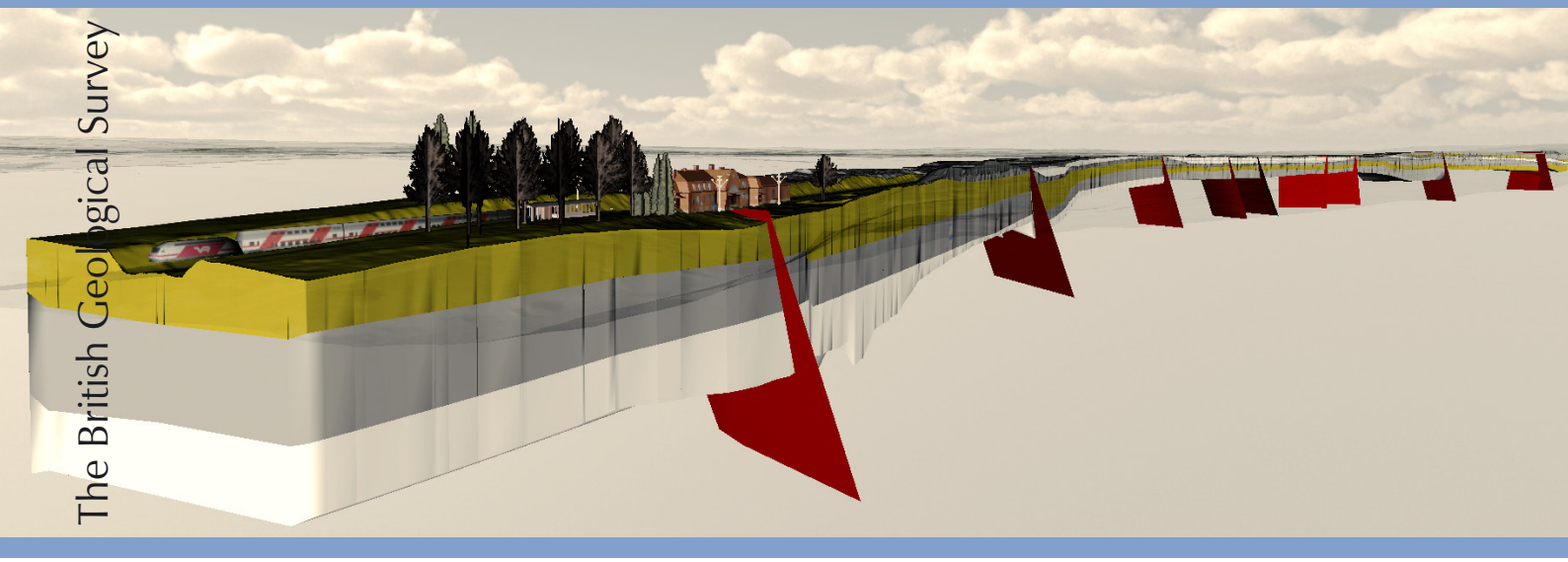
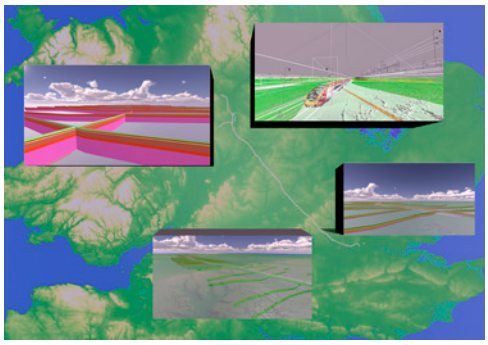
GEOVISIONARY

Transport and infrastructure

The British Geological Survey

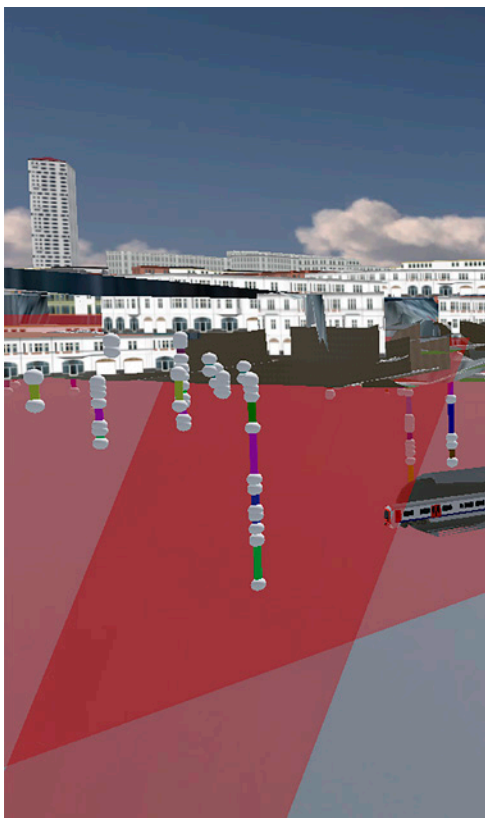


Linear route assessment is an increasingly important discipline that ranges from the local installation of gas pipelines to national scale infrastructure projects such as HS2. GeoVisionary has the capacity to integrate and visualize a variety of data types at wide ranging resolutions. This is advantageous for managing the full lifecycle of these assets from ground investigation, installation, management, decommissioning and post use of above and below ground space.



