

PRESS RELEASE

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Glasgow geothermal project heats up with first borehole

The first borehole is being drilled at the UK Geoenery Observatory for Glasgow, allowing scientists to 'see' underground at the world-class geothermal energy research site in the east end of the city.

Marking the beginning of the 15-year research investment, a 7.2m high drilling rig broke ground on the site to form the first borehole for the observatory.

Over the next 15 months, the drilling team will create 12 boreholes of various depths, which will enable research into Glasgow's geology, its underground water systems and the potential for heat from the water in the city's disused coal mines.

One of the biggest aims of the project is to find out whether there is a long-term sustainable mine water resource that could provide a low-cost, low-carbon heat source for homes and businesses.

Measurements will be taken from the boreholes, such as temperature, water movement and water chemistry. Environmental baseline monitoring of near-surface chemistry, gases and waters will also be measured.

Lord Henley, the undersecretary of state at the UK Government's Department of Business, Energy and Industrial Strategy (BEIS) was joined by representatives from the Natural Environment Research Council (NERC) and the British Geological Survey (BGS) who are leading the project.

The observatory is one of two sites proposed in the £31 million UK Geoenery Observatories investment commissioned by NERC, the UK's leading funder for environmental sciences, and operated by the BGS, the UK's principal provider of impartial geological evidence since 1835.

The Glasgow Geothermal Energy Research Field Site will enable the UK science community to study the low temperature mine water geothermal environment just below the Earth's surface.

Lord Henley said: "Clean growth and innovation go hand in hand, so as part of our modern Industrial Strategy we're investing £31 million into projects like this which could transform derelict coal mines into valuable low carbon sources of energy.





"Reusing deep mineshafts could help to reinvigorate local economies, creating new high-skilled jobs and boosting supply chains in traditional mining communities."

Tracy Shimmield, co-director of the Lyell Centre, BGS Scotland said: "The British Geological Survey will operate the Glasgow Geothermal Energy Research Field Site, which will enable the UK and countries around the world to better understand how our industrial legacies can be turned into renewable heat sources.

"The observatory will tell us how much heat is down there, whether it can be sustainably used and replenished, and if it could power homes, businesses or even entire cities.

"This is the first time that this part of the Earth will be monitored closely and consistently, and once again NERC and the BGS are at the forefront of innovation in environmental science."

Professor Zoe Shipton, professor of geological engineering at the University of Strathclyde and chair of the UK Geoenergy Observatories science advisory group, said: "More and more of the solutions to decarbonising our energy supply will need to come from beneath our feet.

"Ensuring we take forward these solutions in a sustainable way means understanding more about how the system works.

"The UK Geoenergy Observatories will build up a high resolution picture of the underground system, providing a breakthrough in our understanding. This hasn't been done anywhere else in the world. What we learn in Glasgow will lead the way in understanding how to balance our need for resources, with keeping people safe and protecting our environment."

Cllr Anna Richardson, Glasgow City Council portfolio holder for sustainability and carbon reduction, said: "Innovation and engineering has been at the heart of the Glasgow City Region's economy for more than 200 years and it remains an important growth area for our communities. Glasgow's share of this £31m investment in renewable energy technologies underpins the important research being driven forward by our higher education establishments and energy and engineering businesses, keeping Glasgow firmly on the world stage."

Ian Manson, chief executive of Clyde Gateway said: "We have secured a comprehensive £23m investment programme in renewable energy for the Clyde Gateway, ranging from research into renewables to the installation of a major district heating system fuelled by renewable energy. Over the next few years, Clyde Gateway will become the best location in Scotland for people and businesses who wish to take carbon out of their energy supplies."

The BGS will make data from the Glasgow observatory available online from 2019. Data is already being collected and interpreted - the core samples taken from the ground during the drilling process will become a key data source for the project.

Ends



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Notes for Editors

The British Geological Survey

The British Geological Survey (BGS) is a world leading applied geoscience research centre that is part of UK Research and Innovation (UKRI) and affiliated to the Natural Environment Research Council (NERC). BGS core science provides objective and authoritative geoscientific data, information and knowledge to inform UK Government on the opportunities and challenges of the subsurface. It undertakes national and public good research to understand earth and environmental processes in the UK and globally. The BGS annual budget of approximately £60 million pa is funded directly by UKRI, as well as research grants, government commissions and private sector contracts. Its 650 staff work across the UK with two main sites, the head office in Nottingham and Lyell Centre, a joint collaboration with Heriot-Watt University in Edinburgh. BGS works with more than 150 private sector organisations, has close links to 40 universities and sponsors about 100 PhD students each year. Please see www.bgs.ac.uk.

The Natural Environment Research Council

NERC is the UK's main agency for funding and managing research, training and knowledge exchange in the environmental sciences. Our work covers the full range of atmospheric, Earth, biological, terrestrial and aquatic science, from the deep oceans to the upper atmosphere and from the poles to the equator. We coordinate some of the world's most exciting research projects, tackling major issues such as climate change, environmental influences on human health, the genetic make-up of life on Earth, and much more. NERC is part of UK Research & Innovation, a non-departmental public body funded by a grant-in-aid from the UK government.

The UK Geoenergy Observatories

The UK Geoenergy Observatories will establish new centres for research into the subsurface environment and provide opportunities to research how natural processes can control resource availability, and how natural resources can be used responsibly for present and future generations. The knowledge they generate will contribute to an understanding of new low-carbon energy technologies both in the UK and internationally. The capital project is NERC's response to the British government's announcement in the 2014 Autumn Statement that it would create world-class subsurface energy research test centres through NERC, operated by the British Geological Survey.