



## Earth Science Education Forum (England and Wales) Minutes of the 54th meeting

Held in the Arthur Holmes Room, Geological Society, London. 1.30pm, 3 March 2015.

### Present

Annette Shelford (NHM Learning Team/Real World Science)  
Cherry Lewis (University of Bristol)  
Chris King (Earth Science Education Unit)  
David Brook (London Geodiversity Partnership)  
Duncan Hawley (Geographical Association)  
Isabel Markham (U3A)  
John Stevenson (BGS)  
Lesley Dunlop (English Geodiversity Forum)  
Martyn Bradley (Geology Trusts & U3A)  
Nikki Edwards (Oxford and Cambridge OCR)  
Pete Loader (ESTA)  
Susan Brown (Rockwatch)  
Tom Hose (GeoConservationUK & University of Bristol)

### 1. Apologies for absence:

Cally Oldershaw (All-Party Group for Earth and Environmental Sciences)  
David Bailey (Geologist and science communicator)  
Judi Lakin (GSL)  
Lorraine Craig (Imperial College London)  
Maggie Williams (Liverpool Uni.)  
Nic Bilham (GSL)  
Peter Warren  
Steve Brace (RGS & IBG)

### 2 Minutes of the 53rd meeting, 14 October 2014

The minutes of the 53<sup>rd</sup> meeting were accepted as a true record. A copy has been placed on the ESEF website.

**Action: JS**

### 3 Matters arising

#### 3.1 *National Curriculum (KS3 & 4)*

**CK** reported that under normal circumstances, the National Curriculum for England and Wales is reviewed every five years; the most recent changes took effect from 2014. However, Julie Harrald, (the Director of The Geology Trusts), recently met with the Minister for Education, Nicky Morgan, to discuss omissions within the new curriculum that made teaching Earth science difficult i.e. the absence of plate tectonics in the KS4 science curriculum. This meeting resulted in an offer of a follow-on meeting between the Department for Education officials with Pete Loader and Chris King, representing ESTA and the ESEU to explore options for curriculum modifications earlier than the

normal 5-year time interval and to express concerns about the revisions of GCSE and A-level Geology.

Subsequently, a meeting has been arranged with a Senior Department of Education Official for Tuesday 26<sup>th</sup> May (the first time post-election date that CK and PL are available).

### 3.2 *Training for secondary geology teachers:*

**CK** reported 11 bursaried places have been made available for the next Summer School in Geoscience Teaching and Learning, based at Keele in July; so far, four people have been recruited to the course.

**CK** also reported that ESEU workshops will offer courses to geography teachers, for the first time, from now on.

### 3.3 *Geology for Non-Geologists training 'Geolab':*

**NE** reported that the first GeoLab event is scheduled to go ahead in Seaford, East Sussex, on 22 March. The one-day event, intended for members of the public with no prior geological knowledge, will cost £5 a head. A morning session of background information, run by ESEU facilitators, will be followed by an afternoon of fieldwork on the Sussex coast. Further details can be found at GeoLab Sussex.

### 3.4 *Destination survey for A-level Geology students:*

**CK** reported that statistics are being collected for the latest survey round of 15 schools; results so far show that 39.5% of students that take A level geology at school go on to study geology at university. Subsequently, following a request by Pete Loader as ESTA Chair, 39 schools had responded to the survey (figures to 1.4.15) showing that 44% of the nearly 2500 A-level students included had gone on to do a geoscience degree at university.

### 3.5 *National Geology Database:*

**Action JS:** to contact Diana Clements at the GA to commence adding GA trail guides to the BGS GeoBritain map. The map requires an accurate lat/long of the trail start point.

### 3.6 *MOU between GeoConservation UK and BGS:*

**TH** reported that there is an overlap of work between the BGS and GCUK i.e. If a local GCUK group needed certain geological information BGS may, if practical, provide it for free. Similarly, if BGS needed conservation advice GCUK would be happy to offer their input, if practical, for free. GCUK are also happy to support BGS ventures such as the [GeoBritain map](#).

### 3.7 *International Conference on Geotourism 22/23 October 2012.*

**TH** reported that its volume 'Appreciating Physical Landscapes: Three-Hundred Years of Geotoursim' (Geological Society Special Publication 417) is likely to be published between October 2015 and March 2016. TH also reported that a second publication he is also editing 'Geoheritage and Geotourism: a European Perspective' is to be delivered to the publisher in mid-April with publication expected in late 2015 or early 2016.

