interests you.



Environmental sensitivity mapping - East Midlands Region  
100 hectare resolution  
All assets

Key  
No. of assets  
8+  
7  
6  
5  
4  
3  
2  
1

Map data from  
BGM/NERC/ESR

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Click on map to view enlarged image

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## Environmental sensitivity mapping

### Background to the environmental sensitivity mapping project

The environmental sensitivity mapping methodology was developed by the BGS with co-funding from the [Aggregate Levy Sustainability Fund \(ALSF\)](#) distributed by the [MIST Programme](#).

Phase 1 of the BGS research, 'Strategic Environmental Assessment and future aggregates extraction in the East Midlands Region' aimed to develop the environmental sensitivity technique. The focus of the project was the relationship between aggregates and environmental sensitivity.

The Executive Summary or full report can be downloaded for free from [here](#).

Phase 2 of the research aims to provide the environmental sensitivity map as a data layer within an online regional GIS for the East Midlands. The layer will be hosted on the mineralsUK.com website under the Minerals GIS pages. Click [here](#) to access the online GIS.




Click image to download Phase 1 flyer
Click image to download Phase 2 flyer



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MIST  
Mineral Industry Sustainable Technology

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## Environmental sensitivity mapping

### Consultation and feedback

Consultation is integral to the development of the environmental sensitivity mapping technique. Your feedback and constructive criticism on any aspects of the environmental sensitivity mapping technique are welcomed. Your feedback may be used to aid the critique of the environmental sensitivity data in the final report for this phase of the project (due for completion March 2005). Please email [minerals@bgs.ac.uk](mailto:minerals@bgs.ac.uk).

Your time in evaluating the environmental sensitivity mapping technique is a valued contribution to this project. To have you time acknowledged as such, please download & fill in [this form](#) and return to the freepost address shown.

Consultation seminars are planned for January 2005 in London, Nottingham and Leeds. Click [here](#) for details.



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## Environmental sensitivity mapping


**View the online environmental sensitivity map**

The environmental sensitivity map is being piloted using the East Midlands Region. It can be accessed via the UK Minerals Information Online. This provides a whole range of minerals related information for different regions in England. Follow the link below to view the online GIS and select the East Midlands Region from the drop down list. All the layers, including the environmental sensitivity layer, can be found down the left hand side of the map screen.


Click [here](#) to view the UK Minerals Information Online.



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## UK Minerals Information Online

Effective planning for the sustainable development of the UK's mineral resources requires a wide range of up-to-date and impartial information. This web-based Geographical Information System (GIS) is designed to provide access to a range of minerals-related information and allows it to be related to other forms of land-use (such as urban areas or nature conservation areas) or to other factors such as transport infrastructure. It can also be used to identify areas where mineral extraction may conflict with other land-use and conservation interests.

[View the minerals online GIS for the English regions](#)

### Aims and Limitations

The purpose of this GIS is to show:

- Mineral resources, which may be of current or potential economic interest
- Selected nationally-recognised landscape and habitat designations;
- Land where minerals are, or have been, licensed for extraction (mineral planning permissions).

The GIS brings together this wide range of information, much of which is otherwise scattered and not always available in a convenient form.

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**Minerals Information Online**

Change region: [Select a region...](#) [Feedback Form](#) [Disclaimer](#) [Help](#)

[Refresh Map](#) [Show Legend](#)

Click layer name: [http://194.46.252.143/webster/newest\\_GIS\\_help/choose.html?TheMISEI-OnlineGIS-Intro](#)

**How to use the MISEI - Minerals online GIS**

How to view and navigate the data  
 How to query datasets of interest  
 Accessing layer metadata  
 Map themes and coordinates  
 'Greyed out' dataset names  
 Reporting problems

**How to view data**

Explore datasets using the MISEI GIS by following these basic steps.

Placing your cursor over an icon will display a short description of the functionality provided.

[Zoom Out](#)

**Navigate to your area of interest**

You can define your geographic search area using the 'zoom' (🔍) and 'pan' (📏) tools. To zoom in to a specific area of the map by an amount other than the default factor of 2, use the zoom tool to drag open a box on the map. The smaller the box, the more detailed the result of the zoom operation.

**View your datasets of interest**

Use the table of contents on the left hand side of the screen to display your datasets of interest. Remember to [Refresh Map](#) after selecting datasets to display them. Many datasets can only be viewed at certain scales. If a dataset cannot be viewed at the current scale, it will be greyed out. You will need to zoom in further to view these datasets.