The BGS 3DVS team has a thorough knowledge and expertise to be able integrate and analyse all of these disparate datasets into the GeoVisionary environment, including:

- CAD models
- LiDAR/Point Clouds
- DTM/DSM models
- Geophysical/Seismic data
- Sensor data

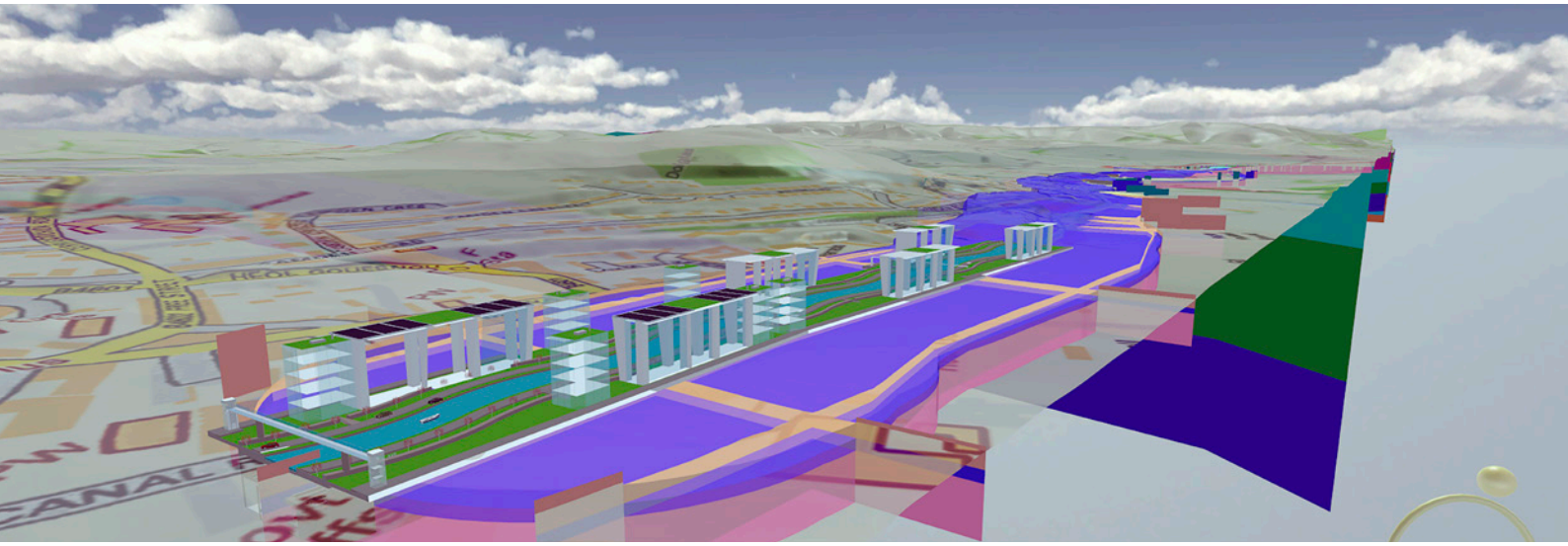


Alongside this, the BGS 3DVS team has direct access to many geoscience data and 3D geological models that can aid the ground risk assessment such as:

- Ground instability
- Geo-environmental
- Geo-engineering
- Boreholes
- Geological surfaces and volumes
- Maps

Projects include:

- Monmouthshire and Brecon Canal (British Waterways)
- North Trans Pennine Electrification between Leeds and York



- Assessing the Underworld (ATU)
- HS2
- Farringdon Station – Crossrail

The challenge

- Assessing and monitoring the impacts on the environment
- Predicting ground conditions including both the natural and artificial resources
- Integration of high resolution data along linear routes including LiDAR, CAD models of buildings and infrastructure, geological/geophysical data,

Benefits of GV3

- Holistic approach to linear route assessment – being able to integrate all types of data formats into one environment for analysis and the communication to colleagues, partners and stakeholders
- Planning – exploration of different route options for optimisation of cost/risk
- Management – risk assessment scenarios using GPS tracking on vehicles and sensor networks to provide continual environmental monitoring, e.g. ground-water levels, flood risks and landslide hazards

Further information

http://www.geovisionary.com/

http://www.bgs.ac.uk/research/engineeringGeology/ggpp/rail_geotechnics.html

Skills and data used

GIS, 3D Geological Modelling, CAD, Geology, 3D Visualization.

For more information please contact:

Enquiries

British Geological Survey, Keyworth, Nottingham NG12 5GG

tel: 0115 936 3143 email: enquiries@bgs.ac.uk

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL