British Geological Survey: 3-Dimensional Modelling
Theme 3 Gathering and maintaining information on our geodiversity
Objective 5 To audit and document our geodiversity including sites, archives and collections.

As well as their huge catalogue of 2-D geological maps at various scales, the British Geological Survey (BGS) is now modelling the UK's geology in 3-D. BGS staff converted information from approximately 600,000 borehole logs held in BGS archives into a data format for the latest 3-D technology, creating geological models that can be used on a PC or viewed when wearing high-tech goggles at the BGS's 3-D Visualisation Facility, which is used for demonstrating 3-D modelling results and for exploring and sharing geoscientific ideas with non-specialists.

A 1:1million scale model of the whole of the UK, LithoFrame 1M, has been completed and mainly serves as an educational tool, used to give an overview of UK geology, including major faults, and can show other features such as the magnitude and depth of earthquakes. Regional models extend to a depth of 5km and can be used for the strategic assessment of groundwater and energy resources, and for identifying possible deep underground storage and waste repositories. Detailed superficial deposit thickness models concentrate on near surface geology and can be used, for example, in civil engineering, in the evaluation of groundwater resources and possible water pollution, and in the prediction of surface hazards such as landslides and the collapse of underlying rocks.