**Visible Active**

- ☒ EAST M POND
- ☐ Mines & (Bridgits)
- ☐ Main Top
- ☐ Main Road
- ☒ Mineral F Permissi
- ☐ Mineral F Permissi
- ☐ BGS 500
- ☐ Site of S Scientific Areas
- ☐ National
- ☐ Special / Consens
- ☐ Ramsar
- ☐ Area of C Natural E
- ☐ National
- ☒ Mineral F Authorita
- ☐ Mineral Reconna Program
- ☐ Mineral E Investime
- ☐ Mineral / Area
- ☐ Igneous
- ☐ Peat
- ☐ Gypsum
- ☐ Chalk

Zoom In Zoom to Scale (no commas): 1:1652481 64

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**Minerals Information Online**

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[Refresh Map](#) [Show Legend](#)

**Legend**

- ☐ Gypsum
- ☐ Chalk
- ☐ Limestone
- ☐ Superficial Sand and Gravel
- ☐ Bedrock Sand and Gravel
- ☐ Brickclay
- ☐ Fireclay
- ☐ Inactive Coalfield
- ☐ Deep Coal
- ☐ Worked Shallow Coal
- ☐ Shallow Coal
- ☐ Hydrocarbon Wells
- ☐ Hydrocarbon Licence Area
- ☐ Coal Licence Area-points
- ☐ Coal Licence Area
- ☐ Summary Aggregates - Crushed rock
- ☐ Summary Aggregates - Sand and gravel
- ☒ Environmental Sensitivity
- ☐ Landsat false colour
- OS 1: 1 000 000
- OS 1: 250 000
- OS 1: 50 000

[Refresh Map](#) [Show Legend](#)

Zoom in or out ( ) to activate greyed out data layers

**Map**

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0 40km

**Toolbox**

Display

Navigate

Query

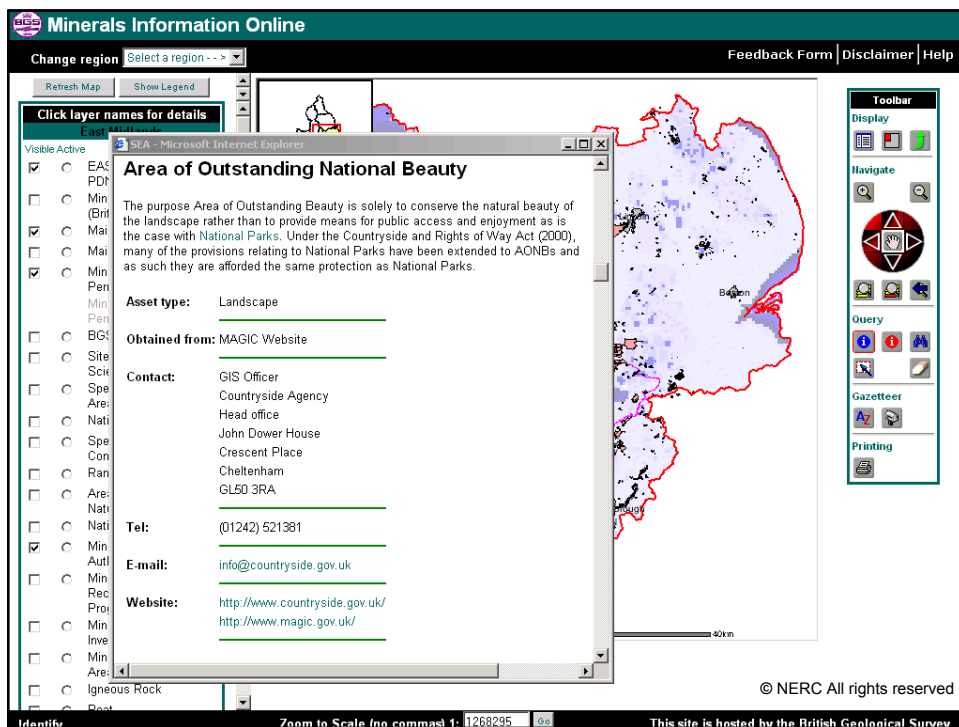
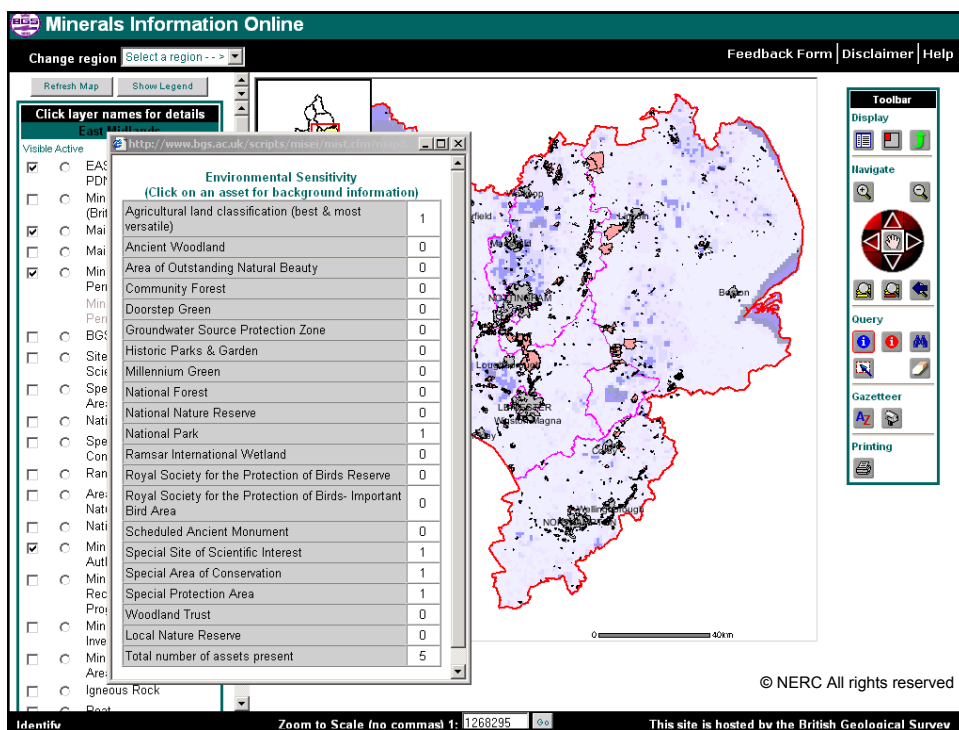
Gazetteer

