

# THE Auger

DECEMBER 2020



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## Advertising & Job Vacancies

### Advertising

If you are interested in advertising in a future edition of The Auger, we have a range of packages available, from quarter to full page adverts and with discounts available for advertising in both 2021 editions. For further information, please contact [admin@soils.org.uk](mailto:admin@soils.org.uk).

### Vacancies

Our members are able to post unlimited, soil science related job advertisements free of charge on our website [www.soils.org.uk](http://www.soils.org.uk) and in The Auger. Advertising is available for non-members at the nominal fee of £75 +VAT. For further information or to list your vacancies, please contact [admin@soils.org.uk](mailto:admin@soils.org.uk).

**Cover image:** Ed Shaw, Riverford Organics, being filmed for our new film #Grounded. © Earth Minutes

*Our mission is to promote  
the study and profession  
of Soil Science*

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# Executive Officer's Welcome

**Sarah Garry**  
Executive Officer



## *Welcome to the final Auger of 2020.*

This year has been a challenging one for all of us and I would like to start by thanking you, our members, for your ongoing support in what has been a turbulent time. We appreciate that each of you will have had a range of extreme personal circumstances to deal with over the past few months, whether through self-isolating, home schooling or furloughing and redundancy. The support you have continued to show your Society despite these conditions has been incredibly encouraging: thank you.

As with all businesses, it took the Society a little while to react to the changes occurring around us. We are now offering our monthly *Zoom into Soil* sessions which have had an excellent attendance, offered a virtual Annual Conference, and have made our Council and Board meetings much more effective by hosting them online. Later in this issue you can see the achievements which we have made in 2020, with *Zoom into Soil* amongst them. Although the challenges of Covid-19 look set to continue well into next year, we hope that the programme of mostly virtual events we have planned for you in 2021 will provide you with an easy way to access the best that your Society has to offer.

As the Society moves towards the World Congress of Soil Science (WCSS) in 2022, you will notice that we are spending more time focusing on how we communicate the Society's message. With the general public, and particularly young people, taking heed of the climate change movement, WCSS provides an exciting opportunity for us to raise the profile of soil, its importance and our Society. As a result, we expect that our website and social media feeds will see a huge increase in traffic and building on the success of the projects featured later in this issue, we hope to see our engagement with the general public grow.

This includes the video *#Grounded* which we provide more details of on page 7. This issue's front cover is a still from the video which highlights the importance of soil to the general public. It includes BBC TV presenter Lizzie Daly and Riverford Organics' Ed Scott, alongside respected soil

scientists, setting out why soil should be top of the agenda for preventing climate change. Please do share the video amongst your networks and help us to educate more widely on the importance of soil.

Our charitable work continues along this theme: we have developed a number of strong external relationships over the past few months which have resulted in a number of our members presenting to school children and teachers to support Lord Lucas' *Making Natural History* festival. We would love members to share the presentation and resources with their local schools and further information can be found later in this issue.

To continue to promote soil and its benefits we need you: we will shortly be writing to you regarding your membership renewal and we hope that the achievements we have made over the past year demonstrate the continued benefit of being a member. Later in this issue, we will introduce our new website and your new member pages, which will make it easier for you to renew your 2021 membership and keep your personal records up to date.

I hope that you enjoy this issue of *The Auger* and I would welcome any feedback you may have on its contents, or suggestions for future articles.

*For now, I wish you all a healthy Christmas and a happy new year.*

Best wishes,

◆ **Sarah Garry**, Executive Officer  
[exec@soils.org.uk](mailto:exec@soils.org.uk)



# President's Thank You

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## *Dear Members...*

It is with a mixture of pleasure and sadness that I write this last President's update for The Auger. The last two years have passed so quickly and it genuinely only feels like the other day that I wrote on my Twitter feed how excited and honoured I was to be taking over as the BSSS President on New Year's Day 2018. So much has happened during this time, and especially in the last six months, that it is almost hard to decide where to start as I try to reflect on my time as President.

As I write, we are in the middle of our second national lockdown and Nottingham, my locality, is recording the highest number of COVID-19 infections in the UK. As a university academic for my day job, I will not lie and say that the last few months, especially associated with the new academic term, have been the hardest of my career. However, I don't want to dwell on the 'C' word. Without a doubt it has, and continues to have, an enormous impact on our daily function as a Society but there is so much to be excited about at the moment that I want to try and focus on the positives (but it goes without saying 2020 is a year that will live long in the memory, largely for the wrong reasons).

Updating on Society news in the last few months, I am delighted that we followed up the appointment of our excellent new-ish Executive Officer, Sarah, with the appointment of the equally excellent Natalie Coles as our Senior Administrative Assistant. Both Sarah and Natalie have managed in a very short time to both settle in and give the impression they have been in the posts for years which is incredible. They have done a fantastic job in getting to grips with their new roles under very difficult conditions, working in isolation from home, largely communicating via the web and still managing to keep the many plates of Society business all spinning simultaneously. One of the most exciting things they are working on is the new Society website, which there is further information on later in this issue. I am sure you will all agree that this is a much needed refresh and as we continue to develop it, we will share with members what new content and functionality they can expect in the coming weeks via our email newsletters.

“ I frequently say ***'this is the most exciting time ever' to be a soil scientist.*** I truly believe it is. I hope you agree. ”





Back in February, we agreed as a Society that all our in-person events would be postponed until the summer and more recently we extended this for the rest of the 2020 calendar year. Given the length of time it takes to organise events, we are soon going to have to make some important decisions for 2021. However, we have been able to move forward with some event planning. Our Annual meeting, themed *Soils in Action*, has just taken place online for the first time on Friday 4 December to excellent feedback from members. The event included an excellent group of speakers and Professor Lorna Dawson from James Hutton Institute provided our second invited President's Lecture, '*Natural Justice: the role of soil in the provision of intelligence and evidence*'. We tested the technology using our new monthly seminar series, *Zoom into Soil*, and it has worked very effectively. There have been some excellent sessions on nutrient management, soil erosion and zero tillage with interesting perspectives from a range of practitioners. Special thanks to Wilfred Otten and Dan Evans for establishing this initiative; it has been a huge success with attendances typically over 150 per session.

We also recently ran our first online AGM and almost 100 members attended which was great, although it made me crave for the days when we can return to meetings in-person! Running alongside our cancelled September Annual Meeting was due to be the Inter Congress meeting, a key milestone in the planning for the World Congress. Like most meetings this moved online and took place between 18 and 23 November and with IUSS members across several continents, a number of us had early mornings and late nights! The meeting allowed us to convey to IUSS all the excellent work that the Society is doing in preparing for WCSS behind the scenes. At one of the recent WCSS planning meetings, the scientific programme for the conference was unveiled which was really exciting, but it also felt like a very important moment on the road to Glasgow 2022, now less than 19 months away!

The biggest Society news since the last Auger I would argue has been the confirmation of our new President Elect, Dr Jack Hannam from Cranfield University. I think Jack is well known to many of our members having sat on the Council for what I would call 'a long time' and also as our Chair of the Education Committee. Jack is also one of our lead organisers for the WCSS and a more passionate soil scientist you will not find. I am really delighted that Jack was elected to this role as I am convinced she will be an excellent President and with her taking over after the WCSS, I know she has the energy to ensure no one suffers from a post-Glasgow hangover!

I am approaching my word limit for this piece so I would like to end with a few thank you's. Firstly, to the past presidents that I have called on for advice, namely Phil Haygarth and Liz Baggs, I have really appreciated your counsel, and especially to Wilfred Otten who has been the most helpful and supportive colleague one could ever wish for. Wilfred will step down from the Society Board and Council at the end of the year as he completes his six year term and on behalf of the Society, I want to thank Wilfred for the tremendous amount of work, time and effort he has devoted which is not always visible to the membership. I also want to thank our Society Board and Council (too many individuals to name I am afraid) for all their energy and support in the last two years; you made the job of President really enjoyable and your enthusiasm for soils was infectious. I need to thank our Society office team who do a tremendous job behind the scenes and really go the extra mile to make the life as Society President as straight forward as possible, so special thanks to Ian, Judith, Lynne, Kim, Sarah and Natalie. I will very much miss my weekly catch ups with Sarah as her positivity is the perfect start to any day!

The role of President has been incredibly rewarding, even during an unprecedented time. I will enjoy my last few months and indeed there is much to be done before the end of the year, however I am very content knowing that I will be passing on the position to exceptionally capable hands in Bruce Lascelles. I look forward to supporting Bruce and continuing my connection with the Society over the next two years as the outgoing President. There is so much to look forward to, not only the World Congress, but the excellent work being undertaken by our regional groups, our journals going from strength to strength and some wonderful outreach work being delivered by our Education committee to name just a few.

I will end by a final thank you to our members. I have enjoyed acting as your Society President and been very grateful for your support. I frequently say 'this is the most exciting time ever' to be a soil scientist. I truly believe it is. I hope you agree.

Best wishes,

🍷 Professor Sacha Mooney, President  
[president@soils.org.uk](mailto:president@soils.org.uk)

# Incoming President's Welcome

Dr Bruce Lascelles



## Dear Members...

Sacha mentions that it feels the last two years have passed by rapidly, and I would agree from the perspective of how quickly my term as President has approached. Having spent the last 23 months working alongside Sacha and Wilfred, I have had the opportunity to learn from them more about the role, the amount of work required and the complexity of the issues which need to be addressed. Despite this realisation(!), I remain very excited about the next two years and honoured to have been given this responsibility.

The last year has clearly brought its challenges, and these are going to continue to test us as individuals and also as a Society, but again as Sacha notes there is so much to be positive about — now really is an exciting time to be a soil scientist — and we need to look for the opportunities around us.

I'll jump first to the summer of 2022 when I hope many of you will be able to join us in Glasgow for the World Congress of Soil Science that we are hosting on behalf of the International Union of Soil Sciences. The working group, which includes our Professional Conference Organiser — Speakeasy, has done a tremendous amount of work over the last few years to bring together the scientific and arts programmes, a concept for bringing policy makers into the congress and engaging with Government bodies, a tours programme (including the planning of all the preparatory work needed), a plan for seeking sponsorship along with a logo, film and lots of other activities. I would like to thank them for their invaluable contributions to date as we start to ramp up activity and move into the detailed planning stages (including the all-important social programme!). Having Sarah and Natalie in post has provided a welcome source of additional support, guidance and insight which is critical at this stage in ensuring we do get the detail right.

