

Opening a window on the world beneath us to aid teaching, research and analysis in geosciences



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

The British Geological Survey (BGS) is a world-leading geoscience centre for survey and monitoring, modelling and research, and data and knowledge. It is responsible for advising the UK Government on all aspects of geoscience and provides impartial geological advice to industry, academia and the public.

Challenge

The BGS wants to open up access to its wealth of information to meet the requirements of the EU INSPIRE Directive and the UK Location

Programme whilst also reaching new audiences and users. Information needs to be provided in a flexible, interoperable online form to facilitate new, previously inconceivable uses for BGS data and stimulate wider use of BGS science information and knowledge to benefit environmental analysis and decision-making.

Solution

OpenGeoscience is a free, open-access data portal providing geological information, including maps, photographs, databases, reports, over a million borehole record scans,

downloadable 3-D geological models, smartphone apps, educational resources and software.

OpenGeoscience attracted over 20 million hits on its day of release in December 2009. When combined with other environmental information, the geological information in OpenGeoscience helps develop a greater understanding of the world around us, enabling the creation of new solutions to environmental problems. The information can be used free-of-charge for non-commercial private study, research and educational activities.

OpenGeoscience overlays its information on OS VectorMap® District, provided via OS OpenData™, the online portal providing free and unrestricted access to a large range of Ordnance Survey mapping and geographic information. OS VectorMap District is ideal for web applications as it can be customised to show only the most important information to create a clear, uncluttered backdrop map. OpenGeoscience also uses Ordnance Survey's 1:50 000 Scale Colour Raster data supplied under the Public Sector Mapping Agreement (PSMA). The resulting street-level geology maps are the first ever to be



Return on investment

'OpenGeoscience has enabled BGS to greatly increase access to geological data and to increase the flexibility in how the information can be used. For example, geotechnical engineers and ground consultants now have the choice to access borehole records online directly themselves, as well as via the BGS Enquiry Service. Releasing the records online has resulted in a 20-fold increase in records accessed, to 30 000 per month. This increased use of the dataset is not only benefiting the UK economy, but has also freed up the BGS Enquiry Service to provide more value-added services.'

OpenGeoscience provides the 'brand' needed to pull together and clearly identify BGS open-access information both now and in the future. Through the website, we are able to reach out to the global information community, raising our profile whilst also meeting the public's ever-increasing demand for maps on viewing platforms such as the iPhone®, iPad® and Android™ smartphones.'

Keith Westhead
Head of Knowledge Exchange

Data products used:

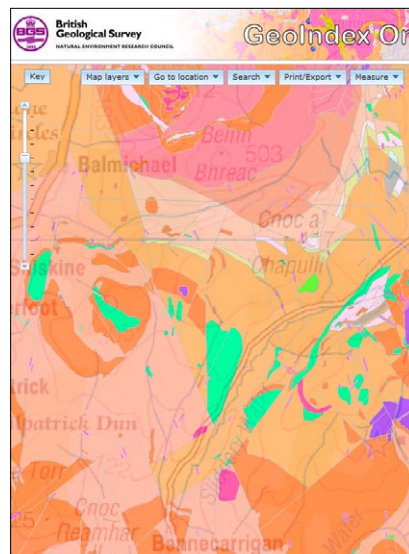
- OS VectorMap District
- OS OpenData
- 1: 50 000 Scale Colour Raster

made freely available over the Internet. Access to the information is further enhanced by the iGeology smartphone app that provides users with these detailed geology maps when out in the field.

Benefits

Providing information through a high-profile open-access portal such as OpenGeoscience:

- Gives easy access to geological information to aid national planning for environmental change, disaster potential and sustainable use of resources.
- Empowers the public to make better informed decisions based on enhanced knowledge of their environment.
- Allows greater access to contextual spatial information for research projects.
- Provides useful teaching materials on easily-accessible web platforms.
- Encourages business innovation by providing information in interoperable forms to seed ideas for the next generation of online information services.



1:50 000 scale geology WMS overlaid on OS OpenData.



'The amount of online material provided for educational purposes by BGS has increased very considerably over a short timescale, and has the capacity to transform the way in which geosciences are taught in universities.'

Professor Paul Smith, Head of School, Geography, Earth and Environmental Sciences at Birmingham University

'Absolutely excellent, and a real benefit to many people. Something BGS can be really proud of.'

Prof. James Jackson FRS,
University of Cambridge

'OpenGeoscience was so popular because it actually gave people something to play with.'

Jonathan Amos, BBC® correspondent

'The iGeology app is a great example of how the right technology can make geography an indispensable part of everyday life. The end result is that public data is put instantly into the hands of the ordinary citizen.'

Keith Wishart, Public Sector Strategist, ESRI® (UK)

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