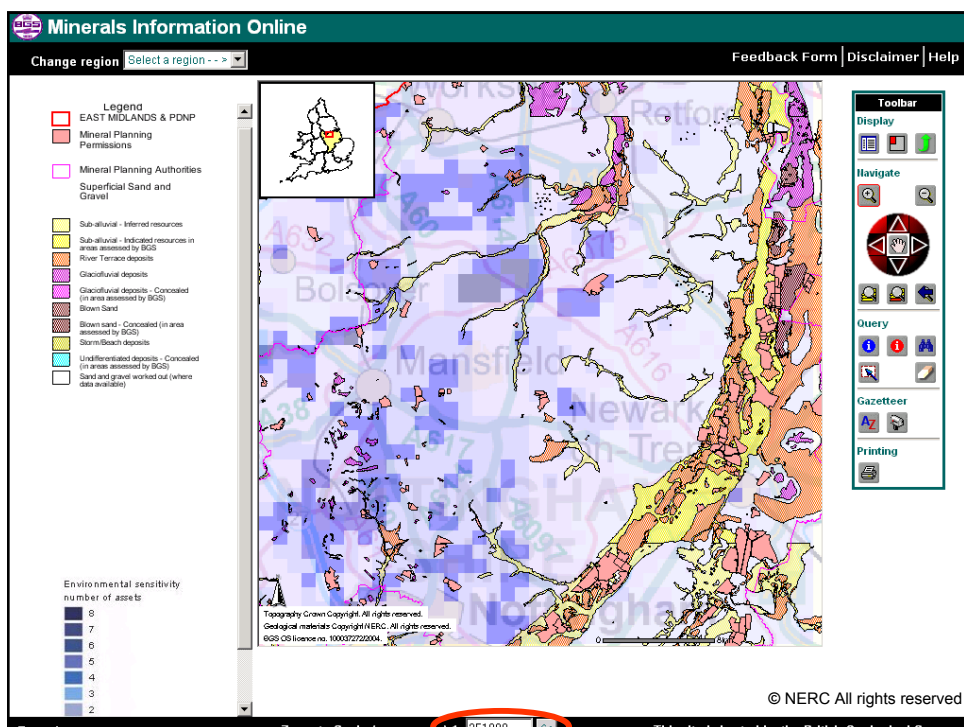
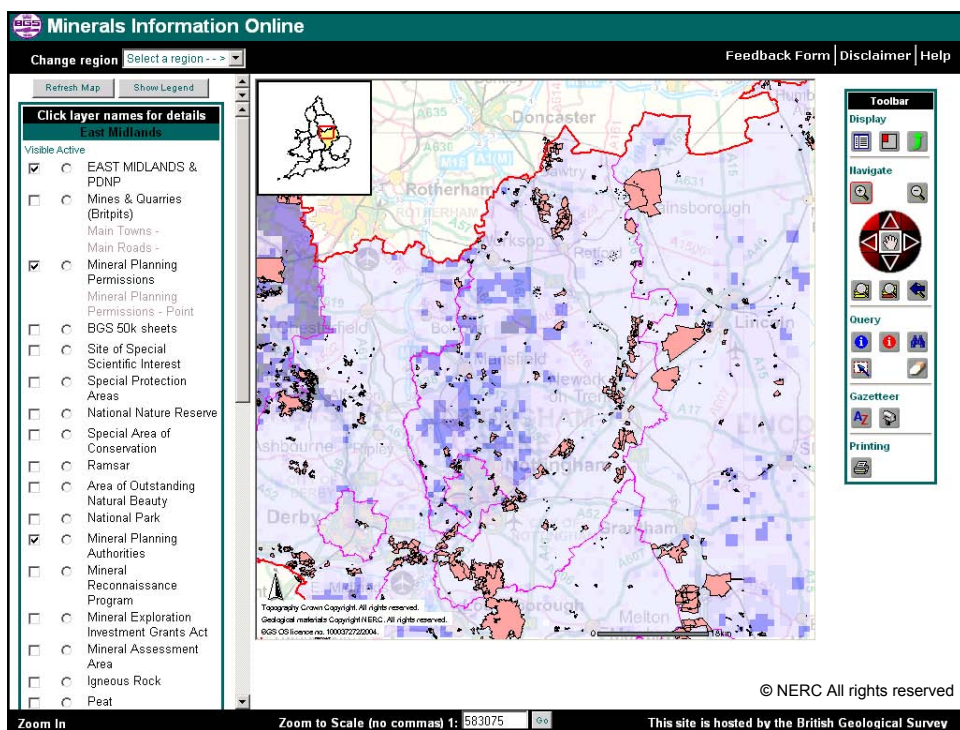
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Zoom In Zoom to Scale (no commas): 1:1268295 64