The Congress, including everything we do in the run up to it and the legacy we leave, is a fantastic opportunity for us to raise the Society's profile further and extend our reach to really make a difference. We need to make sure our voice is heard and that we make clear statements on key issues in support of soil science and our membership. In this ever changing world, we also need to ensure we are using all the technological tools available to us to communicate and engage with as wide a range of audiences as possible. The development of the *Zoom into Soil* series and the film *#Grounded* are major steps forward; the challenge now is to keep the momentum going.

Moving our strategic priorities forward into actions and demonstrable outcomes will be a key part of the next 2 years. The Society strategy (page 9) and associated actions developed this year will take time and energy to implement, but so much groundwork is already in place that we have a running start. I am really encouraged by the priorities which have been set, which include inspiring the future generations of soil scientists and leading on the social and environmental responsibilities of a contemporary society. Ensuring we live and work by the values we set out in our policies on the environment, ethics and equality, diversity and inclusion will be critical to how we are perceived and the power we can bring to our views. These are aspects which we aim to bring to the heart of the World Congress and it is important to recognise that the Congress is not something we do to the side or as an add on to Society business, but truly part of what we aspire to be and to achieve.

Part of our strategic priorities place a focus on our journals in relation to raising the profile of important soil issues. This is another area of rapid change and development and one where we need to ensure we make informed decisions. The work, knowledge and insights of the editorial team makes a very real difference, and we will continue to put in the effort required to navigate through the changes ahead.

I would like to thank you for your continued support and engagement. I look forward to stepping into the role on 1 January, working with Sacha and Jack, and getting to know you all better over the next few years.

There are exciting times ahead!

*Wishing you all a Merry Christmas  
and best wishes for the New Year.*

● Dr Bruce Lascelles, Incoming President





## Open Farm Sunday

Postponed due to Covid-19, this year's Open Farm Sunday took place virtually on **Sunday 20 September**. Although we couldn't be there in person, the BSSS team took to social media to raise awareness of the importance of good soil management and biodiversity in farming. The 2021 event will take place on **Sunday 13 June**, and we hope to return to farms around the country then.

## COP 26 Postponed

Due to Covid-19, the UN Climate Change Summit (COP 26) has been postponed until November 2021. COP 26 provides an ideal opportunity for BSSS to set out how soil can be part of climate change solutions and we will be working with the Science Council and its members over the coming year to demonstrate a strong, scientific community response.

## Response to Natural History Consultation

BSSS responded to the OCR consultation regarding a proposed GCSE in Natural History. Our response focused on the lack of proposed content relating to soil and the importance which soil knowledge would have on students' understanding of Natural History. At the time of writing, OCR is analysing the consultation responses and if the Department for Education supports the proposal, it will launch its own consultation in 2021.

## BSSS Environmental Policy

Conscious of the impact which climate change and human intervention is having on the environment around us, BSSS Council has approved a new Environmental Policy, which seeks to identify ways that we can reduce our carbon emissions. This includes foregoing the use of single use plastic, being conscious of whether we print member materials and if there is a need to, seeking to limit its impact through the use of recycled paper stocks. As we seek to implement the Policy into our day to day activities in 2021, the Executive Office will also be looking for opportunities to participate in a 'Carbon Offset Day'.

The Environmental Policy is available on the BSSS website: [www.soils.org.uk/governance](http://www.soils.org.uk/governance).

## Lizzie Daly Supports Soil

Lizzie Daly, TV wildlife presenter and biologist, has lent her support to a BSSS video **#Grounded** which highlights the importance of soil to the general public. Lizzie is one of the famous faces who appears in the video, alongside Ed Shaw, Assistant Harvest Manager at Riverford Organic, and noted soil scientists Prof. Jane Rickson and Natalia Falagan.

The video is accompanied by a 'Call to Action', practical ways which a member of the public can support soil health and prevent its degradation at a local level.

Please share the video with your networks: [www.soils.org.uk/grounded](http://www.soils.org.uk/grounded).



Soil organisms help soils **store carbon**.



## World Soil Day – 5 December

The UN-organised World Soil Day took place on Saturday 5 December, and BSSS supported the *Keep Soil Alive, Protect Soil Biodiversity* theme at its Annual Conference on Friday 4 December. Speakers presented their views and experience including Lorna Dawson on soil use in forensic science, Martin Ballard, Group Environment Manager of Willmott Dixon, with a view from the construction sector, Alexandre M.J.-C Wadoux on his popular article “Efficient sampling for geostatistical surveys” ([www.onlinelibrary.wiley.com/doi/full/10.1111/ejss.12797](http://www.onlinelibrary.wiley.com/doi/full/10.1111/ejss.12797)) and John Boardman discussing off-site impacts of soil erosion and runoff ([www.onlinelibrary.wiley.com/doi/10.1111/sum.12496](http://www.onlinelibrary.wiley.com/doi/10.1111/sum.12496)).

## Members Support the Virtual AGM

Members turned out in record numbers to support the Society’s virtual AGM on Thursday 8 October. The AGM, which had been postponed from 3 September due to a lack of voting members in attendance, saw Dr Jack Hannam elected as President Elect and Lynda Deeks as the South West Soils Development Group Regional Chair. All resolutions were passed at the meeting and a full list of Council members can be found on pages 28–30 of the magazine. Meeting minutes are available on the BSSS website: [www.soils.org.uk/governance](http://www.soils.org.uk/governance).

## Soils and Stones Group

**SocEnv**  
Society for the Environment

BSSS has been invited to join the Society for the Environment’s Soils and Stones Task Group. Chaired by Martin Ballard, Group Environment Manager of Willmott Dixon, Mike Palmer has been nominated as BSSS’ representative to its sub-group *Healthy soils, natural capital and carbon management*. Martin presented to the BSSS Annual Conference on 4 December and further information on the group’s activities will follow in the next *The Auger*.

## IES Soils Guidance

The Institute for Environmental Science (IES) issued its report, *Sustainable, healthy, and resilient: Practice-based approaches to land and soil management*, in October 2020. The report sets out the IES’ goals for soil: Creating an aspiration for soil and Stopping immediate crises linked to soil.

## Review of Existing Education Materials

Earlier in the year, BSSS launched a tender for the review and curation of existing educational material for school aged children. ADAS was awarded the tender and over the coming months will compile a database which visitors to the BSSS website will be able to use to access relevant educational materials.

## Members Elect New Honorary Member



BSSS members voted overwhelmingly in favour of electing Professor Bernard Tinker an Honorary Member of the Society. Prof. Tinker, who is a former President of BSSS, has had a long career in soil science, including time as Deputy Director and Head of Soils at Rothamsted Research and Director of Science at the Natural Environment Research Council (NERC). Prof. Tinker was involved in over 175 research papers during his career.



## In Brief...

### Soil in the Mainstream

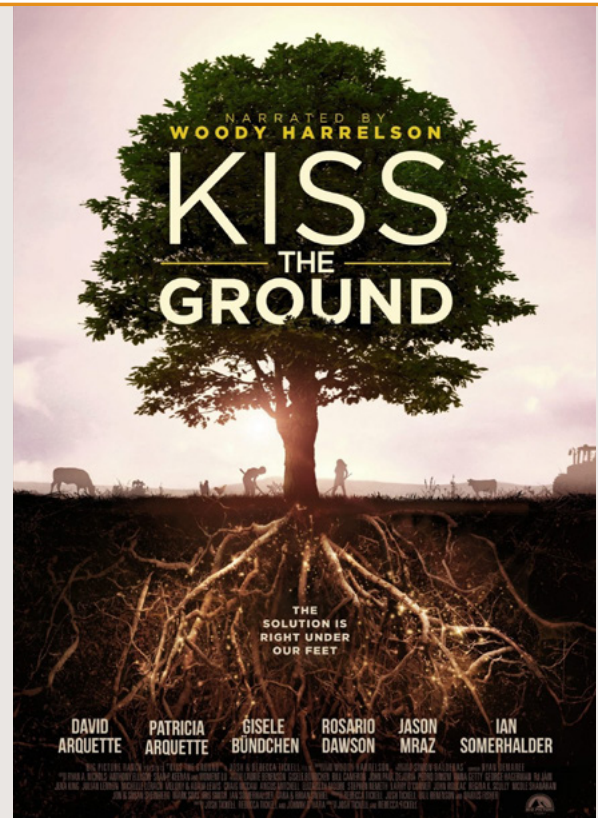
The importance of soil is gaining momentum amongst the general public as a new TED Talk, Netflix documentary and National Geographic article all focus on its importance.

*Kiss The Ground* is a new Netflix documentary narrated by Hollywood's Woody Harrelson. Science experts and celebrity activists unpack the ways in which the earth's soil may be the key to combatting climate change and preserving the planet. [www.netflix.com/gb/title/81321999](http://www.netflix.com/gb/title/81321999)

In the TED Talk, *The Global Movement to Secure Nature's Biodiversity*, Thomas Crowther sets out that biodiversity is the key to life on Earth and reviving our damaged planet. He shared the inside story of his headline-making research on reforestation, which led to the UN's viral Trillion Trees Campaign, and introduced Restor: an expansive, informative platform built to enable anyone, anywhere to help restore the biodiversity of Earth's ecosystems. [www.ted.com/talks/thomas\\_crowther\\_the\\_global\\_movement\\_to\\_restore\\_nature\\_s\\_biodiversity#t-94588](http://www.ted.com/talks/thomas_crowther_the_global_movement_to_restore_nature_s_biodiversity#t-94588)

The National Geographic article, *Farmers are facing a phosphorus crisis. The solution starts with soil*, includes an interview with BSSS member Phil Haygarth along with scientists from ADAS and the Centre for Ecology and Hydrology. [www.nationalgeographic.com/science/2020/10/farmers-are-facing-a-phosphorus-crisis-the-solution-starts-with-soil/](http://www.nationalgeographic.com/science/2020/10/farmers-are-facing-a-phosphorus-crisis-the-solution-starts-with-soil/)

President Elect, Jack Hannam, was quoted extensively in the i newspaper in the piece, *Dig up your Patios and sew cover crops* which encourages the general public to protect their own soil. [www.i.news.co.uk/news/dig-up-your-patios-sow-cover-crops-in-flower-beds-to-boost-soil-health-top-scientists-say-737185](http://www.i.news.co.uk/news/dig-up-your-patios-sow-cover-crops-in-flower-beds-to-boost-soil-health-top-scientists-say-737185)



### BSSS strategy 2020–2025

At the 2020 AGM, President Sacha Mooney set out BSSS' strategy 2020–2025. The strategy, which has seven streams, set out Council's focus over the next four years. The strategy is available on the BSSS website: [www.soils.org.uk/governance](http://www.soils.org.uk/governance).

