

THE Auger

DECEMBER 2018



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Cover image: Some of the volunteer members on the BSSS stand at the 2018 World Congress of Soil Science in Rio de Janeiro, Brazil

Editorial

As we head to the Christmas and New Year break it's an opportunity to take stock of the previous 12 months and to look ahead to the challenges for 2019.

As you will read in this edition of the Auger the Society had a busy summer attending the 21st World Congress of Soil Science in Rio de Janeiro as well as hosting the **2018 Annual Conference "Soils and Sustainable Development Goals"**. A reminder that you are able to view the **Russell Lecture** and some of the presentations from the conference on the society **You Tube channel**.

2018 saw the implementation of General Data Protection Regulation and also the society move towards becoming paperless. Most of you will now be viewing the two journals online via the Wiley website and a link to the previous Auger was emailed to all members in June. If you would like to receive printed copies of either the journals or Auger magazine then please update the preferences within your website membership account.

The new data protection rules are there to protect individual's data and you are able to view the society data privacy notice on the website. The society is keen to ensure that it only holds relevant information for its members. To help us ensure this is kept up to date can I ask you to make a few minutes available to check that we have your correct email and postal addresses registered. You can log onto your website account or contact us directly in the office with any changes that are required.

Please note that the office will close on Friday 21st December 2018 and re-open at 9am on Monday 7th January 2019.

*Merry Christmas and a happy new year from
Ian, Judith, Kim and Lynne*

📍 Ian Brown, Executive Officer exec@soils.org.uk

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

British Society of Soil Science

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

www.soils.org.uk

www.soilscientist.org

e: admin@soils.org.uk

t: +44 (0)1234 752983

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Ian Brown
Executive Officer
exec@soils.org.uk



Kim Spooner
Administrator
office@soils.org.uk



Judith Simpkins
Account Technician
admin@soils.org.uk



Lynne Boshier
Membership and Events Officer
events@soils.org.uk

President's Welcome

Prof. Wilfred Otten President



As I come to the end of my 2-year term as President, I would first like to express my thanks to the outgoing President, Liz Baggs. Liz will leave the Board and Council at the end of this year, having served the Society for 6 years in a row. Her input into Council, Board and the Society has been tremendous and contributed to the successful Society we are to date.

Under Liz's leadership we have seen the Society reaching out more to other communities, recognising the increasingly interdisciplinary nature of soil science. More recently, she hosted the Society's first debate (on the 4 per mille initiative) and was the lead organiser of our recent successful annual meeting on Soil and Sustainable Development Goals. At a personal level I owe Liz much: first for teaching me the ropes as incoming President and these last years in an advisory capacity.

At the same time as Liz's departure, I will hand over to Sacha Mooney and we welcome Bruce Lacelles as the next Incoming President. The Society will be under strong leadership and I look forward to continuing to work with them in the coming 2 years.

These last months have been busy for the Society, as you will read in this Auger. I was fortunate to be able to attend the World Congress in Brazil. It was an exciting experience, even more so as it brought us a step closer to taking over and continuing on our path to prepare for the WCSS 2022 in Glasgow. The BSSS office staff organised a stand at the conference, which was very well attended, with many enquiring about Glasgow. The two whisky tastings may have helped of course, but there is a real buzz around WCSS 2022.

Whilst in Rio I attended the IUSS Council meetings. The most noteworthy points for us as a Society are that: (1) Bruce Lacelles will be part of the presidential team of IUSS as he leads us towards WCSS 2022; (2) after a tumultuous voting procedure, China (Nanjing) was chosen to organise WCSS 2026, so immediately following Glasgow, and narrowly beating Canada; (3) our nominees to deputy chairs for each of the IUSS Division were accepted, so many thanks to all of those who put themselves forward to make our conference a success; (4) we got a chance to speak to the two nominees to become President of IUSS (2021/2022). As I write this it has just been announced by IUSS that the winner of the presidential election is Laura Bertha Reyes Sánchez from Mexico, currently Secretary General of the Latin American Soil Science Society. She will be the first female president in the history of IUSS.

At our Annual Meeting in Lancaster we also held our AGM, and I was pleased with the discussion points raised by our members. It was clear from the discussion that there is great support from our members for the Society to take a more active role in engagement with policy in the current climate.

