

Earth Science Teachers' Association
54th ANNUAL GENERAL MEETING
2.30pm, Saturday 25 September 2021

ESTA Chair's Report 2020/21

Conference

Unfortunately the conference is once again taking place in a virtual world but I hope that some ESTA members will be able to meet face to face on the Sunday. We are planning on having a traditional in person conference at Leicester next year.

Corporate Membership

We now have 3 levels of corporate membership (full details on the website), Quartz, Ruby and Diamond.

The institute of Quarrying have taken on a Quartz corporate membership and the Hereford and Worcestershire Geology Trust have a Diamond membership. If any members have some industry contacts who may be interested in taking on a corporate membership please do mention this to them.

Google Classroom

We are nearly ready to launch the ESTA google classroom, at the time of writing this report I'm hoping that this will take place at the conference.

Council Roles

First of all I would like to formally thank Carole Rushall, Chris King and Ian Barker for their hard work and dedication in the roles of treasurer, secondary co-ordinator and president. I'm pleased to say that Jodie Fisher has agreed to become our next president and will make a presidential address at the Leicester conference and Council would like to propose Angela Bentley for the position of chair-designate, Sara Metcalf for treasurer and Dan Boatright for secondary co-ordinator.

James Speed, ESTA Chair
August 2021

ESTA Treasurer'S Report 2020/21

Income

Income from subscriptions totals £6050.21 and shows a decrease from last year (£9660.50). Thanks are due to Elouise Gill, Membership Secretary who has dealt with subscriptions.

A welcome donation of £2000 was made by the Warwickshire Geological Conservation Group (WGCG) to fund ESTA workshops. The BESER closing balance of £3058.85 was transferred to the ESTA account during the financial year.

Income from the Publishing Licensing Society (PLS) is slightly higher (£280.61) than last year (£263.53).

Expenditure

Publications (Magazine and Newsletter) costs are lower (£3016.35) than last year (£7631.41). This is because two editions of the magazine were printed in a single volume, and this reduced mailing costs. The newsletter has continued to be published electronically and so there are now no printing and mailing costs associated with its production.

Due to the Coronavirus Lockdown during the financial year, ESTA activities were curtailed. Council meetings were held via Zoom. Council expenses are therefore lower this year (£873.73) compared to £4006.91 in 2019/20. Council expenses normally include the costs of Council meetings, attendance at external events, Secondary meetings and workshops, and the upkeep of the website (£845.00).

Publicity costs (£224.66) are normally incurred by attendance at conferences such as the Association for Science Education (ASE), and Geographical Association and careers fairs. Due to the Coronavirus Lockdown, publicity costs are much lower this year (£1227.80 in 2019/20). ESTA presence at conferences normally serve to publicise the association to a wider audience.

The 2020 ESTA Conference was held virtually and did not incur any expenses.

ESTA first adopted a Reserves Policy during 2006/07 and a contingency sum and serves to bridge cash flow problems and ensure, firstly, continuity in the production of *Teaching Earth Sciences* in the event of a large variation in income and, secondly, payments towards specific future projects under the PT Carr Award scheme. The Reserves Policy was reviewed by Council during this financial year. I wish to record that the level of reserves held on the last day of the financial year was £10,000.

I wish to place on record my thanks to Dr Susan Scrafton (University of Durham Assistant Professor) and Holly Scrafton (NHS Physiotherapist) for inspecting the 2019/20 accounts. I also wish to thank past ESTA Treasurer Maggie Williams for her continued help and support with treasuring activities.

At the time of writing this report the accounts for 2020/21 have not been inspected.