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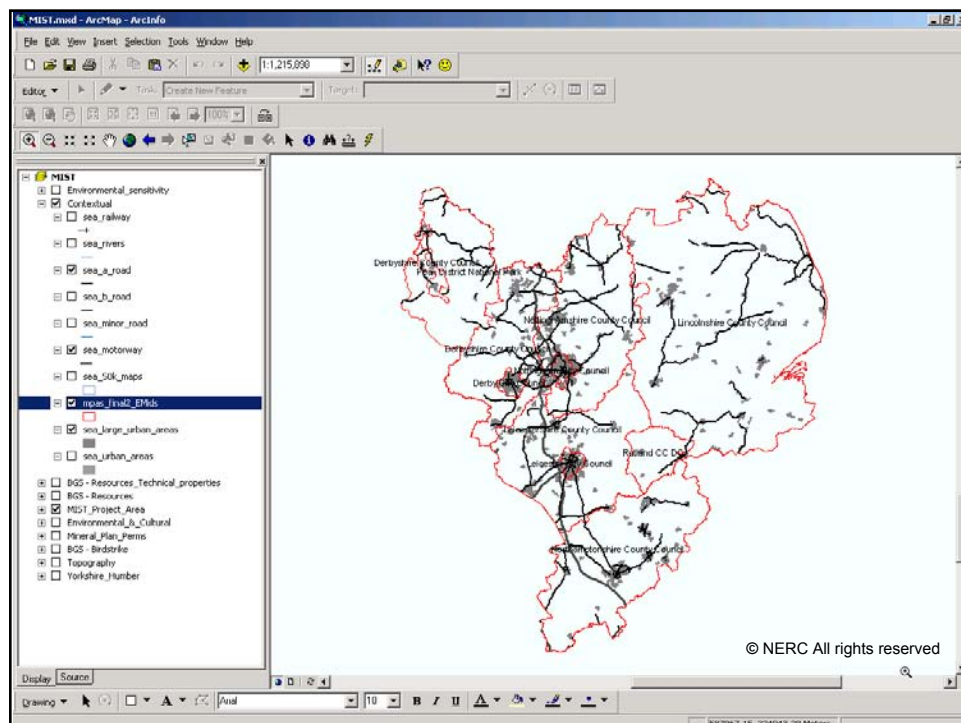


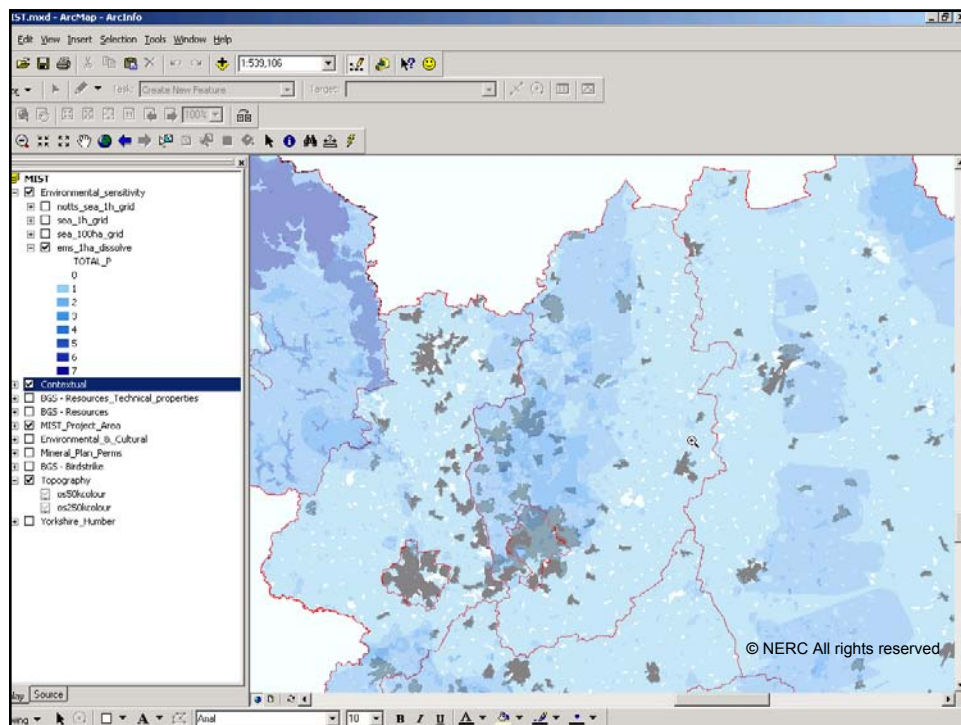
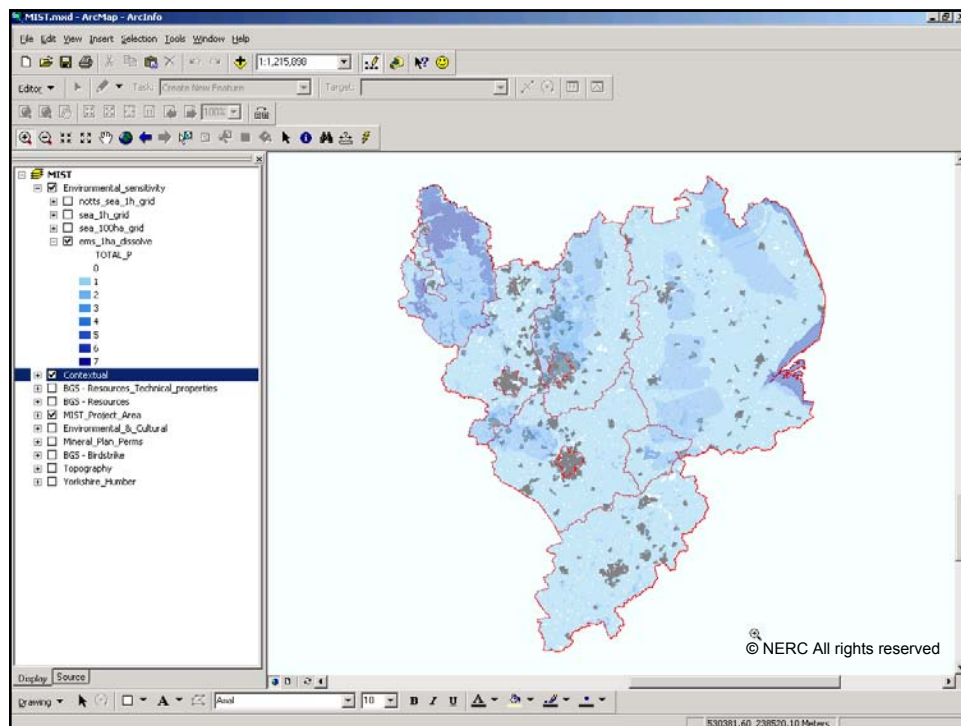


