An international meeting on deep borehole disposal of high-level radioactive waste will be hosted by the Deep Borehole Disposal (DBD) Research Group at The University of Sheffield, UK. This meeting comes at a time when significant interest in DBD concepts is being shown by international organisations involved in high-level radioactive waste disposal.

The objective is to provide a forum for discussions on all aspects of DBD and is aimed at representatives from industry, governmental bodies and policy makers, academic institutions, and non-governmental organisations. The meeting will seek to reach conclusions on concept applicability, and formulate guidelines and recommendations concerning the use of DBD in disposing of specific radioactive waste streams.

This meeting will facilitate discussion of technical, scientific, regulatory and social aspects of DBD, and will consist of keynote presentations, technical items and extensive discussion. These will be based around four main themes:

• Current status of DBD – including technical aspects of the concepts under development.
• R&D activities and challenges – considerations associated with siting, waste package deployment and recovery, near-field barriers, borehole sealing, and all engineering aspects.
• Foreseeable progression of DBD – likely developments of the concept in the medium term.
• Future possibilities and applications of DBD – potential use of the concept at all scales, including centralised and dispersed disposal of a wide range of waste types.
**Location and Accommodation**

The historic city of Sheffield is synonymous with the industrial revolution, and during the 19th century gained an international reputation for steel production and cutlery manufacture. Sheffield is located in the valley of the River Don and its four tributaries, and a third of the city lies within the Peak District National Park. The city has a long sporting heritage and is home to the world’s oldest football club (Sheffield FC).

Sheffield is less than 1.5 hours from the international airports of Manchester, Leeds Bradford and East Midlands, and is easily reached by train from Manchester and London.

**Meeting Venue**

The Mercure Sheffield St Paul’s Hotel and Spa is a modern 4-star hotel in the centre of Sheffield, and has a contemporary restaurant and bar, a spa, gym and indoor pool. The hotel is close to the Lyceum and Crucible theatres, the multi-award winning Winter Garden, the Millennium Gallery, various other museums and a range of shopping facilities.

Limited accommodation has been reserved at the venue at a cost of approximately £115 per person per night bed and breakfast. Accommodation cost is not included in the meeting registration fee, and delegates will need to book rooms directly with the hotel quoting the code 130616UNI. Rooms booked after April 4th will be subject to a different rate, so it is advisable that rooms be booked as soon as possible.

**Meeting Topics**

The meeting is intended to generate significant discussions about various topics associated with deep borehole disposal (DBD) of radioactive waste and will be focused around the following themes:
- Current status of DBD.
- R&D activities and challenges.
- Foreseeable progression of DBD.
- Future possibilities and applications of DBD.

**Call for Papers**

This International Meeting will consist of keynote and invited presentations as listed on the preliminary programme below. The remaining presentations within each session are open and expressions of interest to present within the thematic sessions should be sent to the organisers at the earliest opportunity with a short abstract of no more than 250 words.

**Key Dates**

- Expressions of interest to present – Open 15th December 2016, closes end January 2016.
- Start of registration – 4th January 2016.
- Notifications of acceptance to present – End of February 2016.
- Meeting dates – 13th to 15th June 2016.

**Registration**

All participants are required to register and pay by credit card. Meeting registration will be available on-line via the web address below, and will be open from 4th January 2016. Registration cost is £250.

**Meeting Information and Registration**

Go to [www.onlineshop.shef.ac.uk](http://www.onlineshop.shef.ac.uk), then select Faculty of Engineering, then Materials Science and Engineering, then choose the meeting.

**Meeting Organisers**

- Dr Karl Travis
- Dr Nick Collier
- Prof. Fergus Gibb

**Contact Details**

Dr Nick Collier, Department of Materials Science & Engineering, The University of Sheffield, Sir Robert Hadfield Building, Mappin St, Sheffield S1 3JD, UK.

nick.collier@sheffield.ac.uk
International Meeting on Deep Borehole Disposal of High-Level Radioactive Waste

Preliminary Programme

Welcome and Purpose of Meeting
Dr K Travis

Opening Address
TBC

Overall Keynote Presentation
Timeliness, importance and objectives of the meeting – Title TBC, Mr A Orrell.

Session 1 - DBD Concept and Current Status - Session Chair – Prof F Gibb.
• Keynote Item: An introduction to DBD and a review of concept status – Dr P Brady.
• Current status of the US Deep Borehole Field Test – Mr G Freeze – Invited talk.
• Site selection guidelines – Dr E Hardin – Invited talk.
• Other presentations.

Session 2 - Technical and Political Challenges - Session Chair – Prof N Chapman.
• Keynote Item: Addressing technical challenges of Deep Borehole Disposal – Prof M-L Zoback.
• Site characterisation for the Deep Borehole Field Test – Dr P Brady – Invited talk.
• Engineering challenges of deep large diameter borehole construction – Mr J Beswick – Invited talk.
• Waste package handling and deployment – Dr E Hardin.
• Techniques for sealing waste containers within deep boreholes – Dr N Collier – Invited talk.
• Sealing deep borehole disposals of radioactive waste – Prof F Gibb – Invited talk.
• Bentonite seal laboratory experiments – Dr F Caporuscio.
• Other presentations.

Session 3 – Candidate Wastes for DBD - Session Chair – Prof M-L Zoback.
• Keynote Item: The potential use of DBD for spent fuel – Speaker and Title TBC.
• DBD of plutonium – Frank von Hippel – Invited talk.
• Hanford Cs/Sr capsule overview – Dr L Price.
• A design for DBD of the Hanford Cs/Sr capsules – Dr K Travis – Invited talk.
• Safety case for DBD of Cs/Sr. – Mr G Freeze.
• Spent fuel and vitrified waste as candidates for DBD – Dr K Hesketh – Invited talk – Speaker and title TBC.
• Other presentations.

Session 4 – DBD in National and Trans-national Programmes - Session Chair – Mr A Orrell - TBC.
• Keynote Item: The potential use of DBD in different national programmes – Prof N Chapman.
• Potential for DBD in the USA – Chairman's Comment - Speaker and title TBC – Invited talk.
• Conceptual ideas on multi-barrier systems for repositories in deep wells – a German view on deep well repositories. – Prof F Schilling – Invited talk.
• Consideration of DBD in the UK – Dr J Roberts - Speaker and title TBC – Invited talk.
• History and current situation regarding DBD in Sweden – Dr J Swahn – Invited talk.
• Other presentations.

Session 5 – Summary and Meeting Outcome - Session Chair – Prof F Schilling.
• Panel Discussion.
• Production of concluding statement on concept applicability.
• Formulation of guidelines and recommendations concerning the use of DBD in disposing of specific radioactive waste streams.