WELCOME TO BGS MURCHISON HOUSE
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**Introduction: aims**

- raise awareness of BGS activities based in Scotland
- to highlight why geoscience data inputs to strategic planning and policy
What is BGS?

• Public Sector Research Establishment under the parent body NERC, created by Geological Survey Act of 1845

• Mission: to advance geoscientific knowledge by survey and research

to provide professional, expert and impartial advice
to disseminate information

• BGS is a Public Records Office and National Archive (fossil & mineral collections, boreholes, records, maps, etc)

• Offices: Nottingham (HQ), Edinburgh, Belfast, Cardiff, (Exeter)

• BGS in Scotland staff complement = 207, of which 131 are scientific (incl. IT, records etc)

Accreditations: BSI ISO9001, ISO14001; liP; IFT; (ERMS)
BGS in Scotland
2005-2010 Programme: filling the ‘knowledge gap’

Customers → Knowledge → surface

HIZ – “Human Impact Zone”

soils

superficial deposits

Bedrock
Digital ‘mapping’ GIS-based workflow

Pre-fieldwork desk study: Existing geological mapping is digitised and overlain onto Digital Terrain Models and aerial photography. New interpretations are added and targets for field checking are identified.

Digital field data collection: New field data is captured digitally using ‘ruggedized’ tablet computers, including refinements to the maps and more information on environmental hazards and resources.

GIS compilation: The new geological interpretation is completed and validated using GIS software on desktop PCs. Printed maps and digital data showing hazard and resource-related themes are generated on demand from the GIS.

Geological map draped on Digital Terrain Model, Central Wales.

Digital data capture in the field on tablet PC.

Digital geological map compilation, Sheffield.
“LithoFrame UK” - the new ‘3D map’

- New 3D geological models at local, regional & national scales
- Attributed with physical & chemical properties, environmental & resource information
- Will replace the paper geological map as the primary knowledge base for UK geology
- GIS-based multi-parameter data sets of land surface
3D visualisation

• Virtalis StereoWorks visualisation system one of the first in Europe
• 3D subsurface data models
  — tool for geoscience communication
  — for scientists, council planners, utility providers, landfill managers, minerals & energy industries
BGS interaction with Scottish Government

- SEERAD: FMD, Nitrates, WFD, soils, geodiversity
- Tourism, Culture & Sport: Built Heritage
- Transport: Geohazards (landslides), geotechnics
- Planning: Minerals, National Planning Framework
- SE Agencies: SEPA, SNH, Historic Scotland, MLURI
- Local government: numerous, GCC

Work mostly carried out on a contractual or co-funded basis as BGS receives no direct funding from SE