As a Council, we had already been looking into this and Sacha, Anna and I recently met with the DEFRA Soils team to discuss how the Society can best assist and make a difference. This was a fruitful discussion that we will take forward with Council and has resulted immediately in a request to our members to engage with a workshop to establish a DEFRA's Lowland Agricultural Peat Task Force. Thank you for those members who offered their time and expertise and we hope that you will continue to respond as we advance our engagement with policy makers.

A second debate at the AGM centred on our journals. Both our Editors in Chief and, in fact, the entire editorial team have again made tremendous advances with our journals and continued to support authors who submit a paper. The suggestions for how to ensure our journals continue to be impactful will be taken on board. As you will be aware by now, Margaret Oliver will step down as Editor in Chief for EJSS after a lengthy and significant contribution to the journal. I thank Margaret for her effort over the years and I call upon our members to continue to show support, whether it is by joining the Editorial team, through acting as reviewer, or by submitting papers and encouraging colleagues to do the same. All contributions are welcome and will both strengthen the journal and advance the Society.

At the end of the year, we also look forward to the coming year under Sacha's guidance. Again we are looking to be organising numerous events at regional and national level. For many of these we will call upon you for suggestions and contributions, so please keep your thoughts coming. You will be able to read about many plans in this Auger. We can in particular look forward to an Early Career Conference, which I am sure will build upon the increasing success of previous years events, created for and by our Early Career Soil Scientists. Supporting this event continues to be of great strategic importance to the Society.

I hope to welcome you in increasing numbers at our events, be it regional or national and wish you a good Christmas and Happy New year.

📍 **Professor Wilfred Otten, President,**
June 2018 president@soils.org.uk



My time as chair of the Professional Practice Committee (PPC) ends and Thomas Aspray will take over in January 2019, supported by the new Incoming Chair Mike Palmer. We also warmly welcome Eleanor Reed onto the PPC Committee.

I am particularly enjoying getting to know a wider range of soils specialists through closer involvement with BSSS. It has provided new opportunities for me to collaborate and expand my knowledge. Soils are still the basis of my consultancy work. Every day new and exciting opportunities arise to apply skills in soils and 2018 has passed swiftly.

The BSSS Working with Soils Scheme has undergone a full review led by Dick Thompson. The scheme sets out the minimum qualifications, skills, and knowledge, which the British Society of Soil Science (BSSS) considers necessary for scientists and engineers across several aspects of soil science advisory work. The new updated documents are freely available as downloads via the Society's website. soils.org.uk/working-soil-o

BSSS is thriving and the significance of soil as a keystone of our Natural Capital has been recognised throughout the *25 Year Environment Plan*¹ which seems to be a call for soils specialists in all areas.

In the agricultural sector 2 April 2018 saw the new 'Farming rules for water' come into force. The rules are designed to tackle diffuse water pollution from agriculture and aim to achieve a baseline of good practise across the farming industry. They are aligned with those already in existence for managing nitrates and farm payments. *Guidance: Rules for farmers and land managers to prevent water pollution*² provides advice on what land managers must do to manage manure, fertiliser and soil to prevent runoff, erosion and leaching.



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In 27 July 2018 the *Code of Good Agricultural Practise for reducing ammonia emissions*³ was released which explains the practical steps farmers, growers, land managers, advisors and contractors in England can take to minimise ammonia emissions from farming activities. These are just two examples of research informing practice in the agricultural sector to make a difference, with involvement from BSSS members.

In early 2019 BASIS⁴ is set to launch two brand new qualifications for farmers and advisers to provide them with knowledge and skills to help manage soils for enhanced quality, biodiversity and long-term sustainability. The two courses are Foundation in soils and Quality of soils. Several BSSS members will no doubt become BASIS Approved trainers for these courses and BSSS has already offered support to this important initiative.

In June 2018 we held a very successful co-hosted event, with REA and AD-Net, "*Saving our Soils – understanding and improving soil health*" supported by eminent speakers from our BSSS membership. PPC are working with regional groups and national organisations to develop events to enhance professional development in 2019. The first will be held on the 18th February 2019, '*VOCs in soil: investigation to remediation*' co-hosted with the Institute of Environmental Science (IES) in Edinburgh, full details will be available on the website shortly.

