



## Earth Science Education Forum (England and Wales) Minutes of the thirty-ninth meeting

Held in the Natural History Museum Board Room, Exhibition Road, London. 1.30pm, 8 March 2011

**Present:** Chris King, Chairman (Earth Science Education Unit)  
David Bailey (British Geological Survey)  
Steve Brace (RGS)  
Martyn Bradley (Geology Trusts)  
David Brook (London Geodiversity Partnership)  
Susan Brown (Geologists' Association and Rockwatch)  
Nikki Edwards (OCR)  
Grace Kimble (Natural History Museum) Host  
Tom Hose (Geoconservation UK)  
Natasha Lee (Gloucestershire Geology Trust)  
Jacqui Malpas (Clwydian Range AONB)  
Cally Oldershaw (ESTA)  
Paul Smith (CHUGD Committee of Heads of University Geoscience Departments)

**Speakers:** Chris Darmon (GeoSupplies), Martyn Bradley and Natasha Lee led a discussion on 'Geoscience in Adult Education'

### 1 Apologies for absence

Apologies for absence were received from Diane Ashton (IOM3), Kirsten Bodley (for STEMNET), Chris Carlon, Joanna Mears (Geological Society) Dave Waltham (CHUGD Committee of Heads of University Geoscience Departments), Peter Warren, Martin Whiteley (Geology Trusts), June Wright (British Geological Survey).

### 2 Minutes of the 38th meeting, 7 December 2010

The minutes were accepted as a true record of the meeting after minor amendments. A revised copy will be placed on the ESEF website.

**Action: David Bailey**

### 3 Matters arising

3.1 [Agenda item 2] The minutes of the 37th meeting had been placed on the Forum's website.

3.2 [Agenda item 3.3] It was reported that the Southern Regional Group of the Geological Society had held a careers event earlier that day. About 90 students had attended. The Manchester and NW and the South Wales Regional Groups were thought to be planning similar events. The East Midlands RG has held careers days with the University of Derby for the past two years but it had proved hard to attract potential employers or to find a date that suited all local university departments and schools so there were no plans to repeat it in 2011. P Smith said that CHUGD had expressed concern that the GSL had discouraged students by being too downbeat about current career opportunities. C King said that he had written to the GSL regarding their Careers Day and reassured the Forum that the mood at the event earlier in the day had been positive.

3.3 [Agenda item 3.4] C King reported that he had also written on behalf of ESEF to the GSL regarding the library review. He would forward his letters and replies concerning Careers Day and the Library to June Wright for circulation to Forum members.

**Action: C King and J Wright**

- 3.4 [Agenda item 6] C Oldershaw advised that the next meeting of the All-Party Group for Earth and Environmental Science would be on the subject of shale gas and held on 15 March 2011. The following All-Party Group meeting was planned for 17 May (Libya and its Oil). C King asked that the next Forum meeting be brought forward from the previously advertised date of 7 June to make it easier for members to attend both. The autumn meeting of the Forum would also be scheduled to coincide with the All-Party Group, provisionally scheduled to meet on 18 October.
- 3.5 [Agenda item 8.1] P Smith advised that geology is classified as a STEM subject, but not as a 'Strategically important and vulnerable subject' (SIV). Under the Browne review, all government funding would be removed except for priority subjects (which essentially replace SIVs). Geology is currently a priority subject but there is a danger it could fall off the list and this won't be clear until May. There is also a campaign to include geography as a priority subject. The Immigration Minister, Damian Green, had announced that the cap on immigration for certain subjects including chemistry and geology would be lifted.

#### **4 Finance report**

There has been no change in the Forum's finances. C King confirmed that there were sufficient funds to cover the expenses of visiting speakers, but asked convenors to check with the Chair or Secretary in advance that the expenses were reasonable.

#### **5 ESEF website ([www.esef.org.uk](http://www.esef.org.uk))**

D Bailey reported that there have been no major changes to the content and gave a summary of the basic visitor statistics. There was some discussion about the ease of finding the website using Google (it was suggested that the full name had to be added).

#### **6 All-Party Parliamentary Group for Earth and Environmental Sciences update**

C Oldershaw reported that the name of the All-Party Group had changed and this seemed to have engaged more interest from parliamentarians. The Group would continue to hold meetings in a similar format to previously for the time being. Eventually it was hoped that meetings would be held in the style of 'enquiries' with several meetings to explore related topics with witnesses questioned by the Group and their findings reported, but this had yet to be set up.