**Carole Rushall, ESTA Treasurer,
June 2021.**

EARTH SCIENCE TEACHERS' ASSOCIATION – Accounts and Treasurer's Report for 2020/21			
Current Account			
Income		2019/20	2020/21
	Adverts	£120.00	£00.00
	ESTA Conference	£00.00	£00.00
	Gift Aid	£00.00	£00.00
	Promotions	£00.00	£00.00
	Publishers Licensing Society/Ebsco	£263.53	£280.61
	Sponsorship/ donations	£3020.44	£5108.85
	Subscriptions (including corporate)	£9660.50	£6050.21
	Transfer from deposit	£0.00	£0.00
	Total Income	£13064.47	£11439.67
Expenditure		2019/20	2020/21
	Bank charges	£38.48	£35.89
	Conferences & Publicity	£1227.80	£224.66
	Council expenses	£4006.91	£873.73
	Data Registration	£35.00	£35.00
	ESTA Conference >2020	£874.20	£00.00
	Promotions	£00.00	£00.00
	PT Carr Award	£00.00	£00.00
	Publications	£7631.41	£3016.35
	Public Liability Insurance	£212.86	£170.28
	Subscriptions to other organisations	£65.00	£40.00
	Refunds	£120.00	£00.00
	Transfer to Deposit account (deposit interest paid into main account until 2016/17)	£00.00	£00.00
	Total Expenditure	£14211.66	£4395.91
Deposit Account			
		2019/20	2020/21
	Start	£26634.42	£26834.56
	Interest	£200.14	£131.95
	Transfer in/out	£00.00	£00.00
	End Balance	£26834.56	£26966.51
Total Accounts			
		2019-20	2020-21
	Start	£35902.51	£34955.46
	End	£34955.46	£42131.17
Total Accounts include a reserve of £10,000.00			

Designated Funds			
PT Carr Legacy - Interest on the invested sum of £3003.05			
21 05 2009: £3003.05 invested for 5 years, Halifax Stepped Income Reserve Fund			
		Interest	Balance
2009/2010	2010	£96.10	£1,284.08
2010/2011	2011	£99.06	£1,383.14
2011/2012	2012	£102.73	£1,485.87
2012/2013	£500 awarded to J Marion	£112.92	£985.87
Account closed 17/06/13, balance and interest in current account. closing balance £3123.17			
2013/2014		£112.92	£1098.79
2014/2015		£120.12	£1218.91
2015/2016		£31.22	£1250.13
2016/2017		£29.25	£1279.38
2017/2018		£14.91	£1294.29
2018/2019		£16.91	£1311.2
2019/2020		£22.40	£1333.6
2020/2021		£14.77	£1348.37
Total PT Carr Legacy including amount available for awards		£3003.05 + £1348.37 = £4351.42	

ESTA Conference Account Summary			
Income		2019-20	2020-21
	Sponsorship	£2665.00	£00.00
	Fees received	£11480.00	£00.00
	ESTA (float)	£1500.00	£1500.00
	Adverts/flyers	£210.00	£00.00
	Total income	£15855.00	£1500.00
Expenditure		2019-20	2020-21
	Accommodation & Catering	£7616.41	£00.00
	Insurance	£00.00	£00.00
	Staff fees	£6403.95	£00.00
	Printing , postage & sundries	£50.74	£00.00
	Transport	£599.50	£00.00
	Contributors accommodation & travel	£00.00	£00.00
	Fieldwork expenses	£00.00	£00.00
	Total expenditure	£14670.60	£00.00
Total Conference Account 2020/21			
Bank account starting balance 2020/21 (including £1500 start-up fund)			
Account balance March 2021			£3534.61

ESTA Secretary's Report 2020/21

Meetings of ESTA Council

Three virtual Council meetings were held during the year: on 21 November 2020, 20 March 2021, and 26 June 2021. Council is planning to meet on 27 November 2021. Although the decision to holding meetings virtually was unavoidable owing to the government regulations introduced to control Covid 19, a positive outcome has been noticeable savings in time and travel expenses. While most Covid-related restrictions have now been lifted, it is likely that Council will continue to hold at least some future meetings online. Any member considering joining Council is invited to attend a meeting to observe business — contact the Chair or Secretary if you are interested.