And finally, if you would like to join the PPC team, we would welcome your input, just volunteer to the BSSS office.

📍 Anna Becvar, PPC Chair ppc@soils.org.uk

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

² <https://www.gov.uk/guidance/rules-for-farmers-and-land-managers-to-prevent-water-pollution>

³ <https://www.gov.uk/government/publications/code-of-good-agricultural-practise-for-reducing-ammonia-emissions>

⁴ <https://www.basis-reg.co.uk/News/Post/3989/Coming-soon-New-qualifications-to-help-enhance-soil-quality>

Regional Group Update

NORTHERN SOILS NETWORK (NSN)

Much of the Network's activities since February's meeting were related to preparations for the BSSS Annual Conference held at Lancaster University in September. The meeting was a great success and provided an excellent opportunity to meet some of the Network's members.

The good news is that we now have a new Student Representative. Kirsty Elliot, University of Sheffield, has volunteered to represent our student members. Kirsty is currently researching for her PhD in the effects of sludge-rainfall interactions on soil quality and crop production. It is great to have her on board. We are extremely grateful to Bea Burak for undertaking the Student Rep role over the past two years.

The Network is holding a one day workshop on Dimensions of Flood Risk Management on 28th November 2018 at Newton Rigg College. This exciting meeting will bring together practitioners who have researched the role of soils in flood protection. Participants will also have an opportunity to see some field demonstrations of equipment.

At time of writing we have still not had a volunteer to take over as Chair of the NSN from Jenny Jones. This is very disappointing. There has been some discussion that, if no-one volunteers, the network might have to disband. This is an outcome that none of us wants. Anyone interested in volunteering as Chair should contact Jenny Jones on NSN@soils.org.uk to find out more about the role.

Call for Abstracts: 'Change across Soil Interfaces'

We invite abstract submissions to a **European Geosciences Union (EGU)** session exploring the wealth of multiscale processes and functions which occur across soil interfaces including those between microbes and aggregates, bulk soils and roots and the interactions of soils with the bedrock and atmosphere. The EGU General Assembly will bring together soil scientists from around the world and will take place in Vienna between the 7th and 12th April 2019. Submissions are invited from researchers in all sub-disciplines and all career stages of soil science. The deadline for abstract submissions is the 10th January 2019, 12:00 GMT. For more information, please go to: <https://tinyurl.com/soil-interface>. If you have any questions about the session, contact Dan Evans on d.evans3@lancaster.ac.uk and don't forget that BSSS ECR members can apply for society travel grants to support attendance at this conference.

Dan Evans, Chris McCloskey, Emily Dowdeswell-Downey and Phil Haygarth



Kirsty Elliot, NSN Student Rep

Welcome to the following new Members:

Early Career

Vito Abbruzzese	Alex Adetunji
Betty Amponsah-Doku	Adekanmbi
Edward Baker	Dedy Antony
Aimee Brett	Santosh Birman
Robert Brown	Timo Breure
Alice Charteris	Eliza Case
David Clarke	Vince Chukwu
Lloyd Cockram	Tatiana Cocerva
James Dinsley	Aaron Cross
Rupert Goddard	Ben Gibbons
Naila Hina	Emily Guest
Ying Ping Lee	Victoria Janes-Bassett
Joseph Martlew	Matthew Lowry
Ibrahim Molla	Renée McAlister
Roisin O'Riordan	Niamh Murphy
Luis Ovando Fuentealba	Rachel Osguthorpe
Jessica Ponting	Ryan Paterson
Nicolas Rivolta	Helena Ripley
Christopher Taylor	Mandy Stoker
Jennifer Wardle	Jack Walton
Maarten Wynants	Catriona Willoughby

Associate Members

Alison Brand	Robert Cochrane
Joanne Daly	

Technical Members

Awudu Abubakari	Barry Cullimore
Colin Taylor	George Whelan
Arwel Williams	Susan Wilson

Full Members

Abiola Lucia Akinmutini	Rachael Bacon
Julia Bastone	James Cotterill
David Hackett	Nick Hampson
Darren Ingram	Ibatsam Khokhar
Alfonso Lag Brotons	Niall McNamara
Manoj Menon	Jenny Naicker
Henry Oppong Tuffour	Araceli Perez-Sanz
Laura Poggio	Marc Redmile-Gordon
Balal Yousaf	

Meet the new President



Professor Sacha Mooney becomes the President of the Society on 1st January 2019 for a two year period. Recently, Sacha spoke to Executive Officer Ian Brown who was keen to find out more about him...