#### **7 Potential collaborative projects**

- 7.1 C King reported that secondary teachers specialising in geology had previously been trained only at the universities of Bath and Keele. Bath had now announced that they would not be continuing. Keele had also announced plans to close but had accepted a 'no-cost' option that would allow training to continue. However, a new policy by the Training and Development Agency (TDA) to cut places for trainee science teacher at Keele by 19% had put this at risk as the university wished to maintain levels of trainees in chemistry and physics and could not retain geology without making biology unviable too. Chris had written to the TDA explaining the unintended consequences of the policy and they have approved an extra 6 places, which was very good news.
- 7.2 C King circulated a leaflet about teacher training options, produced jointly with the Geological Society, that would be uploaded to the ESTA website soon.
- 7.3 N Lee advised that the list of 'acceptable' qualifications for Trinity College, Cambridge did not include Geology A-level (Environmental Sciences was included, but only on the 'C' list). This was apparently an error, but it was of concern that geology could be overlooked as a suitable A-level leading to undergraduate study. N Edwards reported that the number of candidates for AS-level geology had increased again in 2011. C King said an article would be published in the May issue of *Geoscientist* magazine which outlined evidence that around a third of the undergraduates in geology came via the A-level or Higher Geology route. If A-level geology teaching was lost, it could have an impact on undergraduate recruitment. P Smith reported that CHUGD had been examining geology applications to universities over the past 5–10 years. Admissions appeared to

be flat or in slight decline (especially for 2001–5). Some institutions had experienced a ‘boom’, others struggle to fill places; this may be related to their admissions policies (e.g. the A-level subject and grade requirements). Some departments welcome A-level geology while others discourage it. J Malpas noted that it was difficult to advise A-level students on university departments given the inconsistent approach. C King said that he had secured funding to access UCAS figures on admissions to geoscience (F6\*\*) courses. It should also be remembered that two-thirds of A-level geology students go on to study other subjects or pursue other careers.

- 7.4 J Malpas said she had produced a DVD that included PowerPoint presentations for three ‘virtual’ field trips which covered the WJEC GCSE “Key ideas from the curriculum” and a risk./benefit analysis of fieldwork. She was planning to present this at the ESTA Conference in Durham, 1–3 July 2011.

## **8 How Should earth science be part of mainstream education?**

Deferred to a future meeting in absence of P Warren.

## **9 “Informed Choices” (Russell Group paper)**

A copy of the paper was circulated before the meeting. It was noted that the ‘facilitating subjects’ listed were close to the main subjects studied in schools (page 21). Also that for Geology/Earth Science courses, A-level geology was listed as a ‘useful’ qualification.

## **10 AOB**

- 10.1 The Aggregates Levy Sustainability Fund (ALSF) had been discontinued in England. It would continue in Wales (and possibly in Scotland) for the foreseeable future. C Oldershaw reported that M Whiteley had written to ask whether, in the absence of the ALSF, the Forum would consider lobbying for alternative funding for geoconservation projects. The Geology Trusts had discussed this and it was believed that major organisations, such as the RSPB, and county-based geoconservation organisations would be making representations. T Hose suggested that organisations should seek funding from the processing as well as the extraction industries. S Brown advised the closure of the ALSF had made a noticeable impact on the Curry Fund with more and larger grant applications being made. Unfortunately this had to be set against a significant drop in investment income. It was agreed that C King should write to Caroline Spelman, Secretary of State for the Department of Environment, Food and Rural Affairs, expressing concern at the lack of continuing support for geoconservation.

**Action: T Hose to draft a letter for C King**

- 10.2 The Heritage Lottery Fund might help fill the funding gap, but this was not certain. D Brook advised that the HLF were currently undergoing a consultation on their future work. There might be some merit in contributing to this debate with the aim of gaining recognition for geoconservation. C Oldershaw suggested that the Forum should invite Michael Murray of the Heritage Lottery Fund to speak at the next meeting in place of the presentation on Geoscience Careers already scheduled.

**Action: C Oldershaw to invite Michael Murray**

- 10.3 T Hose drew attention to the latest Geoconservation UK newsletter. The European Landscape Convention was described — unfortunately this does not mention geology. He invited Forum members to submit news items for future editions.

## **11 Dates of future meetings**

17 May 2011                      C Oldershaw to invite Michael Murray of HLF to give a presentation.

18 Oct 2011 (TBC)              C Oldershaw to convene discussion on ‘Geoscience Careers’.

Chris King thanked everyone for their attendance.

