



Maps out, models in at the British Geological Survey!

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BGS has stopped its' systematic onshore geological surveying programme and the litho-printing of geological maps will cease after a final batch of completed maps are published. In future BGS will undertake integrated mapping and 3D modelling in user defined target areas considering all our available geospatial data (map, boreholes, geophysics etc) assessed in a single 3D workspace. The output will be 3D geological framework models that capture the understanding and interpretation of the survey geologist and honour all available data at the time. As well as building new models in these strategic areas, BGS is collating all existing models assembled over the last 25 years into a common framework to produce a multi-scaled National Geological Model of Britain. comprising crustal, bedrock and quaternary and anthropocene themes (<http://www.bgs.ac.uk/research/UKGeology/nationalgeologicalmodel/home.html>). Different to the traditional geological map, the national model will not be completed at any specific scale, but at every point in the model there may be a different geological resolution available, depending on the purpose of the original model or the strategic national need for subsurface information. The need for a complete and robust nested stratigraphic framework (BGS Lexicon) is becoming more important as we advance this model.

Archive copies of all legacy models will be approved and stored in their native formats. In addition a newly designed Geological Object Store will hold geological objects such as coverages, surfaces and cross-sections from these models inside a relational database to ensure versioning and long-term security of the National Geological Model.

In the mid-term these models will be attributed with physical properties such as porosity and density and form inputs to process models such as groundwater and landslide models to help predict and simulate environmental change. A key challenge for geologists and their systems building the geological models is to maintain their models in a dynamic manner, so that they are fit for the requirements of many different users and that feedback from external parties can be incorporated into them. Only then are we achieving our vision of a shared National Geological Model.