How long have you been involved with Soil Science?

My interest in soil originally began during my A level in Geography, physical geography being my favourite element of the subject. After a degree in Geography that had a substantial 'soils' element, I studied for a Masters degree in Soil Science at Aberdeen University in 1994 and then followed that up with a PhD at University College Dublin. Whilst at Aberdeen I began to get involved with the British Society of Soil Science through my interaction with Jim Gauld, who was one of our lecturers. At the time Jim was the Secretary of the Society and therefore I began to get invited to attend Society events and was ultimately encouraged to become a member.

What is your area of expertise?

I am a Soil Physicist and my main area of research interest is concerned with soil, root and water interactions. My main specialism is in the image

analysis of soil structure.

I became fascinated with the micro-fabric of soil and how it influences soil behaviour and functioning following my time at Aberdeen working with the late, great E.A. Fitzpatrick. He taught me how to make soil thin sections and describe the soil structure under a microscope which subsequently became a focus for both my Masters and PhD research.

Since then most of my research has moved on to the use of X-ray Computed Tomography, also known as CAT Scanning, for examination of soil structure. The main advantage of this approach is we can explore the pore network in 3-D as opposed to 2-D in thin sections which is more relevant when trying to understand how soils behave in the field plus you can acquire images much more rapidly.

What made you join BSSS?

As previously mentioned I was encouraged to join the Society whilst studying for my Masters degree at Aberdeen. There was only 7 students within my student cohort and by joining the Society I was able to become part of a far wider soil science community.

How has the Society changed since you first became a member?

It feels like it has grown massively in the last 24 years since I joined and has evolved into a much more contemporary modern society. With the merger of the Institute of Professional Soil Scientists (IPSS) there is now a change of focus with the bringing together of the academic and practitioner communities. This gives a wider coverage for the soil science community within the UK and it is great to see that now reflected on council. Certainly when I served on council between 2005–2011 the composition was more biased towards soil scientists working in academia. One of the tasks I undertook then was to establish the Midlands Soil Discussion group with the help of the late Barry Rawlins, Mike Fullen, Fiona Nicholson and Andy Tye in 2010.

What are you looking to achieve during your two year Presidency?

This is a good question. The last two years has prepared me well for the role I think and it has been fantastic working closely with Wilfred and Liz (and Ian of course). However what I hadn't realised in advance is just how much work is involved as President of the society in dealing with the many issues as they arise such as those related to the journals, annual meetings, supporting ECRs, finances etc. Essentially the day to day work that you don't really think about unless you are directly involved. So, where as two years ago I had all these plans for things I would like to do, I find myself thinking more and more these days I just need to survive it!



It feels like it has grown massively in the last 24 years since I joined and has evolved into a much more contemporary modern society."



On a more serious note there are several things I wish to do. These include trying to visit our regional groups and find out more about what our members get up to, to engage a little more with other societies with common interests now that there is a real buzz about the importance of soil and to work with our council and board to come up with innovative ways to attract more members to our annual meeting. I am also very passionate about education and, in particular, enthusing the younger generation. I have some ideas for engaging school children linked to the next World Congress in Glasgow that I hope to be able to work with our Education committee and the WCSS team to deliver that. Finally, and most importantly, I hope to hand over the reins to the next President with the society in at least as good, but hopefully better position than it is now. A tough ask!

Then some more light-hearted questions;

Where do you work?

I am based within the Division of Agriculture and Environmental Sciences, School of Biosciences at the University of Nottingham. I have a ‘research’ home at the Sutton Bonington campus which is where the Hounsfield Facility is based, of which I am the director and a ‘teaching’ home at the University Park campus which is close to the city.



...to engage a little more with other societies with common interests now that there is a real buzz about the importance of soil and to work with our council and board to come up with innovative ways to attract more members to our annual meeting..."