**Agreed actions:**

Agenda Item	Subject	Owner	Due date
37.6	All Party alterations to be communicated to David Bailey for Web update.	Cally Oldershaw	December 2010 meeting
38.6	All Party update of procedures required	June Wright	Next meeting
39.2	Minutes of 38th meeting to be uploaded	D Bailey	ASAP
39.3.3	Circulate correspondence about GSL library and Careers Day	C King & J Wright	Before 40th meeting
39.10.1	Draft letter to DEFRA re continuing funding for geoconservation	T Hose & C King	ASAP
39.10.2	Invite Michael Murray to speak about HLF funding opportunities at 40th meeting	C Oldershaw	ASAP
39.Presentation	Costed proposal for adult education database	C Darmon	By 40th meeting

**Geoscience in Adult Education: Martyn Bradley, Natasha Lee and Chris Darmon**

**Martyn Bradley** introduced the presentations. The main providers of adult education in geology used to be universities, through extension classes, the Open University and the Workers' Educational Association (WEA). Most universities gave up teaching adult education in geology when central funding was withdrawn several years ago. Warwick University had continued to offer courses but much reduced compared to ten years ago, when there were 6 courses running. Some former university tutors now offer private courses. Adult education was a route into geoconservation activities for many people.

So how do interested parties find out what courses are available? Chris Darmon would speak about this later.

**Natasha Lee** noted that Bristol University had also terminated their adult education courses and went on to describe the role of Geology Trusts in adult education. The Gloucestershire Trust held a list of school offering courses in geology and also runs courses itself.

'Community Earth Heritage Champions' was a three-year course, funded by ALSF and HLF, which would finish in August 2011. Members of the community 'adopt' a quarry and make it into a local facility. They may also offer guided walks, fossil hunting events, rock and fossil roadshows, rock concerts and conservation days. 'Champions' are trained in basic skills, local geology, and to manage the site for conservation.

The Geopark Way is a 109-mile geological walking trail from Bridgnorth to Gloucester. There are 17 day-long walks along the trail. Introduction to geology courses were established to train volunteers and local community conservation groups, run by independent tutors for the Earth Heritage Trust. Courses were held at three locations along the trail and covered basic geology, palaeontology, regional, local and global geology. There will be a new course in the summer on volcanoes. The costs are modest.

Earth science in prisons. A three-year pilot project funded by Awards For All had been carried out by the Gloucestershire Geology Trust (now looking for continuation funding). Earth science workshops had been taken into prisons. Many inmates had no formal qualifications and had an average literacy equivalent to Key Stage 2, numeracy levels were even lower. Many prisons have education programmes aimed at reducing reoffending on release by offering training in basic skills, life skills, art or therapeutic activities. There are very few science courses. Most practical experiments cannot be

carried out and even substances such as vinegar, bicarbonate and blutac are banned which limits activities, though rocks can be taken in. There is also a perceived apathy — inmates are not expected to engage in science courses.

The pilot showed that earth science courses can improve basic science skills, self-image, and awareness of global issues. Workshops took place at HMP Eastwood Park, a closed women's prison which offers a good range of educational course. The workshop included a basic geological map exercise lasting an hour (using the basketball court). 18 people attended and feedback was good. The second session covered the rock cycle and included four simple 15-minute experiments. The third session focused on Earth Art. The experiments were more successful than art, partly because of time constraints. Geology turned out to be an ideal subject for science teaching — it is very visual, appropriate materials could be brought into the prison and it encouraged an interest in the natural world. However, prisons were unable to cover the costs involved so additional funding is needed if the ambition to roll out a wider programme (for instance, extending the pilot to young offenders' institutions).

**Chris Darmon** described his own background in earth science education which included a PGCE at Keele University, lecturing in the civil engineering department at Loughborough University and teaching for the WEA. He had been a teacher in Sheffield for eight years and also taught A-level evening classes and extramural classes at Sheffield University's Institute for Lifelong Learning. However, changes in the way adult education was funded meant that courses would soon be unaffordable for most with courses worth 120 credits costing thousands of pounds.

However, the appetite for adult education in geology remained, perhaps encouraged by recent TV coverage of geology and astronomy. He was now teaching two courses independently in Sheffield and had launched a distance-learning course on techniques in field geology. Tutors working independently needed to have appropriate insurance.

One difficulty for potential students is finding out about courses. There are very few geology courses offered by the WEA outside London. There are many active U3A groups but their website doesn't list all those that exist. The time is ripe for a national database of geological courses. Chris proposed that Down To Earth should establish a non-profit-making database collating information on what courses are available. This would need some sponsorship eventually.

C King thanked the speakers and invited discussion from the Forum.

D Brook noted that many WEA courses had in the past spawned local geological societies (e.g. the Harrow and Hillingdon GS), but many courses and societies face closure as they have become unsustainable.

G Kimble suggested that a costed proposal should be drawn up. Once potential costs were identified, suitable sponsors could be sought, or the costs could be distributed among organisations contributing to the site.

C Darmon said he felt a central funding body or sponsor would be best.

C King asked C Darmon to consider what the set up costs would be and how much the site would cost to maintain. PESGB might be a useful contact.

P Smith suggested selected learned societies might be prepared to provide funding.

M Bradley advised that the next U3A magazine would have the theme of archaeology and geology and might be a useful channel for raising awareness.

**Action: C Darmon to send C King a costed proposal within two months to take forward.**