iGeology

The information world is on the move. Rapidly developing web and communication technologies are making geospatial data much more accessible to a new generation of environmentally aware users through Smartphones, tablet computers, GPS-technologies and innovative web services.

The latest development from the BGS is the free ‘iGeology’ app available for the iPhone, iPad and Android smartphones. This app allows the public to interrogate a geological map and related databases, to help them understand the environment and landscape around them. Having iGeology on your phone is the equivalent of 500 ‘street-scale’ paper geology maps in your back pocket.

Since its launch in late 2010, iGeology has been downloaded over 50 000 times from 56 countries around the world. It was featured on BBC Radio 4’s Material World and was iTunes’ No.1 free education app in September 2010. The BGS received a Highly Commended award for iGeology at the ESRI UK 2011 GIS Vision Awards. It also won two awards in the ESRI Inc Storytelling with maps competition 2011.

For more details, see http://www.bgs.ac.uk/igeology

New GeoReport modules for SuDs and landslides

The BGS Enquiry service has recently launched two new GeoReports aimed at delivering detailed, site-level information for landslides and sustainable drainage systems (SuDs). Both reports contain 1:50 000 scale map extracts showing geology alongside other relevant information, and have been prepared by geologists with an expertise in that area.

The landslides report is for people who are carrying out preliminary site assessments or who have a general interest in the landslides of a particular area. Prepared by a geologist with landslides expertise, it is based on an analysis of geological maps, hazard potential maps, records in the BGS National Landslides Database, photographs and published literature. This report describes the geology that might be encountered at the surface or at ‘rockhead’ (bedrock lying beneath the soil layer or beneath superficial or landslide deposits) beneath the specified site.

The SuDs report is aimed at professionals involved in planning or construction, but it may also be relevant to help householders judge whether or not further professional advice should be sought. It provides relevant subsurface information necessary to site effective infiltration-to-the-ground sustainable drainage systems (SuDs) such as shallow soakaways, infiltration trenches and infiltration basins.

Further information on the whole range of GeoReports can be found at http://shop.bgs.ac.uk/GeoReports
LondonEarth survey reveals man’s impact on the capital’s soil

The largest environmental survey of London’s soils has just been completed by scientists at the BGS. The LondonEarth survey was carried out to provide baseline information for over 50 chemical elements. It enables local authorities and others with an interest in the urban environment to assess the health of London’s soil, in addition to stimulating and supporting environmental science research.

This is the first time that the chemical composition of the soils for the whole of London has been measured at this level of detail. The results from the survey are available under licence in Microsoft Excel format.

BGS join forces with HPA to create a radon map for Scotland

Digital mapping techniques have enabled the Health Protection Agency and British Geological Survey to produce a new radon map of Scotland. Radon is a naturally occurring radioactive gas which seeps from the ground and is the second largest cause of lung cancer in the UK.

In 2009 the HPA produced a radon map of Scotland, charting areas most likely to be affected by the gas, based on measurements in homes. Since then Agency staff have worked closely with the British Geological Survey to produce a more accurate map.

The new technique has led HPA scientists to estimate that between 2000 and 5000 Scottish homes could have radon concentrations above the radon action level where work would be recommended to protect occupants — a rise on the numbers predicted in the 2009 map.

The new Indicative Atlas of Radon in Scotland has been published which shows the highest radon potential in each one kilometre grid square of Scotland.

The digital radon potential data, which defines radon-affected areas in Scotland, includes much more detail than could be shown in an atlas. The full detail is published as a digital dataset at 1:50,000 scale for GIS, and is available under licence from the BGS. Information for individual dwellings and sites can be obtained from the UKradon website and the BGS GeoReports service.

The data is also being incorporated into the reports of BGS’s external partners in the property related environmental information and digital mapping industry.

Please contact the BGS Enquiries section for more information.

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One million Borehole Records released online through BGS OpenGeoscience

The National Geoscience Data Centre, at the BGS, holds over a million records of UK onshore boreholes, dating from the 18th century to the present day. These were drilled for many purposes, including shallow site investigation and deeper water or oil exploration.

The records form an invaluable resource for modern ground surveys, exploration and research, and are in constantly high demand from the business and academic sectors. They also give the general public a fascinating glimpse of what lies beneath the ground in their area.

These records have been available through the BGS information services for many years, but in January 2011, the BGS released the records free of charge on the web as digital scans. This forms an extension of the OpenGeoscience service which aims to promote access to NERC environmental geoscientific data.

The new service is already proving extremely popular, with over 30 000 borehole records being viewed each month.

For more details, see http://www.bgs.ac.uk/data/boreholescans

Extending the coverage of detailed geological mapping

There is an increasing need to use the best available scale of geological information to support projects that are influenced by ground conditions and the occurrence of geological deposits. The employment of suitable geological information at appropriate stages of project development can identify hazards, contribute to risk management strategies, maximise resources and asset management processes that contribute to safe engineering decisions.

Over the last five years, BGS has had an on-going programme to capture more data at the more detailed 1:10 000 scale. The Digital Geological Map of Great Britain dataset (DiGMapGB-10) is based on the published survey scale maps of the British Geological Survey, which have a nominal accuracy of about 10 m on the ground.

Approximately 35% of Great Britain is now covered by DiGMapGB-10, with coverage concentrated in urban areas. The data is available in fully attributed GIS format.

Please contact the digital data team for more information at digitaldata@bgs.ac.uk

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