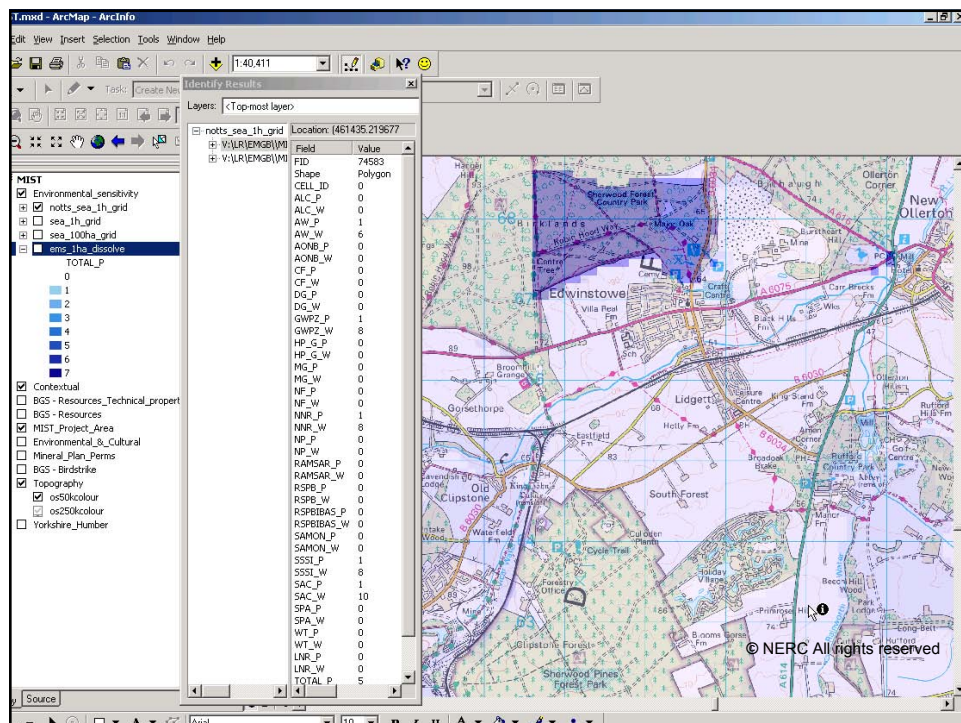
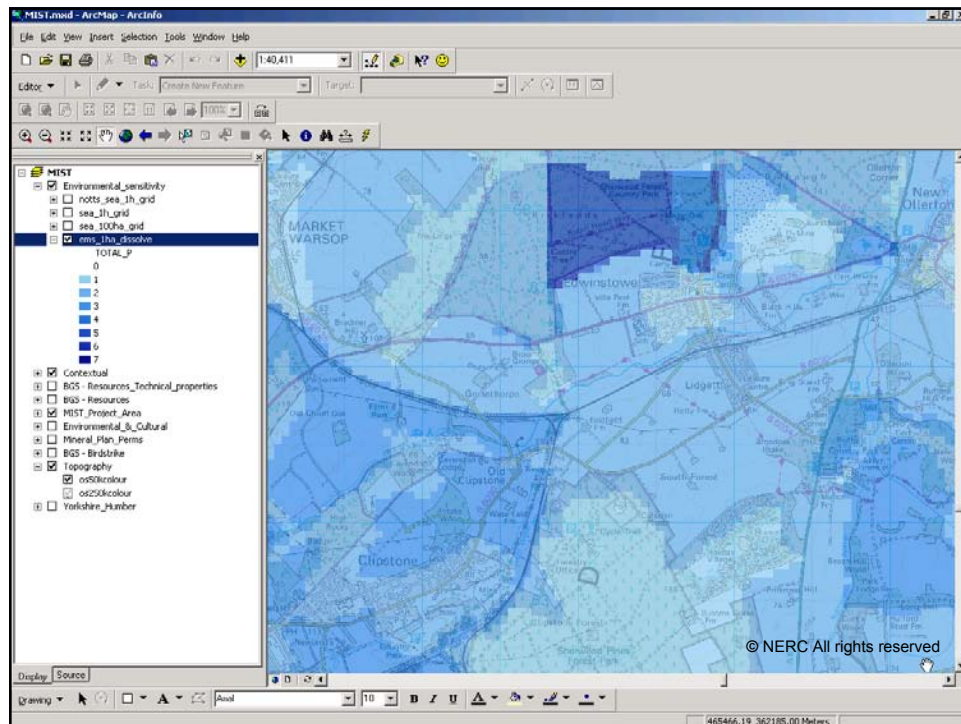
# GIS version