### 3.8 *'Bus Pass Geology':*

**IM** reported that the draft of the first guide is being scientifically edited and revised. Fieldwork for the second guide is underway. **DB** reported that 'London's underground geology' has been initiated.

**DH** reminded the group that 2016 is the International Year of Fieldwork, which could be an opportunity for Bus Pass Geology to become a vehicle to encourage high quality fieldwork. **Action**

**DH** to ask coordinators if the ESEF or ESTA can be involved with the International Year of Fieldwork.

### 3.9 *Earth Science Week (ESW):*

Nothing to report

### 3.10 *Geological poster map of the British Isles:*

**JS** reported that the map was still being generalized to remove any inconsistencies between the work of BGS, GSNI and GSI. **DH** suggested that the International Year of Fieldwork 2016 may be a good opportunity to launch the map.

### 3.11 *Future talks*

12 May 2015

Geologists' Association - Christopher Green

*Geoeducation with the GA at 1.00 pm*

13 October 2015

Annette Shelford - NHM Real World Science.

8 December 2015

TBC

### 3.12 *What are the benefits of growing 'British' geologists?*

Not discussed due to lack of time.

## **4 Finance report**

No significant changes to report.

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

The website is up to date.

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

Nothing to report.

## **7 Potential collaborative projects**

**DH** briefly asked the group if there could be more opportunities for bright A-level students to be mentored by industry contacts outside of formal work experience-type placements.

## **8 ESEF Achievements**

Not discussed due to lack of time.

## **9 AOB**

**CK** provided an ESTA secondary report, which is attached at annex A, that included plans for a new Earth Science Education Foundation. **CK** also commented that in 2015 no geology teachers were trained through the PGCE route, but six geology teaching training places are likely for the academic year 2016/17. The initial A-level and GCSE geology OFQUAL specification submitted by the Exam Boards (OCR and WJEC) had not been approved, but the revised submission should score better. When approved, they would be reviewed by a range of stakeholders; the submission stressed that the specification must include fieldwork. Higher Geology in Scotland would be discontinued from 2015. However, Scottish schools could opt to use an exam board based in England to continue studies in geology from 2017.

**10 Dates of future meetings**

12 May 2015	Geologists' Association – Chris Green confirmed
13 October 2015	Speaker TBC
8 December 2015	Speaker TBC

## Annex A

### ESTA Secondary Report – March '15 and Report on plans for a new Earth Science Education Foundation

#### ESTA Secondary Report – March '15

##### Geology teacher training

Following a meeting between National College for Teaching and Learning officials (the organisation that managed initial teacher training (ITT) in England) between Pete Loader and myself (CK), the NCTL has agreed to look favourably on a request from the OAKS SCITT associated with Keele for six teacher training places for either science/geology teacher training or geography/geology teacher training for 2016/17.

The plan is that participants will have their first placement in an OAKS partnership school near Keele and their second placement in an institution with expertise in geology teaching somewhere else in the country.

An article detailing all this will be published in the March 2015 edition of *Teaching Earth Sciences*. Now we will need to find institutions across the country willing to take trainee geology teachers for an 11 week placement by May this year, so that they can join the OAKS partnership (for this purpose only) before the request for allocations of places by the OAKS needs to be submitted.

The person supervising this and providing one week of geology teacher education input will be CK.

##### A-level and GCSE Geology in England, Wales and Northern Ireland

- An Ofqual review of A-level and GCSE provision concluded that geology, together with a number of other subjects, should be reformed for first teaching in 2017.
- OCR and WJEC jointly have submitted a document to Ofqual requesting permission to revise A-level geology, and discussions about this continue (with crazy deadlines).
- WJEC has submitted a document to Ofqual requesting permission to revise GCSE geology, and discussions about this continue too (with equally crazy deadlines).
- If these representations are successful, the plan is that a committee will be set up to oversee the developments, chaired by the Geological Society, with representation from both Awarding Bodies (OCR and WJEC).

##### Higher Geology in Scotland

This will definitely be discontinued from this year (2015)

However, the module will remain on the SQA books, so that students can study in this area, but without gaining any credits for it

It is hoped that this will 'keep the door open' to the development of a future qualification in Higher Earth science.