### Call for Images

As the BSSS executive team prepare to make visiting the office a more regular occurrence, we are looking for exciting images, photos or maps which can be displayed on the Society's office walls. If you have any copyright free images, or have run out of storage space for your soil map collection, and would be happy for these to feature either in the office or in future publications, please contact [admin@soils.org.uk](mailto:admin@soils.org.uk).

### New name for The Auger

In 2021, we are hoping to redevelop The Auger and are looking for your suggestions on the magazine's name. If you have a suggestion for a new title for the magazine which demonstrates the diverse membership the Society represents, please contact [admin@soils.org.uk](mailto:admin@soils.org.uk) by Friday 29 January 2021. If your suggestion is chosen, you will win a £25 gift voucher of your choice!

If you have any further suggestions on the regular content, information and interviews you would like to see in the magazine, please let us know.

# Congratulations to our Award Winners

BSSS is proud to sponsor a number of awards within academic institutions, which are presented to students based on criteria set with each one. Due to Covid-19, some of these awards have been delayed or postponed for the 2019–20 academic year.

## Award Winners

BSSS is delighted to announce the 2019/20 award winners who have each received two years membership to the society as part of their prize.

### **Annabel Landless**

Best Student in Soil Science  
*at Royal Agricultural University*

.....

### **Timo Makower**

Undergraduate Award  
*at Lancaster University*

.....

### **James Willis**

Undergraduate Award  
*at Harper Adams University*

.....

### **Ecem Asma**

Masters Award  
*at Harper Adams University*

*The following have not yet been awarded or have been postponed:*

Colin Stansfield Award  
*at Myerscough College*

MSc Dissertation Award  
*at University of Reading.*

## New Award

We are pleased to confirm the introduction of a new award at Cranfield University for students within the MSc Environmental Engineering programme. The award, *The British Society of Soil Science Award for the Most Promising Soil Scientist*, will be effective from Cranfield's next graduation ceremony and will be awarded retrospectively to a member of the 2019–20 student cohort. We look forward to announcing the winner in a future edition of *The Auger*!



### **Annabel Landless**

Best Student in Soil Science  
*at Royal Agricultural University*



### **Ecem Asma**

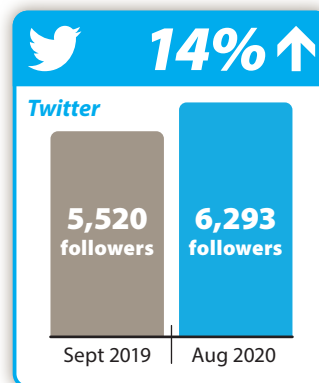
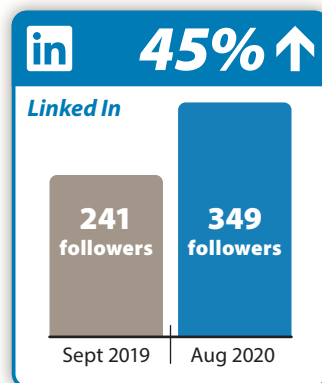
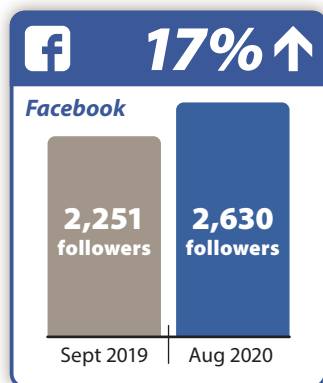
Masters Award  
*at Harper Adams University*

# BSSS Highlights 2020

*Despite the turbulent environment, BSSS has led on some key achievements in 2020.*

**493** people attended our three live Zoom into Soil webinars

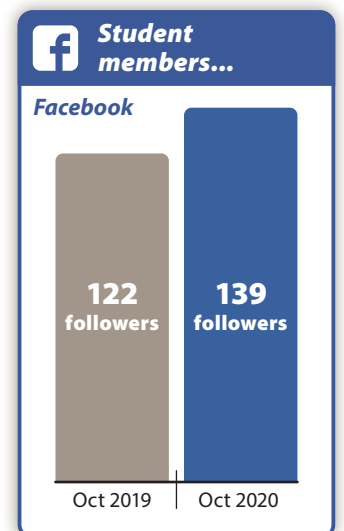
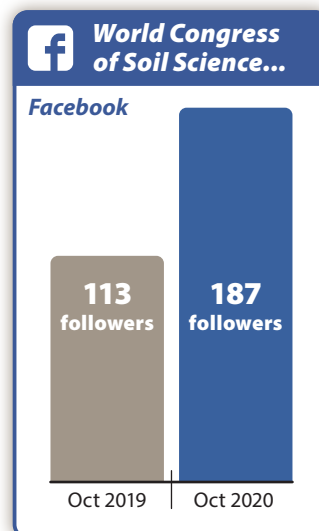
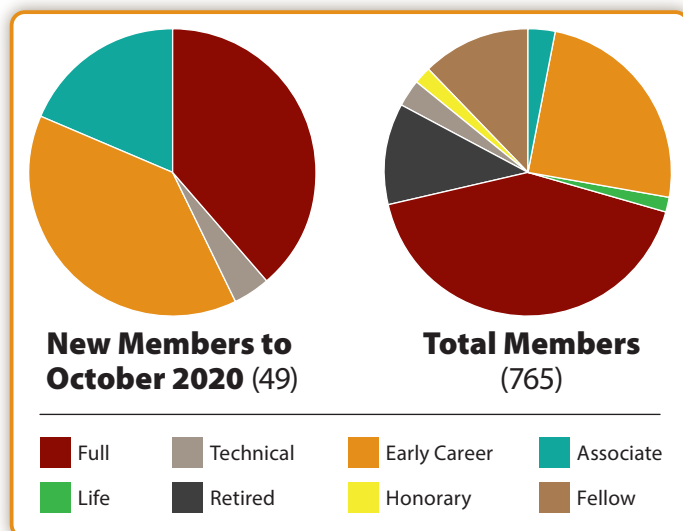
**695** had watched the content online between July and November 2020



**5** *Fellows* this year

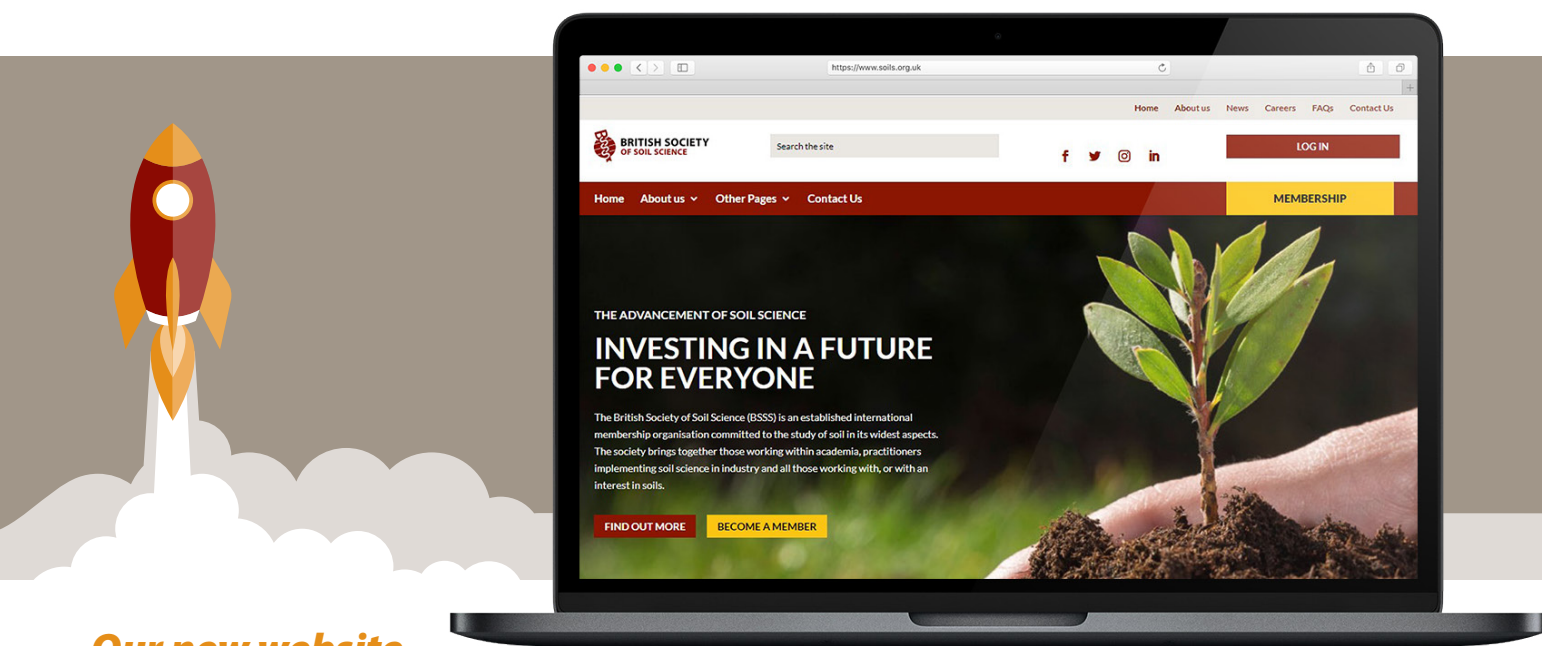
**1** *new Honorary Member* —  
Professor Bernard Tinker

**47** *Chartered Scientists*  
compared to **44** in 2019





# New BSSS Website & Member Renewals



**Our new website  
is off the ground!**

**Come and have a perusoil...**

BSSS is excited to announce the launch of our new website! The content has been updated and given a new look and we hope that you will find it interesting, engaging and easy to navigate.

**For our members,  
the site includes:**

- A detailed individual profile giving you the control to update your details and renew your membership
- Find an Expert – list your profile publicly and feature on our experts list for queries from members and the general public alike (available for full, technical and fellow members)
- Online event booking and payment, with automatic receipts and invoices sent straight to your inbox! No need to wait for this to be sent separately to you
- Apply for a grant or award, directly from the website

- An integrated email system which will allow us to send professional looking BSSS bi-monthly emails, straight to your inbox!

The website is still a work in progress and over the next few months we will be focusing on the education and careers pages on the site, to ensure there are suitable information and resources for those interested in soil.

Non-members and stakeholders will be able to register to the site, allowing us to send tailored quarterly emails and promote relevant activities to them.

