



## **QRA 2015 Annual Discussion Meeting**

### **“The Quaternary Geology of the North Sea basin and adjacent areas”**

#### **The Date**

Monday 5<sup>th</sup> to Thursday 8<sup>th</sup> January 2015

#### **The Organising Committee**

Emrys Phillips (British Geological Survey); Margaret Stewart (British Geological Survey); Carol Cotterill (British Geological Survey); Mads Huuse (Manchester University); David Hodgson (University of Leeds); Simon Carr (Queen Mary University of London)

#### **The theme of the meeting**

The North Sea has had a long and complex geological history with its present-day structural configuration largely being the result of rifting during the Jurassic–Early Cretaceous, followed by thermal cooling and subsidence. Since the middle Cenozoic, up to 3000 m of Oligocene to Holocene sediment have accumulated in the central graben region of the North Sea, locally including more than 800 m of Quaternary sediments. Preserved within this sedimentary record is the evidence for several ice sheets having advanced into the North Sea at different stages during the Quaternary, contributing to the periodic erosion and infill of this sedimentary basin.

The traditional view of the Pleistocene glacial history of the North Sea suggests that the region has encountered three major glacial episodes during the past 500 ka, referred to as the Elsterian Stage (oldest, Marine Isotope Stage [MIS] 12), Saalian Stage (MIS 10–6), and Weichselian Stage (youngest, MIS 5d–2) glaciations. The main criterion for this threefold subdivision are the discrete sets of tunnel valleys preserved offshore, which delimit the broad extents and submarginal drainage systems developed beneath these ice sheets during each phase of glaciation. However, in recent years, this simple three-stage model has come under considerable scrutiny and there is now growing body of evidence that there may have been many more glacial episodes. The increasing geomorphological evidence for ice sheets having extended across the northwest European continental shelves, means that it is becoming increasingly apparent that the sedimentary record within the North Sea basin is likely to contain the key evidence for the existence of these former Pleistocene ice sheets and intervening interglacials.

The North Sea basin is known to have been an important pathway for large-scale glacial transport to the deeper Atlantic Ocean, as shown by the presence of large

glacial debris fans along the northwest European continental margin. These fans were fed by ice streams, comparable with those that drain the majority of ice from modern-day Greenland and Antarctica, and these were probably a key feature of the North Sea ice sheets. As a result, the North Sea basin is also likely to be an important site for understanding the discharge and stability of the major northern European palaeo-ice masses, including the British and Fennoscandian ice sheets.

The Edinburgh 2015 QRA annual discussion meeting aims to bring together scientists working in the North Sea and surrounding areas. It will provide an ideal forum in which to exchange views and information, and discuss new ideas regarding the Quaternary evolution of the North Sea basin on a variety of time scales, its glacial and interglacial successions, its archaeological record of human occupation, and the recent advances in the mapping of marine habitats and their conservation.

So we hope you will join us in Edinburgh in January 2015. All of the details of the conference including digital versions (Microsoft Word; pdf) of the registration and abstract forms can be found on the QRA web site ([www.qra.org.uk](http://www.qra.org.uk))

## **The Venue**

The QRA's 2015 Annual Discussion Meeting will be held at 'Our Dynamic Earth'; a 5 star visitor attraction in Edinburgh's city centre with Earth Science at its heart. 'Our Dynamic Earth' is located in the Holyrood area of the city, close to Holyrood Palace and the Scottish Parliament, and provides stunning views of Salisbury Crags and Arthurs Seat from its distinctive, award winning tented structure.

To find out more about 'Our Dynamic Earth' please follow the link below:

[www.dynamicearth.co.uk](http://www.dynamicearth.co.uk)

## **The Conference**

### **Outline Programme**

Monday 5<sup>th</sup> January – Conference registration at 'Our Dynamic Earth' (evening: 5:00pm until 8:00 pm)

Tuesday 6<sup>th</sup> January – Conference registration, Welcome and main conference sessions at 'Our Dynamic Earth' (9:00am to 5:00pm); evening "ice-breaker" drinks reception (location to be confirmed)

Wednesday 7<sup>th</sup> January – Main conference sessions, 'Our Dynamic Earth' (9:00am to 5:00pm); conference dinner at the Apex International Hotel located in Edinburgh's Grassmarket

Thursday 8<sup>th</sup> January – Main conference sessions and close, ‘Our Dynamic Earth’ (9:00am to 4:00pm)

Friday 9<sup>th</sup> January – Post-conference workshops to be held at the British Geological Survey, Edinburgh

## Scientific Programme

We have planned a broad range of session topics that represents the range of interests of the members of the QRA. These include:

- Quaternary geology of the North Sea – a general session
- Tunnel valleys and subglacial to ice-margin drainage systems
- Ice sheet limits and dynamics within the North Sea region
- Pleistocene stratigraphy and palaeoenvironments
- Quaternary geology of the onshore areas surrounding the North Sea
- Post-glacial to Holocene evolution and sedimentation within the North Sea basin
- Archaeology and human occupation
- Mapping of marine habitats and marine conservation
- Off-shore and coastal geohazards and resources

And finally a poster session which is open to all.

## Keynote speakers

To be confirmed.