Subjects discussed by Council since the last AGM have included:

- Succession planning for Council roles
- Future ESTA Conferences
- Representation of ESTA at the Geographical Association and Association for Science Education conferences
- Student perceptions of geoscience and enrolments to geoscience courses
- The timing of A level Geology exams in summer 2021
- Web-based teaching resources using Google Classroom
- Collaboration with other organisations
- Review of the ESTA Data Protection Policy
- The Geological Society's Education and Outreach Network resource
- Corporate Affiliates

ESTA President

Council are extremely grateful to Professor Ian Barker for his valuable support and advice as ESTA President. Professor Barker stepped down from this role at the June 2021 Council meeting. Our new President is Dr Jodie Fisher who manages the earth science research laboratories at Plymouth University and provides expertise in micropalaeontological and geochemical research techniques, as well as support to palaeontological, mineralogical and sedimentological processing, imaging and analysis. Dr Fisher was also co-founder of the Girls into Geoscience initiative.

ESTA emails

ESTA relies heavily on email for communicating with our members – 24 emails were circulated to the membership distribution list in the 12 months to June 2021 with news of events, resources and vacancies for teachers of Geology, Geography and Environmental Science. However, we still lack up-to-date email addresses for a significant proportion of the membership. This often happens when members change job or internet provider. If you are not receiving email updates or ESTA News, please get in touch to confirm your contact details.

Finally, I apologise for not being available to attend the AGM this year.

David Bailey, ESTA Secretary
July 2021
secretary@earthscience.org.uk

ESTA Membership Secretary's Report 2020/21

ESTA Higher Education Co-ordinator's Report 2020/21

Note: The items in this report are listed in chronological order, for ease of collation in ESTA's report to the Charities Commission, whose reporting period is April - March.

University Geoscience UK (Sept 2020 – Mar 2021)

UGUK Annual Meeting (19 Nov 2020)

Mark Anderson has stepped down as Chair of UGUK and has been succeeded by Nick Koor (Portsmouth).

I attended this meeting online; the main discussion focused on the Geological Society's new strategy and proposed actions arising from the 24th June meeting earlier this year. Some good ideas were put forward, some of them specific and tangible, others rather more nebulous, but there was a definite feeling (despite everyone being short of time) of the urgency. The focus was on what UGUK would best be suited to achieve and/or lead on, and also how to liaise with ESTA and other organisations that could be involved. Concerns over recruitment of students were linked to initiatives to raise the awareness of geology in schools, especially in those schools where geology A level is NOT taught, and also to create resources for careers officers. Further discussions ranged over the role of accreditation in (potentially) narrowing participation, and how to increase diversity and inclusivity of the subject in general, and university programmes in particular. Traditionally, we have seen fieldwork as an attraction; we need to face the reality that it also represents a considerable barrier to many groups and limits our diversity. The COVID situation has forced many of us to provide alternatives to fieldwork so perhaps this is the spur needed to reassess the relationship between geology and field teaching?

Geological Society of London (Sept 2020 – Mar 2021)

I attended an online meeting of the Joint Higher Education Committee on 18th November. The Society has unfortunately suffered a round of redundancies due to COVID, including Judi Lakin who has been the HEN liaison for several years. She has been replaced by Rose Want as Education Officer. Despite this disruption, some progress has been made on projects including the Schools Geology Challenge, where funds are being sought to widen participation; also the Education and Outreach Network – Pete Burgess at Liverpool is leading on this collaborative initiative that aims to connect a range of HE and employer stakeholders with schools, sharing resources and offering outreach visits/virtual visits. JP Morgan are creating an online platform to facilitate this (see information on GEON later in report).

Accreditation review

There was a protracted discussion in the meeting. Nick Rogers has stood down as Chair of the review panel and Mark Anderson has taken over; he also recently discovered that QAA are planning to revise the subject benchmarks for Earth and Environmental science, so the GSL will take care to align their review with the new QAA standards. A useful discussion around the purpose of accreditation and potential for change ensued, prompted by the information that some new geology degrees are being proposed without accreditation.