I am also very passionate about education and, in particular, enthusing the younger generation. I have some ideas for engaging school children linked to the next World Congress in Glasgow that I hope to be able to work with our Education committee and the WCSS team to deliver that."

Family?

I am married to my wife Emma and we have 2 children; Dylan aged 11 and Lily aged 8.

Pets?

I am not really a pet kind of person to be honest but Dylan and Lily have a pet rabbit called Gingersnap although I tend to be the one who gets the clearing out task.

Favourite Colour?

Blue.

Favourite holiday destination?

Canada – I have had some of my best holidays there.

What makes you happy?

Other than a peaty gleyed podzol with an iron pan, I enjoy spending time with my family especially Sunday afternoons in the autumn/winter. I love going to see live music and anytime when Tottenham Hotspur win is a source of much happiness!

Three words that describe you?

Audere est facere.

● **Interview of Professor Sacha Mooney, new President by Ian Brown, Executive Officer**

BSSS Memo *on two recent Defra meetings on the future of Agriculture Bill and Agriculture post Brexit.*

At conference this year there was some discussion over the power of BSSS to lobby government.

The current situation regarding BSSS involvement with Government is that often, invitations to events and consultations arrive with very short notice. This means the President and team have limited time to consult members and due to this often offer out the attendance to such things to council members. In some cases, no-one from council is able to attend as it really is too short notice. The conversation about how we engage with Government is not over, and Wilfred our current president is taking this forward to see how we can engage with members more.

Earlier this year, I was offered the opportunity to attend two meetings on behalf of BSSS related to BREXIT. Attendees included many farmers (many organic), Defra bodies, charities, consultancies and lobby organisations. Here is a summary of the meetings.

1. Defra consultation event – organised by the Soil Association at Sheepdrove Farm.

George Eustace (Defra) spoke explaining the principles of the consultation and what Defra's aims were. The main points he put across were:

- That the current CAP is impossibly bureaucratic, and it regulates too much.
- That the subsidy makes farmers feel they should be grateful for the money, that farmers are recipients of the cash but not the biggest beneficiary.
- That there are inflated land rents, in part due to the subsidy. And low prices for crops.
- A move away from subsidy is a move towards rewarding farmers for results.
- **“Soil Health” will be a cornerstone of the policy.**
- He gave examples where Natural England Catchment Sensitive Farming have helped, but how the systems are different in different counties. E.g. need more slurry and FYM help in the South West, and opportunities for grass ley in arable elsewhere, to give soils a break.

- He was keen to state that the Agricultural Bill is not set on Organic practices but linked the ideas to Albert Howard who wrote in 1930s – 1970s of perfecting farming in a scientific way, an alternative approach, not labelled as “organic” but a “new method”. He said we need to look at old husbandry methods, and dove tail with modern science.

There were breakout sessions to discuss the options further within workshops. I took part in the following:

- 1 – New Stewardship Scheme, and
- 2 – how to improve Farming Excellence:

- Soil health thought most important by many though there was much discussion over how to measure it, when and why. A lot of discussion but no clear answers.
- The future of farming was discussed in great depth. Subsidies to get young farmers involved and educated in soil and environment health was thought beneficial by many.

2. I also attended the Westminster event for the APPG Agroecology Committee Meeting – discussing the committee's draft consultation response.

The responses to the consultation can be found here:

https://agroecology-appg.org/ourwork_categories/reports/

<https://www.gov.uk/government/consultations/the-future-for-food-farming-and-the-environment>

📍 **Leila Froud, ADAS** Leila.froud@adas.co.uk

What you do in your job

Dr Paul Newell Price – ADAS



To highlight the wide range of career paths chosen by soil scientists we are introducing a new feature in the Auger *“What you do in your job”*.

In this first article Dr Paul Newell Price explains what he has been doing recently in his role at ADAS.