## Post-conference workshops

The post-conference workshops are **free** to attend and will be held (subject to demand) at the British Geological Survey’s offices in Edinburgh

- **Workshop (1)** Micromorphology and analysis of glacial sediments (led by Emrys Phillips and Simon Carr)
- **Workshop (2)** 3D seismic geomorphology (led by Mads Huuse and Margaret Stewart)
- **Workshop (3)** Analysis and interpretation of surface multibeam data (led by Carol Cotterill)
- **Workshop (4)** Logging and analysis of marine core (to be confirmed)

## Call for abstracts

To submit an abstract simply download and complete the abstract submission form (Microsoft Word) which can be found at the QRA web site ([www.qra.org.uk](http://www.qra.org.uk)) and e-mail your completed form to Emrys Phillips ([erp@bgs.ac.uk](mailto:erp@bgs.ac.uk)). Delegates are allowed to submit more than one abstract. The deadline for abstract submission is **Friday 31<sup>st</sup> October 2014**. Accepted abstracts will be ‘published’ in the conference volume

and given to all delegates at the meeting. Further details concerning the length of the talks, as well as the size and format of the posters will be given closer to the event.

## Registration

Registration QRA 2015 Annual Discussion Meeting is now available. To register and pay on-line simply follow the link:

<http://www.eventbrite.co.uk/e/qra-2015-annual-discussion-meeting-edinburgh-tickets-11774191925>

For postal payments please complete the online registration form (Microsoft Word) which can be found at the QRA web site ([www.qra.org.uk](http://www.qra.org.uk)), and send a cheque (made payable to the “*Quaternary Research Association*”) for the correct amount to:

Dr Emrys Phillips c/o British Geological Survey, Murchison House, West Mains Road, Edinburgh EH9 3LA.

The cost of registration for the QRA 2015 Annual Discussion Meeting for “Early Birds” is **£165.00** (full) or **£130.00** (students) (1<sup>st</sup> July to 31<sup>st</sup> October 2014), or for “late booking” **£195.00** or **£160.00** (students) (1<sup>st</sup> November to 15<sup>th</sup> December 2014). The fee includes the conference volume, all lunches and other refreshments during this 3 day conference, as well as the drinks reception. A daily-rate of **£65.00** per day (payable on the day) is also available for those who cannot attend the whole conference. The conference dinner, at a cost of **£35.00** per person, will be held at the Apex International Hotel located in Edinburgh’s Grassmarket with the restaurant providing spectacular views of Edinburgh Castle.

## Support for postgraduate attendance

Postgraduate members of the QRA are eligible to apply for the Postgraduate Meeting Award (PMA) to support their attendance at the 2015 Annual Discussion Meeting. Any registered postgraduate who is a current member of the QRA is eligible to apply (regardless of duration of membership); applications are particularly encouraged from students in their first year of study. The awards normally cover 50% of the costs of the meeting (excluding travel to the venue); the remaining 50% must be found from other sources.

The main criteria for the distribution of awards will be (i) relevance to research topic, and (ii) financial need. A brief supporting letter from your supervisor must accompany the application. Please ensure that anticipated budgets are complete and, where appropriate, identify the source of financing, e.g. QRA, external source/Department/Institution (give details), personal funds, etc.

Recipients will be required to submit a short report of expenditure to the Awards Officer (for files only) not more than 3 months after completion of the meeting. Once the report has been received, members will be eligible to apply immediately for other QRA awards (i.e. the usual 12 month moratorium on further applications will not apply).

The deadline for applications is 15<sup>th</sup> September 2014 (see [www.qra.org.uk/grants](http://www.qra.org.uk/grants)).

### **Accommodation**

Edinburgh is a vibrant city attracting visitors all year round. It offers a wide range of accommodation from hostels for those on a budget, to self-catering apartments, as well as guest houses and hotels.

Delegates can book their own accommodation for the QRA annual discussion meeting in Edinburgh January 2015 using the following link:

<https://cabs.conventionedinburgh.com/ei/cm.esp?id=150458&pageid=41P0QXOWF>

This on-line booking service is provided by *Marketing Edinburgh's Convention Bureau* ([www.marketingedinburgh.org](http://www.marketingedinburgh.org))

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**Session:** Quaternary geology of the North Sea/Tunnel valleys and subglacial to ice-margin drainage systems/Ice sheet limits and dynamics within the North Sea region/Pleistocene stratigraphy and palaeoenvironments/Quaternary geology of the onshore areas surrounding the North Sea/Post-glacial to Holocene evolution and sedimentation within the North Sea basin/Archaeology and human occupation/Mapping of marine habitats and marine conservation/Off-shore and coastal geohazards and resources/Poster session (delete as appropriate)

**Corresponding author:** enter name here                      **e-mail:** enter e-mail address here

**Type of presentation:** Talk/Poster (delete as appropriate)

#### **Title of Presentation**

**Name 1**<sup>1</sup>, Name 2<sup>2</sup> and Name 3<sup>3</sup>

<sup>1</sup> address of author 1 (e-mail address)

<sup>2</sup> address of author 2

<sup>3</sup> address of author 3

Please type or cut and paste your abstract here. Please use the font Times Roman 12 point. Your abstract should be concise and factual, and a **maximum length of 300 words**. The abstract should state briefly the purpose of your research, the principal results and the major conclusions. Please avoid using references and do not include figures in the abstract. Non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention within the abstract.