GeoWeek 2021 (Jan 2020 – Mar 2021)

The GeoWeek 'Supergroup', led by Chris King, along with the EarthLearningIdea (ELI) team, planned for GeoWeek 2021 with optimism and adaptability in the face of constantly changing constraints due to the COVID situation. I liaised with University Geoscience UK and brokered a new home for the GeoWeek website, which the BGS was keen to relinquish from its portfolio. Pete Burgess (Liverpool University) picked up this baton energetically and enthusiastically, and collaborated with John Stevenson to shift the website across to the new UGUK-based website, <https://earth-science.org.uk/>, where it now features as a set of pages essentially replicating the original site: <https://earth-science.org.uk/geoweb/>. Users trying to access the old site were redirected to this new site. The Secretary of the Open University Geological Society, Pauline Kirtley, was also invited to join the 'supergroup'.

Geological Society of London (Mar 2021)

The Joint Higher Education Committee met on the 10th March online. UGUK are seeking recent graduates willing to make short videos to 'populate' an interactive version of the 'Future of

Geoscience' poster to help promote different careers in geoscience. If anyone has any likely candidates, please let me know.

Accreditation review

Progress slowed during the past year, along with personnel changes. The panel is now moving towards a more inclusive, less traditional scheme that will focus more on graduate outcomes instead of prescribing minimum absolute numbers of days or hours performing specific tasks. This fresh approach was partly prompted by the realisation that some new geoscience degrees were not even seeking accreditation, to allow them to deliver more flexible curricula. The review will now align with the QAA Benchmark review of the ES3 standard, which is starting shortly and due to complete in September. I met with QAA staff in January (about the new OU Geology degree), which highlighted some anomalous text in the statements that they are keen to revise. I also applied to join the advisory group for the QAA ES3 review, which will be chaired by Sian Davies-Vollum (Derby); my application was subsequently accepted.

Geoscience Education and Outreach Network (GEON)

In partnership with JP Morgan, the GSL has set up a new platform (GEON) to act as a hub for information and connections across geoscience education and outreach. Most content is open access, and it is free to join; members create their own profile. It's searchable and pretty easy to navigate/use, even though in the beta phase. The Society are keen for people to try it out: <https://gsl-geon.mn.co>. One immediate link I thought of was EarthLearningIdea, but I'm sure there are others (including ESTA of course).

GeoWeek 2021 (1st – 9th May 2021)

It was reluctantly decided not to encourage field-based events, limiting those to a few strictly-controlled activities with pre-booking and set numbers of participants that adhered to government COVID guidelines. The new UGUK-based website, <https://earth-science.org.uk/> featured 43 'events' this year, but patchily distributed. There were good clusters of events in Wales and Scotland. There was also an online 'Launch' event on the theme of 'Net Zero', with a talk given by Karen Hanghøj (BGS), followed by a lively Q&A panel. A few outdoor events were run with limited numbers on the theme of Net Zero, prompting participants to consider from a viewpoint how the landscape might change moving towards decarbonisation.

The new site can still be accessed using the original url (by redirection): <https://earth-science.org.uk/geoweeek/>.

Late on in planning, a plan was hatched to add 'events' to the Geoweeek website that were, effectively, links to self-guided geowalks available or downloadable online. Unfortunately I ran out of time to search for and contact the owners for permission to use their resources in this way, but I suggest that this could be done ready for next year's GeoWeek, so that there is a mix of 'virtual', self-guided and guided events on the site. Promoting the self-guided walks will likely entice more people to take part in guided GeoWeek events in the future – a kind of stepping-stone for those new to the concept.

QAA Subject Benchmark statements (May – Sept 2021)

The first meeting of the advisory group for the QAA review of the ES3 benchmark statements was held online on 10th May. The statements are undergoing a substantial revision, focusing on Equality, Diversity and Inclusion (EDI), Employability and Sustainability more explicitly. The new statements will aim to promote inclusivity in degree programmes, with a less trenchant view of the primacy of fieldwork in the disciplines. First draft of the new Benchmark Statement is due in September, when it will be published on the QAA website with a form to collate feedback from the community. The statement will then be revised in line with these comments and should be finally published by the end of the year.