- has more functionality
- is not scale dependent
- more data layers

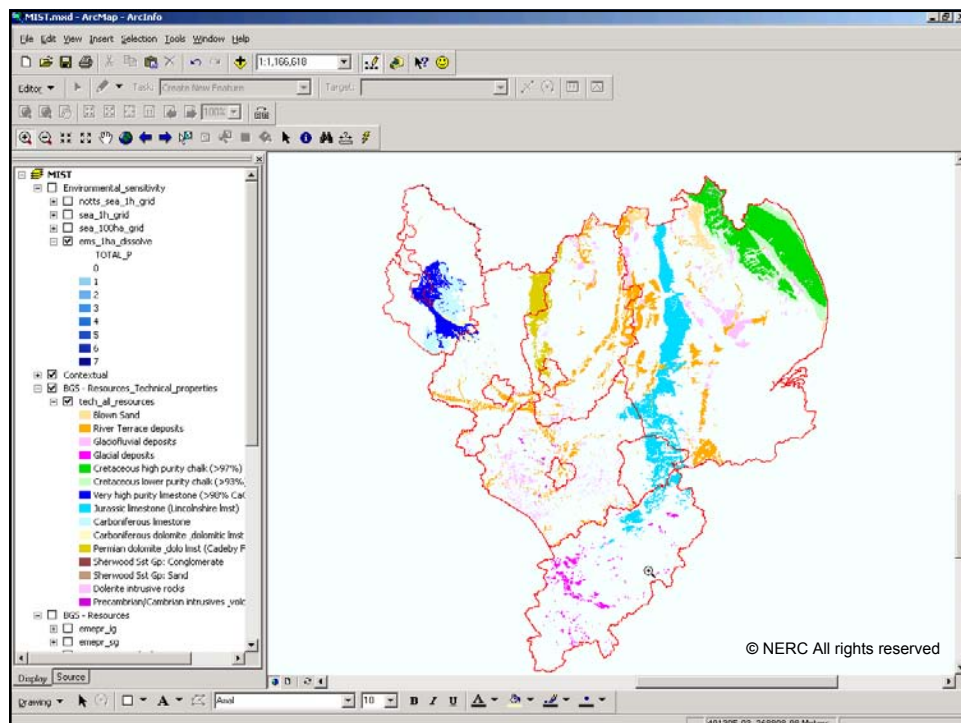
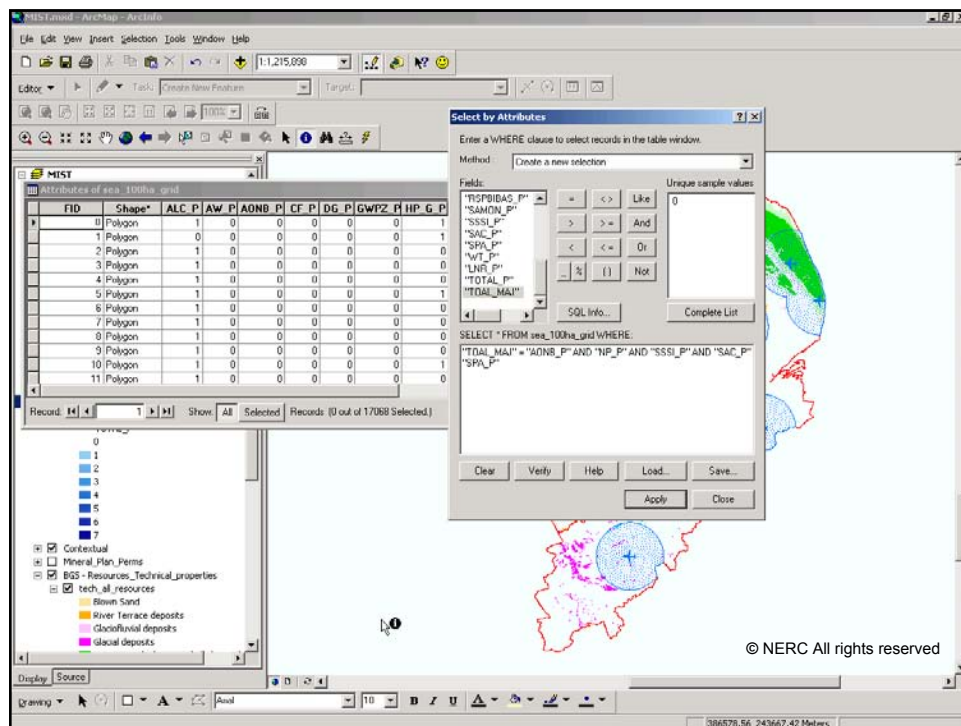