Within the Soils & Nutrients team at ADAS we tend to work in groups of two to three soil scientists on a variety of projects. This month we’ve mostly been working with farmers and government to meet statutory targets for cleaner water and improving wildlife habitats in three English catchments; developing a soil and nutrient management guide for horticultural growers including the use of precision farming technologies; assessing the effectiveness of agri-environment schemes in delivering

We would welcome similar articles from members to feature in future editions of the Auger. If you would like to submit a short article (around 200 words plus a high resolution photograph) talking about your role, **please contact Ian Brown in the society office.**

better soil, air and water quality; restoring a former colliery and coke works to a mosaic of meadow grassland and woodland; and assessing the environmental impact (principally soil erosion risk) of the new East African Crude Oil Pipeline in Uganda and Tanzania. Meanwhile we’ve been helping with proposals for NERC and GCRF funding and preparing to lead a new five-year Horizon 2020 project on sustainable permanent grassland systems and policies.

The 2018 Annual Conference

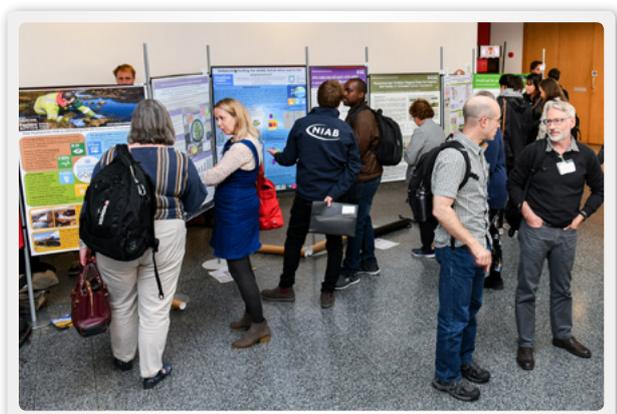
The 2018 Annual Conference **“Soils and Sustainable Development Goals”** took place at Lancaster University on 4th and 5th September and saw 100 delegates attend the two days of oral and poster presentations, panel discussion, conference dinner and the Annual General Meeting.



Professor Liz Baggs (left) and Cheryl Palm (right)

Professor Liz Baggs led the organising committee with assistance from Dr Jenny Jones, Dr Eleanor Reed and Dan Evans who reviewed over 60 abstracts submitted by members earlier this year. The final programme consisted of 15 oral presentations from the abstracts submitted. These oral presentations were complimented by three invited keynote speakers and 30 posters.

Day 1 got underway with an introduction from President Professor Wilfred Otten followed by an introduction to the 2018 Russell Lecture from Professor Liz Baggs before Professor Cheryl Palm delivered her keynote presentation **“Soils and Food Security: A Management Conundrum”**. It was a very busy first day with a further keynote speaker Professor Steve McGrath **“Soil, micronutrients and the link to human health”** and 8 oral presentations from delegates. These presentations are now available on the Society **YouTube channel**. The Society Annual General Meeting was held during the afternoon and you can see the minutes from this meeting on pages 24 to 29 of this edition of the Auger.



Posters and networking



Professor Steve McGrath

The presentations are now available on the Society YouTube channel

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



Dan Evans

Day 2 began bright and early with a keynote presentation from Professor Phil Haygarth “Soil, Water, Phosphorus and the Sustainable Development Goals” followed by a further 7 oral presentations from delegates. The morning session ended with a panel discussion featuring all keynote speakers plus Dr Paul Newell Price which gave the delegates the opportunity to discuss further issues that related to the conference theme.



Dr Paul Newell Price



President Professor Wilfred Otten presenting Roisin O’Riordan the award for the Best Early Career Poster Presentation

The Best Early Career Poster Presentation was awarded to Roisin O’Riordan (Lancaster University) “Soil, Cities and Sustainability”.

The Best Early Career Oral Presentation was awarded to Victoria Janes-Bassett (Lancaster University) “Sustainable soils and food: Modelling the long-term effects of agriculture and land-use change on soil biogeochemistry”.