We would welcome any feedback you may have on the new website and hope you take the opportunity to look around!

## Membership Renewal and Profile Update

With our new website in place, your 2021 membership renewal will look slightly different to previous years.

You should have already received your renewal letter and invoice by email with details of how to log in to your new member profile on [www.soils.org.uk](http://www.soils.org.uk). Please take the time to check that your personal data is correct and make any necessary updates. From here, you will be able to access your renewal invoice and follow the steps to process payment online via PayPal. Should you prefer to pay via BACS transfer, these details have been provided on your invoice.

If you have previously paid your membership by direct debit, this will be collected on **15 January 2021** and your member profile will be updated with this payment once complete. Should you wish to confirm whether this applies to your renewal, update your account details or set-up a direct debit for the first time, please contact us as soon as possible via [admin@soils.org.uk](mailto:admin@soils.org.uk).

We are keen to champion the importance of equality, diversity and inclusion across the Society and you will notice new questions on your member profile which will allow us to support our members and underrepresented groups into science by monitoring our members' data. Members are under no obligation to provide this data, but we hope that you will allow us to monitor this confidentially and without prejudice and in line with our draft Equality, Diversity and Inclusion Policy which is under development.

*Find An Expert* remains a key feature of the website for Full, Technical and Fellow members. Although profiles have been carried forward from the previous website, we would encourage you to review the content and update where necessary. If you have not featured on this page before and would like to add your profile, you will need to complete the About Me and Expertise fields and update your preferences so that this can be viewed by either members only or the general public.

To support the aims of our Environmental Policy, future editions of *The Auger* will be sent electronically; however we do have a limited number of print copies available to ensure we remain inclusive for all members. Should you require a print version of the magazine, please contact us and we will post a copy to you.

The new website will allow the office to carry out a more efficient and effective renewal process, and we hope that members will also have a positive experience. The new website will allow us to improve the layout of membership communications and newsletters and we hope that you will enjoy the new streamlined look that you will see in future communications from the office.

For any assistance with the new website or your member profile, please do not hesitate to contact us via [admin@soils.org.uk](mailto:admin@soils.org.uk).

## Member Update...

# WILEY

### Wiley Discount

BSSS is delighted to confirm that a 25% discount has been secured for members on all Wiley publications. To take advantage of the offer, visit the Wiley website and enter the discount code SL25. [www.wiley.com/en-gb](http://www.wiley.com/en-gb)

### British Library to host The Auger

You will notice a change on the front cover on this edition of *The Auger*, as the British Library has issued the publication with an International Standard Serial Number (ISSN). The ISSN is a unique identifier which is used to identify serial publications and amongst others, its benefits include providing libraries with the tools they need to store and manage *The Auger*, and academics with details they need to cite the publication.

Previous issues of *The Auger* will now be submitted to the British Library for safekeeping, preserving the Society's history and making it easily searchable for future scholars.

# Zoom into Soil:

## *Nutrient Efficiency*

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On Wednesday 22 July, BSSS launched its new virtual webinar series **Zoom into Soil** with Nutrient Efficiency. Hosted by Wilfred Otten, Past President, and following a brief introduction to the society from incoming President, Bruce Lascelles, we were delighted to welcome 160 attendees and our speakers, Mr Richard Reeves and Dr Martin Blackwell, to the event.



Richard farms over 800 acres of land near Manchester Airport with a range of soil types. Although his son is a farmer in Suffolk, Richard has no one to take over his land which has influenced the decisions he has made for the future of his farm. His main farm lies within Tatton Park, owned by the National Trust, and when Richard retires from farming, it will revert back to parkland in line with National Trust policy. Richard has supported Lancaster University students with visits to his farm over the last 10–12 years and he highlighted the importance; not only to look at the soil but to provide them, as future decision makers, with an insight into farming and an opportunity to speak to those working in agriculture.

Within his 800 acres, the soil type ranged from light sandy loam to sandy clay loam and being in a high rainfall area for arable farming with the average annual rate of 860mm, this had created problems for the farm. The lack of dry days and the rainfall spread meant that although yields had been matched with competitors on winter barley and spring crops, Richard had struggled with his yields and quality for winter wheat. Richard believed in traditional farming and using just one system of ploughing with a combination drill.

### Organic Resources

In 2000, Richard became involved with sludge cake from United Utilities and applied this to his land regularly for 15 years. At the start it was not a scientifically applied product but through his work with the National Farmers' Union (NFU), began a better system of analysis. Around five years ago, Richard stopped using the product due to an increase in sustainable soil phosphate levels, contractor issues for application and a number of wet years which meant weighing up soil structure damage versus the good of nutrients. Application was due to start again in June 2019 but unfortunately wet weather postponed this.

A few years ago, Richard trialled the application of green waste to the soil which complemented sludge cake well, but the cost and soil damage remained a problem. Richard remains an advocate of organic resources in the right situations.



## Caught between a rock and a hard place: how can we use phosphorus fertilisers more efficiently?

Martin explained that the first commercial phosphate fertiliser was produced by John Bennett Lawes in 1842 and he discovered that approximately 1% of animals is phosphorus but that 80% of this occurred in their bones. By dissolving animal bones in sulphuric acid, he created a superphosphate and this represented the start of the inorganic fertiliser industry and the foundations for Rothamsted Research.

Martin outlined the key issues associated with the use of phosphorus including global food production's reliance on it. He noted that the majority was produced from finite rock phosphate deposits and as the phosphorus cycle was linear, phosphate reserves were being used up and it was being lost down rivers and into the sea. With Morocco holding the majority of rock phosphate deposits, the UK was completely reliant on imports as they hold none.

### How long will the rock phosphate deposits last?

The three largest producers of phosphate are China, Morocco and the USA accounting for 70% of global production. Based on rates of mining continuing at current levels, Martin indicated that China had 23 years of supplies left, India had 29 and the USA had 37 years left. There were some other major reserves but these were affected by geopolitical issues, such as in Syria. Martin suggested that the World had 260 years of supplies left and there was a need to use and recycle phosphate more efficiently.

### Management of P Fertilisers

Martin gave an overview of the key issues of P fertilisers including over-application, the accumulation of P in the soil leading to inefficiency and the low up-take of 'plant available' P by crops. This led to the management opportunities for improving P use efficiency in agriculture which could be tackled through either the plant, the soil or the fertiliser. With examples given for each option, Martin delved further into three specifically; root exudates, soil pH and application rates. He provided the delegates with an overview of research and experiments for each management opportunity and concluded with recommendations of how to increase P use efficiency and the multiple approaches required.



Dr Martin Blackwell

Following the presentations, delegates asked a number of questions including whether the introduction of the Biosolids Assurance Scheme had given more confidence to farmers, how water companies could promote the benefits of biosolids to farmers, whether the soil damage Richard spoke about was due to the physical application of sludge cake, the availability of P in African soils and the distribution of leaching.

Our sincere thanks to Richard Reeves and Dr Martin Blackwell for their time and contribution to *Zoom into Soil: Nutrient Efficiency*.

The full webinar is available to view free of charge via the **BSSS YouTube channel** ([www.youtube.com/user/BritishSocietyofSoil](https://www.youtube.com/user/BritishSocietyofSoil)).

## Presenters

Richard Reeves is a first generation farmer. Since 1981, he has farmed 800 acres of land in Cheshire, using a wide combination of crops on a range of different tenancies. In the 1970s, Richard was involved in farm management with Imperial Chemical Industries (ICI) and worked closely with the Duke of Westminster. Richard obtained a BSc (Hons) in Agriculture from Leeds University, and in the last 15 years, he has kept a close affiliation with Lancaster University, hosting students visits to his farm. He has also been a visiting speaker for environmental science students and is a former Chairman of the National Farmers' Union's (NFU) North West Crops board and was a spokesman on organic resources.

Dr Martin Blackwell is a Senior Research Scientist at Rothamsted Research, UK. He is a soil biogeochemist with over 25 years' experience of studying both phosphorus (P) and nitrogen (N) cycling. Recent work has focussed on P use efficiency and P cycling in arable and grassland systems, the role of organic P in plant nutrition, and the development of better P fertiliser application rate recommendations.

# Zoom into Soil:

## Erosion

Following the success of the inaugural **Zoom into Soil** webinar in July, a second session was held on Wednesday 2 September with a focus on Erosion. Chaired by Dan Evans, former Early Career Members' Chair, we were delighted to welcome 160 attendees and our speakers, Professor Jane Rickson and Mr John Chinn, to the event.



With the title of her talk *Losing ground – should we worry about soil erosion?*, Professor Rickson began with a reminder of the importance of soil, how precious it is as a resource and how vital keeping it safe is to prevent erosion degradation. Separating the effects of erosion into on-site and off-site, Jane explained how it affects production, regulation, biodiversity, cultural features, water quantity and quality and sedimentation in watercourses. Defining soil erosion as “*the removal of soil, rock, artificial fill or any slope forming materials by erosive agents*”, photographic examples were presented showing different types of erosion; rainsplash, interrill, rill, gully, sub-surface, wave, riverbank, wind and mass movements.

Professor Rickson continued by explaining the universal soil erosion processes and how they are used to devise control measures. By comparing the detachment of soil by rainfall or runoff with the transport capacity, the erosion rate can be determined and control measures considered depending on whether there is a need to control detachment or reduce the transport capacity of flow.

### How bad is the rate of soil erosion in the UK?

Jane showed some of the research, surveys, experiments and field work that have been carried out to try to estimate the rate of erosion and what influences it, in order to develop mechanistic erosion models to evaluate these factors. She went on to discuss the typical rates of erosion in England and Wales depending on the erosion type and what this actually means in terms of net losses compared to the perceived tolerable level. Furthering the research, the impact of soil erosion risk and rates assessed in the field have been compared with known soil depth to predict future soil loss. It has been estimated that in very small, shallow soil areas, the top soil resource could be lost by 2050 and this could accelerate under the impact of climate change. Based on 2011 prices, the cost of soil erosion in England and Wales has been estimated at £165 million per annum and £50 million per annum for Scotland, implying that more money needs to be spent on control measures to try and avoid these associated costs. Professor Rickson ended her talk by looking positively to the future on what we can do and the effectiveness of control measures.

### Cobrey Farms: Asparagus and Erosion

John started his presentation by explaining the size of the problem experienced at his farm with it being on an old meander valley of the River Wye. The farm runs southwest to northeast with steep slopes of erodible sandy soil, made worse by the focus being on high value fruit and vegetable crops that grow well on irrigated sandy soils. The farm's number one crop is asparagus, a perennial crop that lasts 10 years from planting, and was previously at serious risk of soil erosion.