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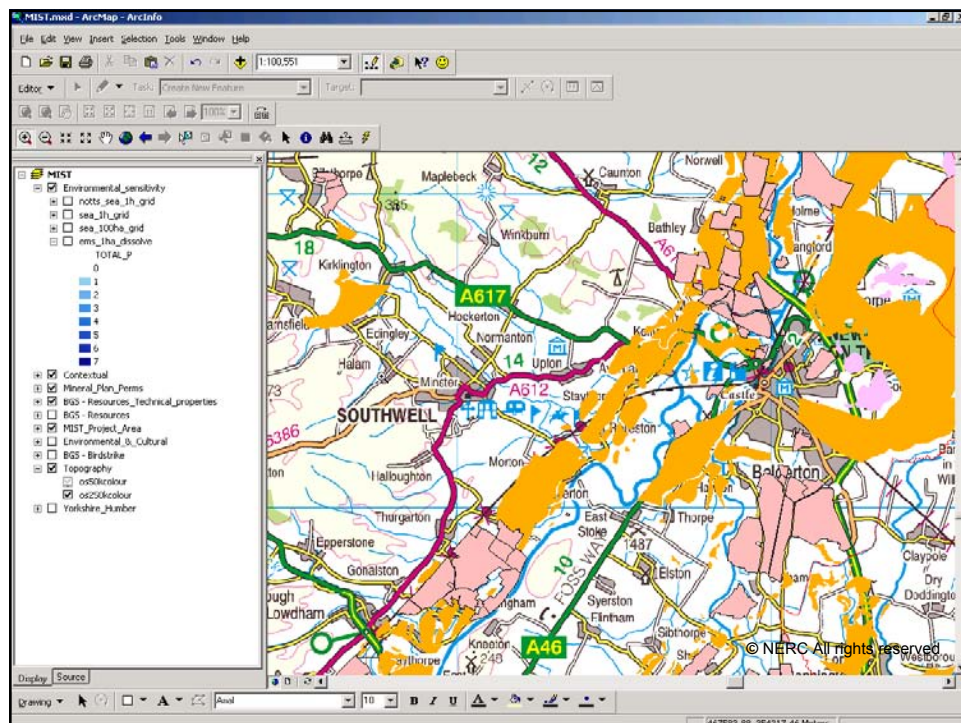
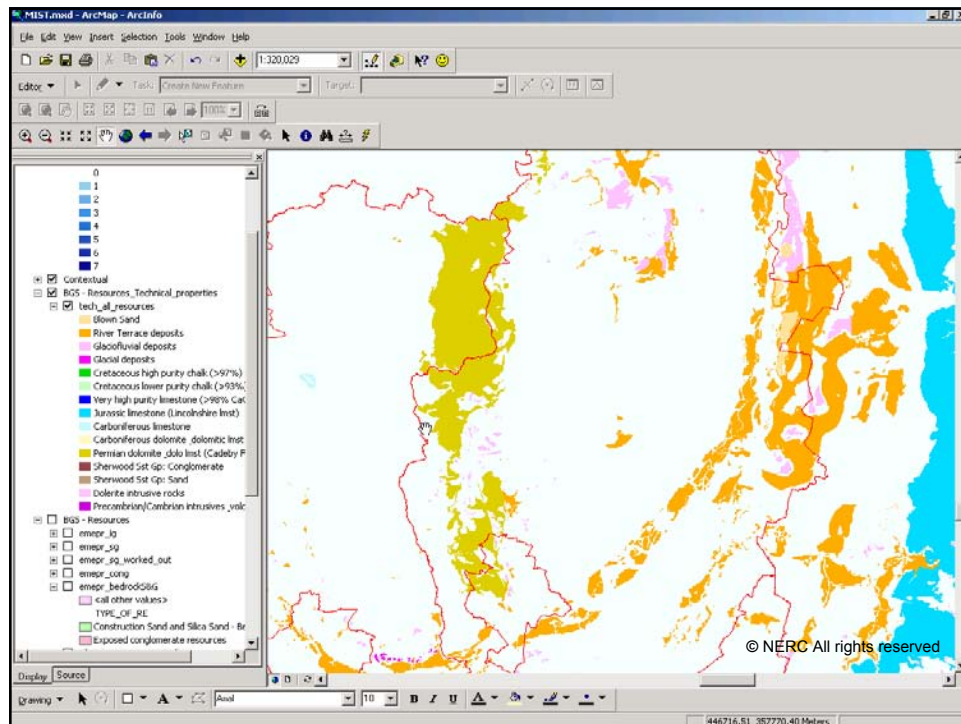


