



British  
Geological  
Survey

2024 TO 2025 HIGHLIGHTS

# Environmental Sustainability report











British  
Geological  
Survey

2024 TO 2025 HIGHLIGHTS

# Environmental Sustainability report



# Waste management

BGS has continued to deliver 99.6 per cent landfill diversion for waste produced on site:

- 94.9 tonnes recycled
- 20.5 tonnes for energy recovery
- 0.5 tonnes to landfill

There have been some innovations and improvements to how we receive our waste data, meaning we have even more accurate reporting of where our waste goes.

We have implemented further waste segregation practices, with the introduction of specific food waste bins in all kitchenettes. We also acquired an aggregate skip to help with the removal of rock and core samples, ensuring they are taken to an aggregate-specific recycling facility.

We have introduced a 'packaging re-use' scheme at Keyworth, allowing staff to re-purpose single-use packaging materials such as polystyrene chips, bubble wrap and soft plastics for any packages.

We have installed two worm composting bins on site.





# Sustainable IT

Due to Microsoft Windows 10 reaching end-of-life in October 2025 and the migration to Windows 11, we have accelerated our equipment rationalisation programme. We are aiming to move all staff from desktop computers to laptops, aiming for the majority of staff to have one computer each. This year, we substituted 20 computers and plan to accelerate this through early 2025. Laptops generally take between 30 and 70 watts in operating mode, compared to 200 to 500 watts for desktops.

We are currently monitoring the National Geoscience Data Centre (NGDC)'s power use in Keyworth and reviewing the Energy Academy Data

Centre in Edinburgh, by Heriot-Watt University, to locate inefficiencies in both. In particular, we will adopt more efficient use of the air conditioning systems.

We have undertaken a power utilisation study for NGDC, which indicates it is not efficient. This is likely due to removal of hardware and 40 per cent free capacity. For maximum power usage effectiveness, the data centre needs to be fully occupied. We plan to reduce the air conditioning capacity so it is more proportional to the volume of hardware in the room: the current air conditioning units draw above 450 000 kWh per annum, so a 40 per cent reduction will result in a significant energy saving.









# Ground-source heat pumps

Over the last year, we installed a 28-borehole ground-source heating system to heat decarbonise two of the buildings at the Keyworth site. This £1.7 million project replaces heat emitters and controls, and will eliminate gas heating.

The boreholes are 230 m in depth on a closed-loop system. We installed a 'living laboratory' within the system, containing five boreholes with sensors that are giving us information on the overall performance of the system, covering the heat change in the ground over time and the performance of the buildings combined with our knowledge of how the buildings work. The system will become operational in June 2025. The system is complemented by air-source heat pumps to further reduce the need for natural gas.

# Laboratory efficiency

This year, BGS established a laboratory sustainability committee to oversee our laboratory activities. The committee has carried out a full audit of the Laboratory Efficiency Assessment Framework (LEAF) accreditation across all levels (Bronze, Silver and Gold).

The Keyworth laboratories received a report following the laboratory equipment sustainability audit, which Green Light Laboratories Ltd carried out in 2024. The report helps us understand where our energy consumption and running costs can be improved and provides us with recommendations for areas that would benefit from local energy profiling. The findings of the report are now being implemented.







## Biodiversity gains

BGS continues to develop biodiversity initiatives on site. We monitor biodiversity through a variety of techniques, including:

- wildlife cameras
- internal specialist surveys such as moths and insects
- external specialist ecology surveys

We have a lunchtime litter-picking group to reduce the effect of waste inadvertently scattered around site. We are increasing our pollinating plants, especially near the beehives at Keyworth. As in previous years, we have a summer (March to

October) no-mow area (70 per cent at Keyworth with 'no-mow for bees' signs erected). The bee orchids at Keyworth continue to flourish, with a proportion of the 150 to 200 plants counted on site being allowed to flower.

We have three beehives on site; only one colony of honey bees survived the winter and a replacement colony was installed in the second hive in the spring. Sensors in one of the hives record data on both the rate of honey production and the day-to-day exit and return of several kilograms of bees. Jars of 'BeeGS' honey will be available in the late summer and autumn.

We continue to increase the number of bug hotels at Keyworth for the solitary bees.





©iStock.com/Petmal

## Business carbon activities

We are preparing to go live with the carbon accounting scheme for business travel this year. Initially focused on air travel, the aim is to reduce carbon costs year on year. The overall target will be allocated between different parts of the organisation, based on previous use, and use will be monitored and made public via a dashboard.

The revised authorisation form for business travel is being used to enable the assessment of the carbon emissions and carbon dioxide equivalent for each flight. Processing of data from the revised forms enables use to be monitored against targets. The BGS scheme is harmonised with those of NERC and UKRI.





British  
Geological  
Survey

### Contact us

E [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)  
T 0115 937 3100

[bgs.ac.uk](http://bgs.ac.uk)