**John Chinn**

In 2003, Cobrey Farms planted asparagus in rows across the slopes of the valley fields but did not follow the contours due to the requirements of machinery. This proved a success for the first two years but following heavy rainfall events in 2006, the water broke through the asparagus beds causing gully erosion and dirty water run-off. Despite great efforts to clean up, the mud and dirty water ended up on the valley road which led to a visit from the Environment Agency and eventually a court case and fine. Thanks to Sarah Olney from Natural England, John was introduced to Dr Rob Simmons from Cranfield University and following advice, Cobrey Farms started retro-fitting geotextile lined Grass Waterways to areas of their asparagus fields where gully erosion and dirty water run-off had been experienced. Using images taken at the farm, John explained how this was achieved and although it didn't stop water running off the field, the water that did run off was crystal clear, carrying no suspended solids.

Realising that more needed to be done to stop all soil erosion and improve soil structure, Cobrey Farms went on to sponsor Jo Niziolowski in 2011 on a four-year MSc, then PhD project at Cranfield University to investigate treatments to minimise soil erosion and dirty water run-off in asparagus. In 2012, Cranfield University carried out a topographical survey of all the fields prone to soil erosion in the Coughton Valley at Cobrey Farms. It was soon realised that good soil management starts long before a crop is planted which led to the involvement of Cranfield University before the planting of an asparagus field, explained in depth by John during the webinar.

Following a trip to Canada where asparagus fields are not cultivated at all post-planting, Cobrey Farms set up a trial with Cranfield University, using funding from AHDB, to measure, compare and contrast asparagus performance over seven years under combinations of no-till, min-till, full traditional tillage, mulching with compost or straw and companion cropping with rye or mustard.

John provided some fascinating results only three years into the trial and promised more results to come. He finished his talk with final thoughts that the work the farm was undertaking could be relevant to other perennial crops and even forage maize.

The webinar was concluded with questions including whether erosion is more significant now compared to other geological eras, the relationship between academics and practitioners, whether the type of soil affects erosion rate, whether improving and stabilising carbon in soil could help reduce erosion and should incentives be delivered by improved food prices at the supermarket.

Our sincere thanks to Professor Jane Rickson and John Chinn for their time and contribution to Zoom into Soil: Erosion.

The full webinar is available to view free of charge via the **BSSS YouTube channel** ([www.youtube.com/user/BritishSocietyofSoil](https://www.youtube.com/user/BritishSocietyofSoil)).

## Presenters

Professor Jane Rickson has over 30 years' experience of research, consultancy and teaching in soil and water engineering, specialising in soil degradation processes and sustainable land management. Her work has focused on better understanding of soil functions and their role in the delivery of ecosystems goods and services, including water regulation, agricultural production and carbon storage. She uses multi-disciplinary approaches to integrate fundamental and applied land resources science at a range of spatial and temporal scales.

John Chinn is a partner of Cobrey Farms, a 1,500 hectare family farming business based in Herefordshire. Cropping includes asparagus, potatoes, green and fine beans, peas, broccoli, blueberries, rhubarb, combinable crops and a small vineyard. John is President of Cambridge University Potato Growers' Research Association (CUPGRA) and has recently stepped down as Chair of the Centre for Crop Health & Protection (CHAP), one of four Agri-tech Centres established by UK Government to improve the uptake of science and technology on farms.



# The Countdown is on: WCSS 2022



*Bruce Lascelles, President Elect and Chair of the WCSS Working Group, shares an update on the achievements of the Working Group to date and the impact which Covid-19 has had.*

The countdown is really on for the World Congress of Soil Science (WCSS) with only 18 months to go until we deliver the Congress in Glasgow from 31 July–5 August 2022!

We recognise that the impacts of Covid-19 globally are still being felt and we are planning for every eventuality: to make sure WCSS is able to go ahead whatever the global situation and that we are as inclusive as possible, maximising opportunities for people from a diverse range of backgrounds and geographies to attend.

Our WCSS Working Group has been hard at work over the past six months, particularly with regard to the development of the scientific programme which has been an iterative process. It quickly became clear that there were a number of common themes and these have formed the basis for the four plenary sessions and eight inter-disciplinary sessions (run as two parallel sessions). Although the sessions are still in the planning stage, the working themes are:

## Plenary Sessions

### 1. *Soils and security*

With a focus on food, nutrition and health. Food and nutritional security are major policy concerns globally with climate change and variability, and the loss of biodiversity having large effects on food systems.

### 2. *The north/south divide*

Interactions between economic and soil management allowing the south to thrive. The UN Sustainable Development Goals 2030 were agreed global policy shapers with particular emphasis on change in the developing world.

### 3. *Soils and land use in the 22nd century*

Building on the recent Intergovernmental Panel on Climate Change report on land use.

### 4. *Data and information*

How does the data revolution change the way we work with soils?

## Interdivisional Sessions

- A. Geospatial systems for Decision Support in sustainable soil use and management
- B. Soil carbon: From particle to planet
- C. Interdisciplinary soil science for impact
- D. Selecting plants for sustainable soils
- E. Soil Science and the emerging philosophy of regenerative agriculture
- F. Best management practices for global soil erosion control under changing climate (including extreme events)
- G. Soil securing humanity/Humanity securing soil
- H. Sustainable land use

We will be able to provide a further update on the programme and the abstract submission process in 2021.

## Pre and Post event Tours

Although Great Britain is a small island covering less than 0.2% of the Earth's surface, it has produced 62% of the 32 global Reference Soil Groups recognised by the International Union of Soil Science and FAO World Reference Base. As a result, we have named the tour programme *Small Island, Diverse Soils, Big Opportunities – Connecting people and soils*.

The programme will include a six-day pre-congress tour taking delegates from south east England to the Southern Uplands of Scotland; one-day mid-congress tours to Edinburgh, Glasgow, Stirling, the Isle of Arran and Boggall Glen; and three post-congress tours with an opportunity to visit three diverse Scottish regions.

Thank you to John Hollis who has recently stepped down from the Working Group and has done an excellent job in establishing the tours programme to date.



## Arts Programme

To support WCSS, we are working closely with artists on the development of a number of programmes including **Soil Voices** and **Soil Stories**. In addition to supporting the specialists who will attend the Congress, the arts programme provides a way to engage the public on the importance of soil and its impact on their lives.

Soil Voices will be the development of an original episodic audio drama story called *Digging Deeper* which will follow Dr Kate Sinclair as she reluctantly returns from the city with her daughter Ella to oversee a peat restoration project following the discovery of a bog body. The themes will include humans and soil, farming technology, women in soil science and innocence versus experience (how children see soil differently from adults). The podcast will be accessible for all ages and aims particularly to be able to engage younger generations in the stories of soil and its importance.

Soil Stories is an oral history project which will explore memories and connections on the theme of soil and how these connections have changed. Interviewing a selection of people including farmers, gardeners, scientists and lay people, it will focus on how people feel connected to soil and why, and raise awareness of the importance of soil amongst a wider community.

## Marketing

If you have emailed the office recently or followed the Congress on social media, you will have seen our new email banner. The graphic has similarities to one of our upland soils, the podzol, and incorporates the thistle, the National Flower of Scotland. We have also included outlines of faces on each side to represent the critical link between soils and people and the ultimate importance of soils to our future — not everyone sees these initially so hopefully a good conversation starter! You are welcome to share the banner amongst your own networks and please contact [exec@soils.org.uk](mailto:exec@soils.org.uk) for a copy.

## Sponsorship and Partnership Opportunities

To make the Congress a success, we are reliant on sponsors and partners supporting the event. Over the coming months, we will be preparing details of sponsorship opportunities for both WCSS itself and the Arts programme we will be producing. If your organisation would be interested in receiving information on the sponsorship opportunities when they become available, please contact [exec@soils.org.uk](mailto:exec@soils.org.uk).

## Net Zero Carbon

Finally, we recognise the importance of demonstrating our commitment to reducing our own environmental impact and aim for the Congress to be Net Zero Carbon; and we will be encouraging delegates to play their part in this too. One of the positive impacts of Covid-19 has been that all Working Group meetings are taking place virtually, which has significantly decreased the carbon impact of our meetings.

Although we couldn't have predicted when we started this journey back in 2010 that our planning would have been impacted by a global pandemic, I am delighted with the progress which the working group has made towards what will be one of the biggest achievements of the Society in its almost 80 year history! If you aren't already, please follow our social media pages for the latest information on the Congress as it becomes available.

Facebook:

[@WCSS2022](https://www.facebook.com/WCSS2022)

[www.facebook.com/WCSS2022](https://www.facebook.com/WCSS2022)

Twitter:

[@WorldSoils2022](https://twitter.com/WorldSoils2022)





*With the need for reliable knowledge about soil processes acting from molecular to continental scales in natural and managed environments greater than ever, the Editor-in-Chief of the EJSS describes the latest changes to the management of the journal to meet the BSSS commitment to advance the study of soil.*

Entering the term 'soil' into the Web of Science search tool reveals a dizzying total of 2,060,849 papers<sup>1</sup>. 'Novelty' is a key criterion for papers that are accepted for publication in the EJSS. Indeed, one of the first things that I did after becoming EiC in March 2019 was to work with the new Senior Editorial Team (the Deputy Editors and I) to refresh the Aims and Scope<sup>2</sup> of our journal to define what we mean by 'novelty'. Our interpretation was that research published in the EJSS must '*...advance the theoretical and mechanistic understanding of physical, chemical and biological processes and their interactions in soils...*'<sup>3</sup>. However, perhaps we should be concerned that, with more than 2 million papers already published about 'soil', there is nothing 'novel' left to learn?

Eighteen months later (and with a very satisfying 30% increase in Impact Factor to 3.742 under our belt), I am delighted to report that excellent and fascinating manuscripts that hold promise to further our understanding of soil processes are submitted to the EJSS by researchers from all over the world every day. I can personally vouch for that because I read every one of them! This hugely privileged position has allowed me to gain an overview of the emerging themes in soil science and the innovative analytical, mathematical and theoretical approaches that are allowing the advancement of knowledge.

## Rigorous and efficient peer review

The fundamental interdisciplinarity of modern soil science means that peer-review demands an equally wide knowledge base. In this respect, soil scientists submitting their research papers to the EJSS are assured of the rigorous and efficient peer review of their papers by the Senior Editorial Team who have many years of experience of research and publication in the key areas of soil physics, soil chemistry, soil biology and pedometrics/geostatistics. The Senior Editorial Team are supported by the generous contribution of the expert Associate Editors comprising our Editorial Board<sup>4</sup> and the reviewers that they select as the most appropriate to review submitted manuscripts.

