



BGS Digital Preservation Policy

1. Introduction

This policy outlines the framework for a digital preservation policy at the British Geological Survey (BGS) and the National Geoscience Data Centre (NGDC) and summarises its scope, objectives and drivers. The aim is to ensure the longevity of the digital information assets of the organisation in a sustainable way by addressing the factors which risk making them unusable and inaccessible. The policy will be accompanied by a preservation strategy, which describes in a detailed Annex the tasks and actions to be taken to achieve the objectives of this policy.

2. Scope, objectives and benefits of the policy

2.1. Scope

The scope of this policy is limited to the organisation's data collections and applies to born-digital and digitised data. It covers all research data and associated project management information in all formats including:

- NERC (or BGS) owned data
- Data generated by NERC funded geoscience/sub-surface grants
- Third party data (commercial and voluntary donated data we hold under non-exclusive, in-perpetuity license)

2.2. Relationship to other policies

Other policies, covering the business information and with an impact on digital preservation include:

- [NERC Data Policy](#)
- [NERC Records Management Policy](#) and corporate retention schedule
- NERC Information Security Policy
- [NERC Ethics Policy](#)
- [BGS Science Strategy](#)
- [BGS Business Plan](#)
- [BGS/NGDC Collections Policy](#)
- NGDC Standard Operating Procedures (SOPs) for data deposit and ingest, including the [metadata form](#) and the [acceptable file formats](#) list

The stakeholder requirements (SLAs, MOUs, formal contracts etc.) and the role of BGS within national and international geoscience communities will also be taken into account in the preservation framework.

2.3. High Level Objectives

- **Data management** – ensuring that digital records are managed through inevitable changes
- **Accessibility** – ensuring data is accessible and can be located easily
- **Availability** – enabling users to be able to work with the data in the way they need to
- **Data documentation** – allowing users to understand what the data is and what it is about
- **Integrity** – the data the users retrieve from the archive is what it says it is

2.4. Benefits

The benefits of long-term access to the UK geoscience data for re-use are both scientific and financial. The risks of failing to address long-term accessibility are minimised. A strong preservation function enables the organisation to achieve its core mission as the UK's premier provider of authoritative geoscience data.

3. Preservation framework

This policy takes into account the ongoing information management requirements of NERC, BGS, the implications of the BGS Science Strategy, and the wider government, corporate, and information landscape.

The NGDC will work in collaboration with BGS Science and Operational Directorates to ensure the digital continuity of digital assets. This will be done by promoting best practice, by delivering staff training both online and during formal sessions, and by providing information via a variety of channels.

3.1. NGDC/ BGS requirements and drivers

All NERC-funded geoscience data must be managed and maintained, backed up securely, stored and delivered to all users by the NGDC. The objectives with regard to provision of relevant, comprehensive and up-to-date information include:

- Creation and capture of good metadata and other documentation
- Data verification and validation according to standardised ingest procedures
- Maintaining long-term open accessibility to publicly funded datasets

Digital preservation must align with the broader strategic goals of NERC, BGS and RCUK to realise the benefits of digital continuity. These include:

- Reuse of value-added information assets to contribute towards economic growth
- Need to address societal and scientific challenges
- Increased collaboration between scientific disciplines and partners

3.2. Legal and regulatory framework

- [Data Protection Act 1998](#)
- [Freedom of Information Act 2000](#)
- [Environmental Information Regulations 2004](#)
- [Public Records Act 1958](#) and [1967](#)
- English /UK law for commercial agreements and contract law

This policy helps BGS meet its legislative and accountability requirements and the expectations of its user community. BGS must have legal rights to preserve any digital content kept in its archives.

3.3. Roles, responsibilities and required resources

Director of Informatics: Owner of the BGS Digital Preservation function.

Head of NGDC: Strategic alignment of digital preservation, optimisation of available resources.

Data Science and Records Management staff: Special expertise in digital preservation, covering the development and implementation of digital preservation policy, strategy and associated workflows.

NGDC staff: ingest, store, help deliver and preserve the data, and provide guidance to users.

Data creators and depositors (internally and externally): Appropriate actions to safeguard the data they create and deposit, including the selection of appropriate file formats and provision of descriptive and technical metadata.

Systems and Network Support: Ensure infrastructure used for storing digital records and materials is fit for purpose. Apply general data security.

Required resources and skills: Senior management support for long-term funding is required to carry out preservation activities. Knowledge of digital preservation, technical expertise in specific formats and tools, IT skills, quality control, staff training, communications, management skills.

Collaboration: BGS will collaborate with the wider scientific and general digital preservation community to share expertise and experience and to gain knowledge of the latest technologies and preservation methods.

3.4. Preservation risk assessment

The preservation strategy will include a risk assessment to identify and prioritise the most at-risk data and the actions required to strengthen their long-term accessibility in line with available resources.

4. Key concepts

4.1. Digital curation

- **Authenticity:** The data is what it purports to be, is created or sent by the purported person, and at the purported time.
- **Integrity:** The data is complete and unaltered.
- **Reliability:** The data accurately reflects the original context of data creation and is trustworthy.
- **Usability:** The data can be located, retrieved, presented and interpreted.

4.2. Standards and best practice

The organisation will follow the broad guidance given in standards and best practice guidance to support the level of preservation required. These include:

The **Open Archive Information System (OAIS) model (ISO 14721)** covers functional areas necessary for digital archives including data ingestion, archival storage, data management, administration, preservation planning, and access to data.

Information Security Standard (ISO 27001:2013) balances access and security of digital information. The standard requires that an organisation understands what information assets it holds and ascertains the value of these assets.

ISO 23081: Information and documentation – Managing metadata for records includes references to preservation metadata to underpin the continued authenticity, reliability, usability and integrity of digital information to support its preservation.

Work is currently underway to secure the **Data Seal of Approval and the World Data System (DSA-WDS)** certification.

4.3. Sensitive data

There are safeguards in place for sensitive and confidential data in compliance with the [DPA 1998](#). Work is also underway to comply with the GDPR coming to force in May 2018.

5. Functional preservation (detailed in the strategy)

- Integration with data management
- Appraisal of digital materials
- Capture of preservation metadata
- Technical implementation
- Preservation planning
- Communications and training

6. Evaluating the success of the policy

BGS will use suitable benchmarking schemes to measure the progress of this policy.

7. Policy review date

This policy will be reviewed every three years.