**Tom Argles, ESTA HE Co-ordinator
August 2021**

ESTA Secondary Co-ordinator's Report 2020/21

Preamble

This is my final Annual Report as Chair of the ESTA Secondary Committee, and I find that I wrote my first report in 2000, some 21 years ago – much too long, many may say! However, I'm now stepping down as Chair and as co-opted member of Council and, subject to approval by ESTA Council and the AGM, Dan Boatright will be taking over.

Geology teacher training

The 'Teaching and Learning in Geoscience Education' Summer School originated by the Earth Science Education Unit (ESEU), run by Keele University, and currently overseen by ESTA, ran for the final time in early August 2021, kindly hosted by Aquinas College in Stockport, managed by Angela Bentley and Pete Loader. The funding for this final course came from the remains of the BESER funding, bequeathed to ESTA for this purpose, from the Warwickshire Geological Conservation Group (WGCG) funding given to ESTA to support the ESEU/ESTA workshops (see below) and repurposed for the Summer School with permission, and WGCG Summer School funding for 2020 and 2021, which was also offered. This enabled a 'cut down' version of the Summer School to be run with no assessments or formal accreditation, to a larger number of people than normal. In the event the funding was able to support 16 of the 17 people who applied. Although the evaluation feedback has not yet been collated, the anecdotal feedback was excellent, as usual, and our grateful thanks go out to all those involved – particularly the tutors. As previously, these 16 people are the only people who have been trained as geology teachers in the UK in the past two years. The Geological Society has promised to take on the mantle of geology teacher training in future from 2022 and beyond, but the nature and scope of that training is not yet clear.

Earth science training for geography, science and primary teachers

As last year, the ESTA/ESEU offer of workshops to trainees of science, geography and primary was badly affected by Covid and only a few workshops ran, some online. The plan to train ten ESTA members as Regional Earth Educators (REEs) to offer these workshops in their own regions free of charge, had to be shelved for another year. Although the funding for offering future workshops given to ESTA by WGCG was reallocated to the Summer School (as above), we have been invited to submit a bid for further WGCG workshop funding for 2021/22.

The Earth Science Education Forum

- The role and function of ESEF will be reviewed post-Covid.
- A Covid-affected GeoWeek ran in May 2021 with the theme of 'How will the government 'net-zero' targets affect your local area?' Background information for field leaders offering outdoor events was provided by a series of Earthlearningidea publications. Some pilot field visits on this theme were run effectively with Covid compliant small groups of the public.

UK Conferences

- The ASE Annual Conference was hosted by Birmingham University (2021) as an online event. ESTA was invited to contribute two virtual workshops, which seemed to be well received.
- The Geographical Association conference (2021) was also run virtually with a contribution on behalf of ESTA by Duncan Hawley – to whom, many thanks.

European geoscience education support strategy

In support of this strategy:

- In April 2021 the European Geosciences Union (EGU) ran a virtual version of its General Assembly and, as part of this, six half-day sessions of a virtual Geosciences Information for Teachers (GIFT) workshop ran. Nearly 200 participants registered for the workshop and each session attracted more than 100 online participants.
- No new Field Officers to run ESEU-style workshops across Europe could be trained due to Covid restrictions. The four existing Field Officers continued to run workshops virtually where possible.

- An EGU-funded GIFT workshop was run as part of the IAGA Conference hosted in Hyderabad, India in August 2021. This was reportedly very successful.

International geoscience education support strategy

- This is closely related to the EGU education strategy.
- The two IUGS/IGEO Field Officers, working alongside the EGU field officers, continued their good work.
- Whilst funding is available from the International Union of Geological Sciences (IUGS) to train seven more Field Officers, this has not yet been possible due to Covid.

Earthlearningidea

Earthlearningidea's success is continuing – more than 370 ideas have been published in English with more than 1500 translations into 11 different languages; there have been more than 5 million downloads so far, currently averaging more than 40,000 per month. These downloads include not only individual Earthlearningideas but also videos and full workshops. Some of the latest Earthlearningideas are related to the 'net-zero' GeoWeek theme (see above).

In conclusion, very best wishes to Dan as he continues to fly the secondary flag for ESTA. I may be retiring into the background, but my strong support continues.