## Promotion of EJSS manuscripts

Bringing excellent soil science published in the EJSS to the attention of the rest of the world is also a priority. Immediately after becoming EiC in March 2019, I set up a Twitter account (@ejssciences). I am proud to say

that we now have 1,387 followers!<sup>5</sup> All papers are tweeted once they go into Early View, and they also appear on the righthand side of the EJSS webpage<sup>6</sup>.

In response to emerging and high-profile themes in soil science, we also put together Virtual Issues, including the popular Earthworm research<sup>7</sup> and EJSS 70th Birthday in 2019<sup>8</sup> and current Cross Journal EJSS/SUM Virtual Issue on 'Opportunities and Challenges in No-Till Farming'<sup>9</sup> to complement the current Special Issue of the EJSS<sup>10</sup>. In addition, an annual collection of papers presented as Editor's Choice<sup>11</sup> aims to provide a flavour of the excellent science published in the EJSS. By special arrangement with Wiley, our publishers, the papers in these Virtual Issues are made free to access for a limited period, so follow us on Twitter and visit the EJSS webpage for news about these time-limited opportunities!

*I am always pleased to hear your ideas about how we can make the EJSS better by email at [editor.ejss@soils.org.uk](mailto:editor.ejss@soils.org.uk).*

## Ready to submit your paper to the EJSS?

Go to <https://mc.manuscriptcentral.com/ejss>

✉ Professor Jennifer Dungait, Editor-in-Chief  
[editor@ejss@soils.org.uk](mailto:editor@ejss@soils.org.uk)

<sup>1</sup> Web of Science, All Databases, accessed 04/11/2020

<sup>2</sup> <https://onlinelibrary.wiley.com/page/journal/13652389/homepage/productinformation.html>

<sup>3</sup> 2019 Journal Citation Reports (Clarivate Analytics)

<sup>4</sup> <https://onlinelibrary.wiley.com/page/journal/13652389/homepage/editorialboard.html>

<sup>5</sup> @ejssciences accessed 04/11/2020

<sup>6</sup> <https://onlinelibrary.wiley.com/journal/13652389>

<sup>7</sup> [https://onlinelibrary.wiley.com/doi/toc/10.1111/\(ISSN\)1365-2389.Earthworms](https://onlinelibrary.wiley.com/doi/toc/10.1111/(ISSN)1365-2389.Earthworms)

<sup>8</sup> <https://onlinelibrary.wiley.com/page/journal/13652389/ejss-70th-birthday>

<sup>9</sup> [https://onlinelibrary.wiley.com/doi/toc/10.1111/\(ISSN\)1365-2389.no-till-farming](https://onlinelibrary.wiley.com/doi/toc/10.1111/(ISSN)1365-2389.no-till-farming)

<sup>10</sup> [https://onlinelibrary.wiley.com/doi/toc/10.1111/\(ISSN\)1365-2389.no-till-farming](https://onlinelibrary.wiley.com/doi/toc/10.1111/(ISSN)1365-2389.no-till-farming)

<sup>11</sup> <https://onlinelibrary.wiley.com/page/journal/13652389/homepage/editorschoice.html>



# In case you missed it...

In partnership with Wiley, BSSS publish two Scientific Journals; *European Journal of Soil Science (EJSS)* and *Soil Use and Management (SUM)*. Over 100 papers are published annually within the six editions of EJSS and approximately 75 papers appear annually in the quarterly issues of SUM.

BSSS members are granted free access to the full text of both Scientific Journals when signed into your membership account — [www.soils.org.uk/journal-access](http://www.soils.org.uk/journal-access)

If you have any questions or would like more information on how to submit a paper, please contact [admin@soils.org.uk](mailto:admin@soils.org.uk).



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[@SUMjournal](https://twitter.com/SUMjournal)

[www.onlinelibrary.wiley.com/journal/14752743](http://www.onlinelibrary.wiley.com/journal/14752743)

## Cross Journal Virtual Issue 'Opportunities and Challenges in No Till Farming'

In this joint virtual issue of the BSSS journals, the Editors of the EJSS and SUM have selected 20 recently published articles from research on the effects of tillage management on soil processes from across the world. All papers in the virtual issue are free to access until the end of December 2020:

[www.onlinelibrary.wiley.com/doi/toc/10.1111/\(ISSN\)1365-2389.no-till-farming](http://www.onlinelibrary.wiley.com/doi/toc/10.1111/(ISSN)1365-2389.no-till-farming)

## Soil Multifunctionality

With increasing societal demands for food security and environmental sustainability on land, the question arises: to what extent do synergies and trade-offs exist between soil functions and how can they be measured across Europe?

Zwetsloot, van Leeuwen, Hemerik *et al*'s September 2020 early view article in EJSS sets out that managing and monitoring soil multifunctionality across Europe is possible and that synergies and trade-offs between soil functions exist, and vary across climatic zone and land use. The paper indicates that it is difficult to maximize the supply of all five soil functions simultaneously.

[www.onlinelibrary.wiley.com/doi/10.1111/ejss.13051](http://www.onlinelibrary.wiley.com/doi/10.1111/ejss.13051)

## Integrating local knowledge into soil science to improve soil fertility

Featured in SUM (Oct, 2020) 36:4, Cheik and Jouquet advocate for more holistic and transdisciplinary research that takes into account the social, cultural, environmental and economic impacts of agricultural practices. Using examples of agricultural practices that aim to use the activity of termites to improve the services delivered by ecosystems, rather than considering them pests and trying to eradicate them from lands, their paper discusses the interest of traditional agricultural practices as sources of inspiration for soil scientists and for the identification of tomorrow's agricultural practices.

[www.onlinelibrary.wiley.com/doi/full/10.1111/sum.12656](http://www.onlinelibrary.wiley.com/doi/full/10.1111/sum.12656)

## Saving the climate from the ground up

Soil has the capacity to bind large quantities of carbon in the long term. An international team of researchers from the University of Bonn is now advocating effective use of this potential. Experts estimate that this could reduce the increase of the greenhouse gas carbon dioxide in the atmosphere by a third. At the same time, agricultural yields in many regions would also increase significantly. In a recent edition of *Nature*, they present a strategy to achieve these goals.

[www.nature.com/articles/s41467-020-18887-7](http://www.nature.com/articles/s41467-020-18887-7)

## Soil Organic Carbon Dynamics under Climate and Land Management Change Scenarios

The October 2020 EJSS early view article outlines how land management and climate change influence cropland stocks in northern Ethiopia. Mesfin, Gebresamuel, Haile and Zenebe's paper highlights that appropriate land management increased SOC accumulation and reduced impacts of climate change and that findings help to assist land managers to make informed decisions to mitigate climate change impacts.

[www.onlinelibrary.wiley.com/doi/full/10.1111/ejss.13060](http://www.onlinelibrary.wiley.com/doi/full/10.1111/ejss.13060)

## Responses of soil bacteria and fungi

Zhang, Gu and Wang's October 2020 article awaiting publication in a future SUM, examined the impacts of long-term (36 years) management practices on the soil microbial community. High-throughput sequencing was used to determine the diversity and composition of the bacterial and fungal communities under different long-term management practices in an experiment that started in 1981. Soil characteristics such as the moisture content, soil organic matter, total nitrogen, alkali-hydrolyzable nitrogen, and total phosphorus made equally important contributions to the bacterial and fungal communities according to redundancy analysis and the authors speculated that straw cover was useful to improve soil bioactivity with a rich and stable microbial ecosystem.

[www.onlinelibrary.wiley.com/doi/abs/10.1111/sum.12671](http://www.onlinelibrary.wiley.com/doi/abs/10.1111/sum.12671)

# BSSS Public Engagement Grant

*This new grant scheme has been established to help BSSS members undertake public engagement activities communicating soil science to diverse audiences. Individual grants will cover the development of an activity or new resource and can be used to enable you to present at public engagement events, undertake outreach within schools or to groups within the land-based industries.*



The scheme is open to all BSSS members and we are looking to fund a wide range of novel and creative activities which will encourage the general public to understand the importance of soils.

## Grants of up to £250 are available

Applications which will fund activities with a tangible outcome, such as those which could be shared with the wider BSSS membership and used to engage with the public in future, would be preferred.

### Examples activities or events may include:

- External video and editing costs to develop online content, for example YouTube videos, downloadable education or training resources
- The cost to design and print a new educational flyer or resource
- The costs of equipment required to undertake a Sci-art project
- The cost of a stand and equipment needed to attend a science festival, society or trade event
- The cost of supplies to run an experiment, dig or other hands-on activity at a school outreach event, for example during British Science Week.

### The following will not be covered by the grant:

- Attendance at academic conferences and meetings
- Staff salaries
- Purchase of equipment, unless it is essential to your proposed activity
- Attending training courses in specific technical/academic skills

*Please note that due to current Covid 19 restrictions on face-to-face activities, grant awards will be restricted to digital projects and activities until further notice.*

## Eligibility

- Awards are for BSSS members only but events or activities can have international context i.e. take place outside the UK
- We also consider applications for part funding events or activities, where a clear contribution from the grant is indicated

The scheme will be launched on World Soil Day **Saturday 5 December**, and applications are welcomed throughout the following year.

# Grants

BSSS is dedicated to promoting the study and profession of Soil Science as well as supporting and encouraging excellence within the discipline. To achieve this, we offer several funding opportunities which include:

- **Innovation Grant –**  
Suitable for teachers of Primary, Secondary and Higher Education Institutions to encourage development of innovative ways of incorporating soil science into lessons. Value of up to £500. Application deadlines: 1 April and 1 September.
- **Field Equipment Grant –**  
Suitable for Primary, Secondary and Tertiary Institutions to purchase field equipment to aid in the instruction and understanding of soil science. Value of up to £1,000. Application deadlines: 1 April and 1 September.
- **Travel/Early Career Member Conference Grant –**  
Available to Early Career members of the Society to help fund attendance at conferences applicable to their research field. Value of up to £500. Application deadlines: 28 February, 1 May, 1 August and 31 October.
- **David S Jenkinson Fellowship Grant –**  
Available to support early career postdoctoral scientists from the UK to travel and collaborate with an overseas organisation. Suitable for Members of the Society who are UK residents and employed. Value of up to £5,000 annually. As the prize was not awarded in 2020, two prizes will be available in 2021. Application deadline is 31 July.
- **Brian Chambers Soils Fund –**  
Career development funding available to help early career scientists and practitioners develop skills and knowledge needed to manage soils effectively in modern farming systems, essential for the future sustainability of agriculture. Value is based on application (normally between £250–£2,500). Application deadlines: 31 March, 30 June, 30 September and 31 December.