##### ESTA Secondary Working Day – Saturday 6<sup>th</sup> June, 2015

This will include developing a booklet on how ESTA members can engage with local primary schools. All welcome – as ever.

##### ASE Annual Conference - Reading University, Wednesday 7<sup>th</sup> – Saturday 10<sup>th</sup> January 2015

Numbers of attendees were as below. In the event, the ESTA Primary Group was unable to run the Saturday workshop sessions, so these were run free of charge by ESEU facilitators instead.

Day, time	Earth Session type
Wednesday 7 <sup>th</sup> January International Day	International Earth science: International Earth Science: Earthlearningidea (KS2/3/4) – Elizabeth Devon, Peter Kennett and Chris King - 27
Thursday 8 <sup>th</sup> January, 9.30 – 11.00	X
Thursday, 11.30 – 1.00	Interactive Earth science for the new KS3 curriculum - 8 – ESEU (Elizabeth Devon, Peter Kennett and Chris King)
Thursday, 2.00 – 3.00	Earth science out of doors (KS2/3/4) – ESEU (Elizabeth Devon, Peter Kennett and Chris King) - 33
Thursday, 4.00 – 5.00	ESTA/ESEU Distinguished Speaker: Beyond Fierce Earth: The Grand Canyon by wooden boat! Dougal Jerram, - 27

Friday 9 <sup>th</sup> January, 9.30 – 11.00	X
Friday, 11.30 – 12.30	Amazing planet - action-packed classroom science – Earthlearningidea (Elizabeth Devon, Peter Kennett and Chris King) - 27
Friday, 2 – 3.30	Interactive Earth science for the new KS2 curriculum – ESEU (Elizabeth Devon, Peter Kennett and Chris King) - 13
Friday, 4.00 – 5.00	X
Saturday 10 <sup>th</sup> January, 9.30 – 11.00	<del>Working with Rocks and Fossils (KS2) – booked course (Max 30 Min 0)</del> <del>ESTA Primary Committee representatives – £35</del> ESEU primary workshop Paul Grant and Denise Balmer - 5
Saturday, 11.30 – 12.30	<del>Working with Rocks and Fossils (KS2) – drop in session</del> <del>ESTA Primary Committee representatives</del> ESEU primary workshop drop in Paul Grant and Denise Balmer - 20
Saturday, 2.00 – 3.30	X

### International Geological Congress

This will run in Cape Town, South Africa from 27<sup>th</sup> August – 4<sup>th</sup> September 2016 (see: [www.35igc.org](http://www.35igc.org)). CK is one of the ‘Champions’ for developing the school-level geoscience education strand, whilst ‘Champions’ for the HE geoscience education strand include Mark Anderson, Alison Stokes and Iain Stewart at Plymouth.

### International Geoscience Education Conference

GeoSciEd VIII will be run at Campinas, near Sao Paulo, Brazil in August/September 2018.

### Earthlearningidea

The highest ever figure for monthly pdf downloads of Earthlearningideas occurred in January this year – at 53,280. Meanwhile, a review of the last calendar year showed that downloading occurred at an average of more than 42,000 per month and that there are more than 600 translations into ten different languages (now including Polish). There are now more than 200 activities in English, being added to at one every two weeks, with 50 activities still in the pipeline.

Chris King, February 2015.

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### Report on plans for a new Foundation for Earth Science Education

#### Long term objective:

To collaborate with existing organisations to build a sustainable foundation for Earth science education that secures its long term viability through supporting educators in creating the geoscientists and informed citizens of the future.

#### Medium term objective:

To provide a stable platform for the next three calendar years (2016-2019) to support:

- **CPD workshops for science, geography and primary teachers** - the provision of professional development to science, geography and primary teachers and trainee teachers across the UK through maintaining the activities of the Earth Science Education Unit.
- **Summer school in post-16 geology teaching** - the provision of a Masters/Professional level module in Teaching and Learning Geoscience through an intensive Summer School, training practising and newly qualified teachers with geology degrees in the teaching of A-level geology; based at Keele University and supported by ESEU.
- **Developing the subject leaders of the future programme** – identifying and developing subject leaders in geoscience education through a programme still to be devised, possibly involving Chartered Science Teacher status, ‘buddying’ between colleagues in industry and education, professional development training designed to enhance both confidence and competence in subject leadership.
- **Development and communication** – to build a collaborative consortium of organisations to support the long term viability of Earth science education.

Chris King, February 2015.

