BGS Civils – engineering questions answered by a new suite of engineering geology maps

The British Geological Survey (BGS) has recently released a new suite of engineering geology maps called BGS Civils. The maps provide information on the engineering properties of the ground to a depth of 2 m. This new data product is designed to assist in the preparation of tenders, the planning of groundworks and the compilation of ground investigation desk studies.

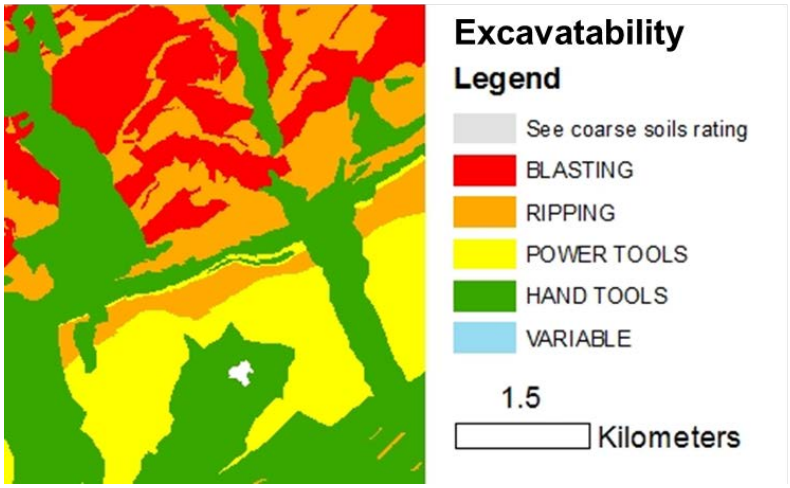
The BGS Civils suite includes eight national maps at 1:50000 scale, each addressing a key issue faced when planning ground engineering projects:

- The **Strength map** indicates the engineering strength of rocks and fine soils, and densities of coarse soils in accordance with BS5930:2015.
- The **Discontinuities map**, describes features (bedding, layers, foliation) in the rock that could lead to a reduction in strength and provides information about how the ground may break up, for example, whether it is fractured, bedded or massive.
- The **Excavatability map** indicates suitable zones for excavation and indicates the type of tool (hand, ripping or blasting tools) needed to dig to 2 m depth.
- The **Bulking map** describes the likely range of increase in volume of the material following excavation from its in situ location.
- The Use as Engineering **Fill map** indicates whether excavated material is suitable to be re-used as engineered fill.
- The **Corrosivity** and **Sulfate-sulfide maps** provide information about the potential aggressive ground soil conditions.
- The **Resistivity map** indicates the electrical earthing properties of the ground.

BGS Civils is a series of digital GIS datasets based on DiGMapGB-50, the digital geological map of Great Britain. DiGMapGB-50 contains descriptive information about the lithological type and variability of each geological unit. This information, coupled with geotechnical data (BGS National Geotechnical Database), information from the literature and expert knowledge, was used to re-attribute DiGMapGB-50 with descriptions relating to the above themes.

BGS Civils is currently supplied by the British Geological Survey as GIS shapefiles and, on request, through a secure web viewer. Contact digitaldata@bgs.ac.uk for further information or see the BGS website (https://www.bgs.ac.uk/products/home.html) where you can download user guides and sample data, and find out more about pricing.

An opportunity for you? The British Geological Survey would like this data to be used in new and exciting applications and tools. We invite developers and entrepreneurs to innovate with our data and produce commercial applications for industry. For example, could you develop an app that would deliver data to excavator drivers or could you incorporate BGS Civils into software/apps that focus on planning or quote estimation? If this is of interest to you, please get in touch (enquiries@bgs.ac.uk).


Excavatability
Legend
See coarse soils rating
BLASTING
RIPPING
POWER TOOLS
HAND TOOLS
VARIABLE
1.5
Kilometers