Visit us at [www.soils.org.uk/grants](http://www.soils.org.uk/grants) for guidelines and application forms or email us on [grants@soils.org.uk](mailto:grants@soils.org.uk).



## Application criteria

Applications will be reviewed by the BSSS Grants and Awards Committee quarterly and scored against the following criteria. The application should:

- identify the target audience
- demonstrate activities that clearly communicate and enhance public understanding of soil science
- consider the impact of the engagement on the intended audience and identify a means by which the impact will be evaluated
- have a clearly costed budget.

## *The planned activity or resource should be:*

- completed within six months of the grant award (unless associated with a specific event which takes place outside this timeframe)
- credit should be provided to BSSS in relevant materials
- where there is a permanent outcome, a copy of the resource should be submitted for display on the BSSS website.

All grant recipients will be expected to provide a report on successful completion of their project.

## How to apply:

For further information please complete the application form at [www.soils.org.uk/grants](http://www.soils.org.uk/grants) or contact [admin@soils.org.uk](mailto:admin@soils.org.uk).



# Grants Case Study: Naomi Cox



**Name:**  
**Naomi Cox**

**Position:**  
**Senior Research Technician at ADAS**

**Grant:**  
**Brian Chambers Soils Fund**

**Used for:**  
**FACTS Course**

[www.soils.org.uk/grants](http://www.soils.org.uk/grants)

“Thank you to the Brian Chambers trust that enabled me to study the FACTS course. I did it and passed at the end of February 2020. I couldn't have done it without you and all the people who helped make it happen. I waited and tried to save for years to do it! I am now contacting as many people as I can to get a position as a trainee agronomist.”

## Brian Chambers Soils Fund: Helping Trainee Scientists Develop



The Brian Chambers Soils Fund was set up in memory of Professor Brian Chambers to provide grants to help fund the learning and development costs of students and early career scientists.

Training and developing soil scientists is essential in encouraging the skills and knowledge needed to manage soils effectively to meet the demands of modern farming systems for the future sustainability of agriculture.

Continued research and education about soils is crucial in helping farmers, land managers and policy makers protect this valuable resource.

### Who can apply?

Applicants must be researching a topic or be employed in a position in which an understanding of soil science, nutrients or manure management is an important component.

### How to apply

Please complete and return an application form via [www.soils.org.uk/grants](http://www.soils.org.uk/grants). Application deadlines are 31 March, 30 June, 30 September, and 31 December.

The BCSF also work closely with the International Fertiliser Society who have established the **Brian Chambers International Award**. Cash prizes are available for PhD or MSc students from any country who can demonstrate how their work will provide practical benefits to farm crop nutrition.

If you would like to find out how the Brian Chambers Soils Fund might help your career development or you or your organisation would like to contribute, involve your own young scientists or find out more about the Fund, please email [grants@soils.org.uk](mailto:grants@soils.org.uk).

# Career Interview

**Name:** Matt Barker

**Job Title:** Graduate Soil Scientist

**Organisation:** Mott MacDonald



## ***A day in the life of...***

Either heading into the office, or grabbing my auger, site gear and Wellies ready for a soil survey!

## ***How does your job fit within Soil Science?***

My job broadly sits under the umbrella of Environmental Consultancy, primarily involving the promotion of sustainable soil handling on large civil engineering projects. We look at soil from a range of perspectives both in and out of the field, including as an agricultural resource, an environmental asset and with regard to potential land contamination.

## ***Why is this an interesting area to work in?***

The overall goal of our work focuses on the incorporation of Soil Science theory in practice, and ultimately trying to make positive environmental contributions to large construction projects. Marrying up the development of infrastructure with sustainable soil handling is being increasingly appreciated as a crucial part of this.

## ***Why Soil Science?***

It's such a broad area of study, with so many interesting (and important) aspects to engage with. On a more basic level, I'm somewhat of a country bumpkin and have always loved the outdoors, whether it be through exploring or sport. This meant I quickly embraced opportunities to explore Soil Science during both my undergraduate and postgraduate studies.

## ***What did you study?***

I studied BSc Physical Geography at the University of Exeter, before undertaking a MSc in Soils and Sustainability at the University of Edinburgh.

## ***What has your career path been so far?***

### ***How did you begin your career?***

I began working for Mott MacDonald during an 8-week Environmental Science internship in the second year of my undergraduate degree, before resuming work with the company after I graduated. I started with a focus on contaminated land and remediation, before switching my primary focus to Soil Science in general (including a greater emphasis on soil quality and agriculture). As part of this, I was very fortunate to have been supported by the company to undertake my MSc.

## ***What is the best thing about your job?***

I like that it's extremely varied, with the opportunity for lots of travelling around the country, different projects, site-work, office-work and engagement with a huge number of disciplines, all with contrasting goals/perspectives. More generally, the job allows me to still connect with Soil Science academically as well as in a more practical sense.

## ***What skills, abilities and personal attributes are essential to success in your job?***

It's important to be able to engage effectively with people coming from a wide range of disciplines, with project success being extremely reliant on connected thinking between engineers and scientists, for instance. It's also always important not to lose sight of either academia or real-world practicalities. In that regard, the job is fundamentally underlain by the need for problem-solving, which offers some really rewarding outcomes.

## ***What advice would you offer to young people interested in a career in soil science?***

Embrace it, because it's an incredibly exciting time to get involved. From a job's perspective, there are more opportunities than ever to form a career around the discipline, and so many angles from which to do it. In my case, I didn't even realise that my current job existed until I got the chance to step into it, so it's always worth trying to keep abreast of the types of opportunities that are out there.

## ***Can you recommend other journals, magazines or professional associations which would be helpful for professional development?***

Given the current situation, I'm sure I'm not alone in taking advantage of the huge range of webinars on offer by both societies and universities. I may be somewhat biased considering I studied there, but Edinburgh University in tandem with Scotland's Rural College offer some great webinars which touch upon Soil Science from numerous different angles (agriculture, carbon, forestry and rural business, to name some examples).

## ***If you could do it all over again, would you choose the same path for yourself? If not, what would you change?***

It's fair to say I'm still very much in the early stages of my career, but I'm not sure I'd change anything! I feel very fortunate to have found a career in something I'm genuinely enthusiastic about, and work with some great people too. Embedding my MSc within this was also a huge bonus.

## ***Tell us one thing about yourself that not many people know***

As strange as it might sound (or actually perhaps not, considering the interests of the audience who might be reading this!) I've got a real interest in ants. They're fascinating little creatures.

*If you would like to be featured in the next edition of The Auger, please email us at [admin@soils.org.uk](mailto:admin@soils.org.uk).*

# CSci Case Study — *from Science Council*



## **Tim O'Hare** **CSci, Principal Soil Consultant**

### *Registration level:*

**Chartered Scientist (CSci)**

[www.sciencecouncil.org/scientists-science-technicians/which-professional-award-is-right-for-me/csci](http://www.sciencecouncil.org/scientists-science-technicians/which-professional-award-is-right-for-me/csci)

### *Job title:*

**Principal Soil Consultant**

### *Professional body:*

**British Society of Soil Science**

[www.sciencecouncil.org/members/british-society-of-soil-science](http://www.sciencecouncil.org/members/british-society-of-soil-science)

### *Scientist Types:*

**Developer / Translational, Service provider / Operational,  
Monitor / Regulator, Communicator, Business / Marketing**

“ *Where a multi-disciplinary team is required for a project, the CSci status helps to demonstrate my expertise at a level equal with other professionals and unifies the group regardless of their specialist subject.* ”

### *Why I chose to apply for CSci and what I value most about being a Chartered Scientist*

I applied to be a Chartered Scientist through the Institute of Professional Soil Scientists (now incorporated into the British Society of Soil Science). I realised that much of my work was relevant to CSci and membership was an important goal for career development. It demonstrates scientific expertise, a recognised level of achievement and a commitment to ongoing professional development. I mainly act in a consultancy capacity, and work alongside other professionals (engineers, ecologists, hydrologists, architects and environmental consultants) where chartered status is important to many colleagues and clients. Where a multi-disciplinary team is required for a project, the CSci status helps to demonstrate my expertise at a level equal with other professionals and unifies the group regardless of their specialist subject.

### *The importance of CPD*

I think it's extremely important. It can be packaged in lots of different ways. A lot of time it's done very informally — day to day you're learning stuff, researching, talking to colleagues... all the way through to the more recognised conferences and seminars. It's not a once a month scenario, it's every other day. You're developing all the time. It could be widened to focus not just on the technical aspects of a skill, but also the commercial aspects. I think as a consultant you're very well-rounded — you have to have both technical and commercial knowledge, including knowledge of how to run a business and manage staff.

For further information on becoming a Chartered Scientist, please visit [www.soils.org.uk/charteredscientist](http://www.soils.org.uk/charteredscientist).



# CSci Renewal Process

Congratulations to all our CSci members who successfully completed their Continued Professional Development (CPD) this year. CSci registrants have received an email setting out the requirements for their 2020 CPD, which will need to be submitted between 1 January and 31 March 2021 to **[admin@soils.org.uk](mailto:admin@soils.org.uk)**.



## Share your story

Are you professionally registered with the Science Council?

Share your experiences with us today:

**[sciencecouncil.org/contact-us/](https://sciencecouncil.org/contact-us/)**

# Your Council and Committee Members 2021

We have a range of committees which members are welcome to participate in and contribute to. If you are interested in joining any of our committees, please email [admin@soils.org.uk](mailto:admin@soils.org.uk) or contact the Committee Chair directly.

Committee Chairs are also members of our Council.

## Early Careers Committee

The Early Careers Researcher Committee represents the needs of our Early Careers members. From designing and delivering the Early Careers bi-ennial Conference, to contributing to The Auger, we would welcome new members to support our work!

Emily Dowdeswell-Downey  
Kirsty Elliott  
Rupert Goddard

Isobel Lloyd  
Benjamin Butler



**Daniel Wardak**  
*Chair* – Until December 2023  
[daniel.wardak@nottingham.ac.uk](mailto:daniel.wardak@nottingham.ac.uk)

## Education Committee

Amongst other things, the Education Committee develops and maintains a public awareness of soil science and promotes the acquisition of skills to those in the soil science industry and promotes soil science as a career choice to the general public. Recently we have been involved in the delivery of the Making Natural History festival and contributing to the OCR Natural History GCSE consultation.