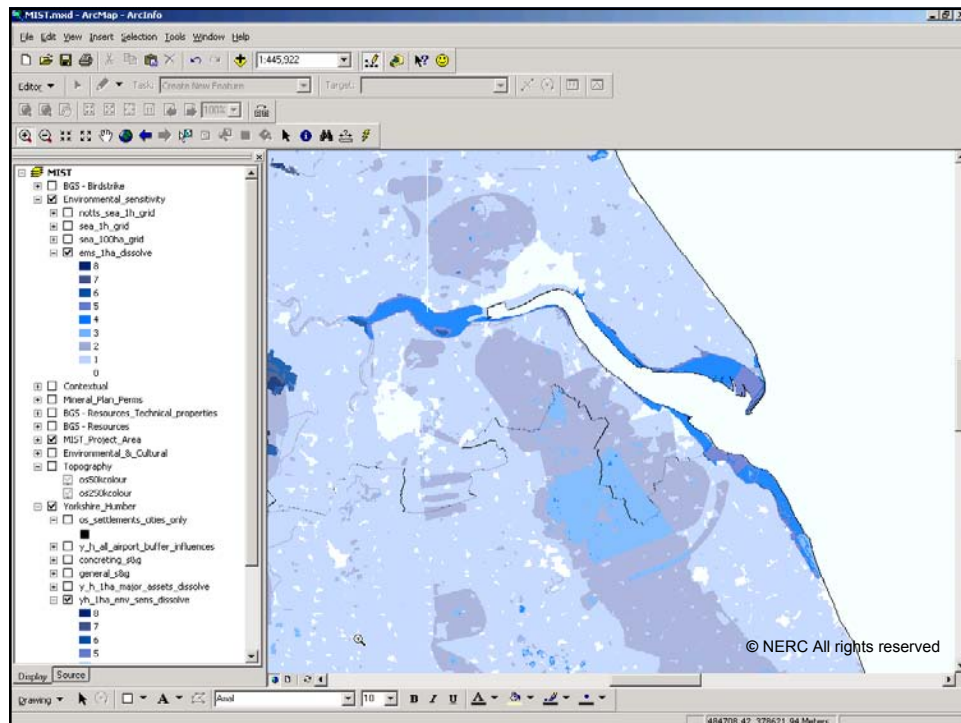
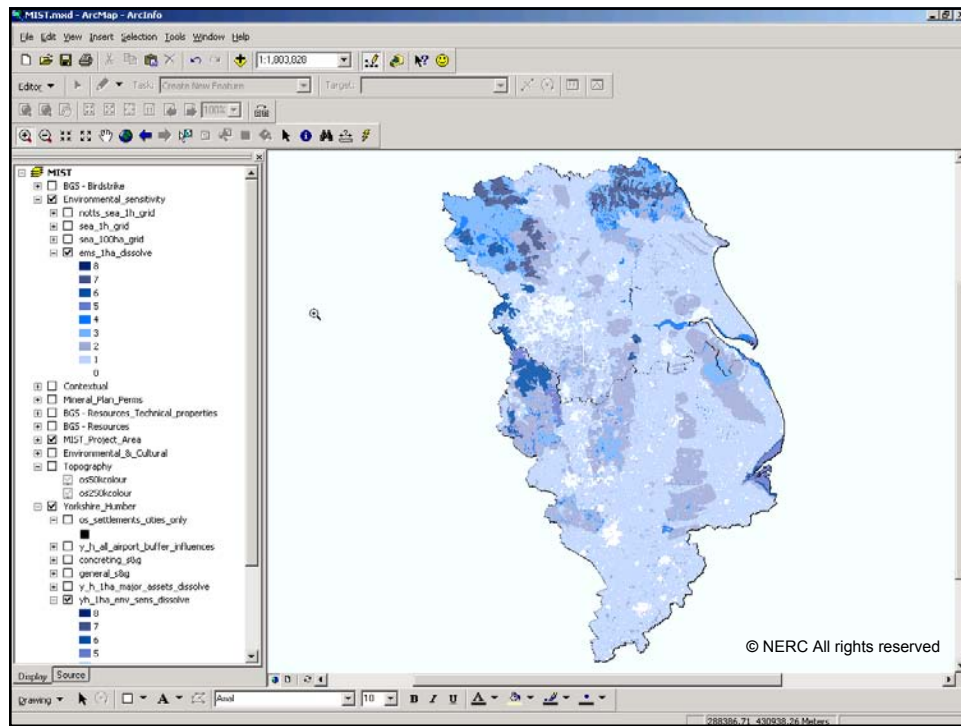












## **For thought and feedback**

- How would/ do you use our data?
- Do you prefer to use the web GIS or have the data layers in your own GIS package?
- Would you prefer a regional view or a site specific view?
- How can we improve upon our datasets and/or information delivery methods to serve you better?

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