

Question 1: To what extent do you think our proposed approach to providing national-scale existing information about geology relevant to long-term safety is appropriate? Please give your reasons.

I believe that the national-scale approach is the right way to start the site selection process. Examination of the geology of England, Wales & Northern Ireland using a standardized approach levels the playing field and allows decisions to be made on the basis of whether or not a particular area is geologically suitable for a disposal site.

Question 2: To what extent do you think that the proposed national information sources are appropriate and sufficient for this exercise? Please give your reasons.

At the national scale, geological information held by the BGS is the most appropriate for use in a screening exercise. No other organization, with the exception of some datasets held by the EA, holds such information and has geologists with the regional knowledge and experience required to present it at this scale. UK geology is complex and varies rapidly both laterally and with depth, but for the purposes of a national scale screening exercise, the geological information presented should be sufficient to provide information to an interested community as to the potential suitability of their area.

Question 3: To what extent do you agree or disagree with the proposed form of the outputs from geological screening? What additional outputs would you find useful?

Ultimately, I believe the process of actual screening would require all the geological information, as described in the RWM National Screening Guidance section 3, in a GIS project so that each factor can be assessed on a layer by layer basis. Allowing interested communities access to such a GIS so that they can interact with the datasets for their area, might help them to visualise the potential suitability. The use of the network of sections and fly-through (presented at the Belfast workshop) as a tool for communicating the national-scale geology, is an appropriate way to show the subsurface arrangement of the various host-rock groupings. However, there was some discussion as to how meaningful the rock groupings would be to non-geologists and I think that for the majority this would be meaningless. A more widely accessible approach might be to produce a thematic set of sections that show areas that are suitable or not. Suitable areas could be coloured on the sections based on the three rock groupings identified (high strength, lower strength and evaporites) and non-suitable areas could be coloured depending on what the main issue is - so for some areas it may be an inappropriate rock type, for others it may be the presence of faulting or the presence of mineral resources. If these sections were then to be used as part of the screening exercise, in order to determine depth of suitable or unsuitable rocks groupings, then the above attributions would need to be added to them.

Question 4: Do you have any other views on the matters presented in the draft Guidance?

No.

Name: Dr Mark Cooper, Chief Geologist

Email address: [REDACTED]

Telephone number: [REDACTED]

Organisation/affiliation: **Geological Survey of Northern Ireland**

Do you agree to your responses to this consultation being published? Yes