**Chris King, ESTA Secondary Co-ordinator
August 2021**

ESTA Primary Co-ordinator's Report 2020/21

ESTA Primary, like many other groups over this difficult period, has been almost completely inactive. So instead of reporting such inertia, I am looking forward as there has been a very promising development.

Due to my connection with the National Stone Centre (NSC), near Wirksworth in Derbyshire, the education officer at the Institute of Quarrying (IQ) approached me to join a small team to look at what resources could be created and shared to help further IQ's STEM initiatives. At this initial meeting I gave a summary of the Primary Team's work and suggested that ESTA become involved, though not just primary but to cover all key stages. We therefore asked David Bailey, ESTA Secretary and NSC volunteer, to join this small working group. IQ not only want to work collaboratively with ESTA but also the NSC, where the Primary Team have been based for many years, and the Somerset Earth Science Centre, where IQ already have links.

For some years the Primary Team have wanted to develop a teaching hub at the NSC, for teachers to attend the ESTA Primary workshops rather than us travelling to various conferences. Such a hub would also offer a good base from which to develop excellent teaching and outreach programmes as well as a safe, geologically interesting site which is also suitable for all key stages. With IQ's industry contacts and career opportunities, this could be the start of a very effective working relationship and a means of promoting geology in schools and colleges and help build the interest in Earth sciences and reinstate geology courses nationwide. Discussions are ongoing and details still need to be worked out.

The other, more recent development is that John Reynolds has delivered his Primary Rock Kit supplies to the NSC from where they can now be put together and sold to teachers and school groups. In addition, John has supplied some 'more advanced' rock samples, including dolerite, quartzite, microgranite, gabbro, rhyolite, amygdaloidal basalt and more, in quantities sufficient to produce rock kits suitable for KS4 and beyond. I am particularly grateful that he labelled each tray of samples with their name and source location. I would like to thank John for his sterling work in producing the primary rock kits for so many years and also for wanting their production to continue in association with the NSC – they are a great resource.

**Tracy Atkinson, ESTA Primary Co-ordinator
August 2021**

ESTA Editors' Reports 2020/21

Teaching Earth Sciences

A combined issue of *Teaching Earth Sciences* 46.1/2 was produced and mailed out to the membership in July 2021. This was a consequence of a much reduced annual course and conference (although all contributors provided articles and many wrote up their Bring and Share items). However, there were not enough articles to justify two issues this year.

While I am immensely grateful to all those who send in articles, you, the membership, must not rely on the "usual suspects" to provide the content. This is your magazine and you all need to take the responsibility to provide content. We are likely to be in the same situation next year with the Conference being virtual once again.

My thanks to everybody who provided articles and I look forward to receiving your articles for the next issue.

**Hazel Clark (Editor, *Teaching Earth Sciences*)
July 2021**

ESTA News

ESTA News was produced twice this year. *EN* 12.1 was circulated to members in June 2020. This issue of *ESTA News* was illustrated with images kindly provided by the University of Derby (hosts of the *ESTA Conference 2020*) and images taken by the Editor. *EN* 12.2 was distributed to members in December 2020 and included images provided by the Editor.

Thanks are due to David Bailey for his time in arranging the email distribution of newsletters to *ESTA* members. Sadly, we still do not have email addresses for all *ESTA* members, so some members did not receive electronic copies of *ESTA News*.

Newsletters have now been published for 12 years. Over the years, *ESTA News* has included news items, details of websites providing useful teaching resources, diary dates, details of recently published geology and Earth science books and field guides. Newsletters have also included information about CPD, other training sessions, workshops, geological events, and conferences.

In June 2021, Joanie Marion will be taking over as Editor of *ESTA News* and the email address for the new Editor is: esta.newslet@gmail.com

**Maggie Williams (Editor, *ESTA News*)
July 2021**

ESTA Project Manager's report 2020/21

ESTA-PESGB Competition to celebrate Earth Science Week (ESW)

A national competition to celebrate Earth Science Week was not organised for 2020, but ESTA and PESGB intend to run a competition to celebrate Earth Science Week 2021.

Maggie Williams
ESTA Projects Manager, July 2021