Emilia Urbanek  
Jenny Jones  
Dick Thompson  
Sarah Garry

Leila Froud  
Sacha Mooney  
*Professional Practice Committee member*  
*Executive Officer*

*Vacant Posts*

Early Careers member  
Three further posts

We are actively seeking new members, including a new Chair, and would welcome applications to [exec@soils.org.uk](mailto:exec@soils.org.uk).



**Jack Hannam**  
*Chair* – Until December 2021

## Publications Committee

The Publications Committee aims to maintain relevant publications in the field of Soil Science and uphold the scientific credibility of publications, the European Journal of Soil Science and Soil Use and Management.

Bruce Lascelles *President*

Jack Hannam *President Elect*

Jenni Dungait *Editor* – *European Journal of Soil Science*

Deyi Hou *Editor* – *Soil Use and Management*

Sarah Garry *Executive Officer*



**Sacha Mooney**  
*Chair* – Until December 2022  
[Sacha.Mooney@nottingham.ac.uk](mailto:Sacha.Mooney@nottingham.ac.uk)

## Grants and Awards Committee

The Grants and Awards Committee oversees the distribution of funds to support members and non-members in promoting soil science and knowledge-sharing. We are actively seeking new members to join the committee and further information is available via the Committee Chair or [exec@soils.org.uk](mailto:exec@soils.org.uk).



**Bruce Lascelles**  
Chair – Until December 2021  
[president@soils.org.uk](mailto:president@soils.org.uk)

**Matt Aitkenhead**  
**Michael Goss**  
**Paul Newell Price**  
**Sarah Garry**

**Ben Butler**

*Brian Chambers Soil Fund Representative*  
*Executive Officer*

*One Vacant Post*

## Professional Practice Committee

The Professional Practice Committee promote guidance on professional practice, review professional membership regulations, fees and grades, monitor external issues where there are implications for the profession, represent and promote the interests of Professional Members and support continuing professional development. We are actively seeking new members to join the committee and further information is available via the Committee Chair or [exec@soils.org.uk](mailto:exec@soils.org.uk).



**Mike Palmer**  
Chair – Until December 2022

**Eleanor Reed**

*Incoming Chair*

**Tom Aspray**

*Past Chair*

**Jason Owen**

*Science Council Representative*

**Gill Shaw**

**Dick Thompson**

*Working with Soils and Education*  
*Committee Representative*

**David Tompkins**

*Non-executive member*

**Paul Newell Price**

*Non-executive member*

**Sarah Garry**

*Executive Officer*

*Vacant Posts*

*Consultancy Practice Rep*  
*Teaching Practice Rep*

## World Congress of Soil Science (WCSS) Working Group

The WCSS Working Group has been established to oversee the delivery of the WCSS and membership of the Group is reviewed on an annual basis and is by appointment only.



**Bruce Lascelles**  
Chair – Ongoing post until WCSS activities wound up  
[chairwcsc@soils.org.uk](mailto:chairwcsc@soils.org.uk)

**Jack Hannam**

*Vice Chair*

**Sacha Mooney**

*Trustee Member*

**Colette Black**

*Project Director, Congress Organiser*

**Niamh Kavanagh**

*Project Manager, Congress Organiser*

**David Manning**

*Scientific Programme*

**Willie Towers**

*Liaison with Glasgow, local community and arts community*

**Ian Rugg**

*Liaison with Governments and Associated Bodies*

**Peter Gregory**

*Scientific Programme*

**Wilfred Otten**

*Liaison with Learned Societies*

**Helaina Black**

*Sponsorship*

**Allan Lilly**

*Tours Programme*

**Sarah Garry**

*Executive Officer*



# Your Council and Committee Members 2021

## Regional Groups

We operate six Regional Groups to meet the needs of our members in different parts of the country. Each of the Regional Group Chairs is also a member of the BSSS Council and implements the Society's strategy, regionally. To discuss joining the Committee of, or becoming a member of a Regional Group, please contact the Committee Chair or email [exec@soils.org.uk](mailto:exec@soils.org.uk).

### **Midlands Soil Discussion Group**

Andy Tye. *Chair.*

### **Northern Soil Network**

Manoj Menon. *Chair.* [m.menon@sheffield.ac.uk](mailto:m.menon@sheffield.ac.uk)

### **Scottish Soil Discussion Group**

Sarah Buckingham. *Chair.* [sarah.buckingham@sruc.ac.uk](mailto:sarah.buckingham@sruc.ac.uk)

### **South East England Regional Group (SEESOIL)**

Leila Froud. *Interim Chair.* [SEESOIL@soils.org.uk](mailto:SEESOIL@soils.org.uk)

### **South West Soils Discussion Group (SWSDG)**

Lynda Deeks. *Chair.* [l.k.deeks@cranfield.ac.uk](mailto:l.k.deeks@cranfield.ac.uk)

### **Welsh Soil Discussion Group (WSDG)**

*Position Vacant*

## Fellowship Awards

BSSS Council recommends the award of Fellow to members who have achieved an important level of responsibility and professional experience with national/international recognition within the profession. A Fellow is entitled to use the suffix *F.I. Soil Sci.*

*Congratulations to the following members who have been awarded Fellow status:*

Liz Baggs

Maria Fernanda Aller

Marcelo Galdos

Jim Webb

Paul Wright

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## Your Trustees — 2021



**Bruce Lascelles**  
*President*



**David Hopkins**  
*Governance Trustee*



**Jack Hannam**  
*President Elect*



**Anna Becvar**  
*Finance Trustee*



**Sacha Mooney**  
*Past President*



**Tom Aspray**  
*PPC Trustee*



# Dates for your Diary 2021

*The following 2021 dates are subject to change and will be confirmed within the regular member newsletters. Please pencil these in your diary for now and keep an eye out for any changes!*

Details of all events listed can be found at [www.soils.org.uk](http://www.soils.org.uk).

If you would like to advertise an event on our website, please email details to [events@soils.org.uk](mailto:events@soils.org.uk).

## 1 January 2021

CPD submissions open

## 6 January 2021

Zoom Into Soil  
(online)

## 3 February 2021

Zoom Into Soil  
(online)

## 24 February 2021

Regional Group Annual Meeting  
(online)

## 3 March 2021

Zoom Into Soil  
(online)

## 4 March 2021

Council and Board Meetings

## 17 March 2021

What Is Soil?  
(online)

## 31 March 2021

CPD submissions close

## 7 April 2021

Zoom Into Soil  
(online)

## 21 April 2021

Regional Group Annual Meeting  
(online)

## 5 May 2021

Zoom Into Soil  
(online)

## 2 June 2021

Zoom Into Soil  
(online)

## 3 June 2021

Council and Board Meetings

## 13 June 2021

Open Farm Sunday

## 16 June 2021

Regional Group Annual Meeting  
(online)

## 7 July 2021

Zoom Into Soil  
(online)

## 21 July 2021

Talking About Soil course  
(online)

## 18 August 2021

Writing About Soil course  
(online)

## 1 September 2021

Fellowship nominations open

## 6 September 2021

Early Careers Conference  
Council and Board Meetings  
(Glasgow)

## 7 September 2021

Annual General Meeting  
(Glasgow)

## 7 – 8 September 2021

BSSS Annual Conference  
Glasgow

## Welcome to our newest members who have joined us between June and October 2020:

### Full Member:

Will Bond	Samantha Brown	Jenny Bussell
John Hills	Rebecca Jordan	David Lyth
David Newton	Jonathan Nichols	Felicity Roos
Edward Scott	Antony Williamson	

### Associate Member:

Kieron Anderson	Tony Brophy	Howard Browning
Sia Chitnis	Nkechinyere Isienyi	Tom Rolf
Sara Smith	Sandra Varga	

### Early Career Member:

Ecem Asma	Dean Bell	Susanna Dart
James Dowers	Wayne Gibbins	Anya Goncalves Geiger
Capucine Jacob	Tilly Kimble-Wilde	Annabel Landless
Timo Makower	Patrick McKenna	Emily Millar
Emma Stacy	Jessica Underwood	Daniel Wardak
James Willis		

### Technical Member:

Robert Price



**BRITISH  
SOCIETY  
OF SOIL  
SCIENCE**

### **British Society of Soil Science**

Building 42a, Cranfield University,  
Cranfield, Bedfordshire MK43 0AL

**[www.soils.org.uk](http://www.soils.org.uk)**

**e:** [admin@soils.org.uk](mailto:admin@soils.org.uk)

**t:** +44 (0)1234 752983

The British Society of Soil Science is  
a limited company, registered in  
England and Wales No. 7110309 and  
a Registered Charity No. 1134456.

*Promoting the study and profession of soil science*

## *What we do*

The British Society of Soil Science (BSSS) was founded in 1947 and is an established international membership organisation and charity committed to the study of soil in its widest aspects. The society brings together those working within academia, practitioners implementing soil science in industry and all those working with, or with an interest in soils.

Research on soils and enhanced understanding and engagement with soils is essential for agricultural, landscaping, construction, remediation, conservation and archaeological projects, as well as policy direction on critical topics such as climate change.

We promote research and education, both academically and in practice, and build collaborative partnerships to help safeguard our soil for the future. This includes hosting the World Congress of Soil Science 2022 in Glasgow, where those with an interest in soil science can meet to discuss the critical global issues relating to soil.

Anyone with an interest in soil is welcome to become a member. Membership starts from £31 for Associate members, with Full membership, which allows the member to use the designation *M I Soil Sci*, for £56 per annum. To find out more visit the BSSS website **[www.soils.org.uk](http://www.soils.org.uk)**.



**[facebook.com/BritishSoilScience](https://facebook.com/BritishSoilScience)**  
**[@BritishSoilScience](https://facebook.com/BritishSoilScience)**

Student Members:  
**[facebook.com/soilunderfoot](https://facebook.com/soilunderfoot)**

British Society of Soil Science  
World Congress 2022:  
**[facebook.com/WCSS2022](https://facebook.com/WCSS2022)**  
**[@WCSS2022](https://facebook.com/WCSS2022)**



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**[linkedin.com/company/](https://linkedin.com/company/british-society-of-soil-science)**  
**[british-society-of-soil-science](https://linkedin.com/company/british-society-of-soil-science)**



**[youtube.com/user/BritishSocietyofSoil](https://youtube.com/user/BritishSocietyofSoil)**