President Professor Wilfred Otten presenting Victoria Janes-Bassett the award for the Best Early Career Oral Presentation

A growing diversity at the British Society of Soil Science

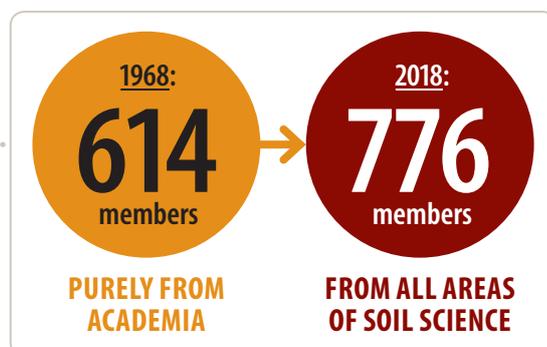
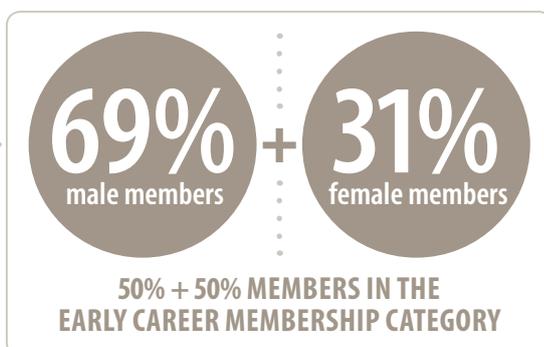
They say every picture tells a story...



The 1968 Annual Conference *"Soil Fertility and Land Classification"* was held at Reading University with 73 society members attending the three day meeting between 18th and 20th September.



Members in
37
countries



...the two photographs shown here, taken 50 years apart, show the change in the membership of the British Society of Soil Science.



Fast forward to 2018 and the recent Annual Conference *“Soils and Sustainable Development Goals”* held over two days at Lancaster University on the 3rd and 4th September saw a similar number of delegates captured in the photograph.

What really stood out for me when comparing the two photographs is the obvious change in the makeup of the members.

In 1968 society membership totalled 614. These would have been purely from academia.

2018 sees membership at 776 and embraces a wider network of members from all areas of soil science.

I recently took a look at the membership data the society holds and it shows the following;

- BSSS has members in 37 countries
 - There are 7 membership categories with Full members the largest group at 43% of total members
 - 69% of members are male and 31% female
- This however changes to an even split within the Early Career membership category
- The age range for membership spans 76 years

What is particularly encouraging is the growing number of Early Career members with the Society many of whom will be joining the two day *“Early Career Researcher Conference”* at the University of Sheffield on 16th and 17th April 2019.

Sensors for Measuring the Moisture in Soil

Food, Life, Protection



HydraGO

Portable, Handheld Device
Sensor-to-Smartphone Wireless Technology
Rugged, Accurate & Easy-to-Use

HydraProbe

One of the Most Widely Deployed Soil Sensors
Consistent Accuracy
Measures: Soil Moisture; Salinity & Temperature
Patented Technology



GroPoint Profile

Measure Soil Moisture over Multiple Depths
Single Probe
No Excavation Required
Cost-Effective



Tel: +44 (0) 1428 661 660

Email: sales@vanwalt.com

www.vanwalt.com

News from Rothamsted Research



The crop processing laboratory is transformed into the 'Soil Zone' at the Festival of Ideas, 22–24 June.

Rothamsted at 175: conference and public event

'Rothamsted at 175' began on 21–23 May with *'The Future of Long-Term Experiments in Agricultural Science'* conference, which welcomed over 170 scientists from 36 countries. The conference celebrated the achievements of LTEs, at Rothamsted and elsewhere, but looked principally to the future, engaging a wide research community in the debate about sustainable agriculture and how LTEs can inform that debate. A principle aim of the conference was to determine the future direction of the Global Long-Term Experiments Network (GLTEN),

initiated in 2017. Delegates agreed that it should be in the context of the UN Sustainable Development Goals and focus on three broad topics: reactive nitrogen, soil carbon and biodiversity. Many of the presentations are viewable on YouTube, if you search for 'Rothamsted'. We acknowledge the conference sponsors BASF, BBSRC, Fertilizers Europe, The International Fertilizer Association, The International Plant Nutrition Institute and The International Potash Institute.

The 175th celebrations continued with the *'Festival of Ideas'* on 22–24 June, which comprised an event for invited schools and guests, and then a full public open weekend. Over 8,000 people visited the site over the 3 days.

Royal visits

On 12 September, HRH The Countess of Wessex visited Ian Pigott's Farm School in Harpenden in her role as Honorary President of Linking Environment And Farming (LEAF) Education, and met with Rothamsted scientists involved with the event. This was closely followed by a special visit by HRH The Princess Royal to North Wyke on 24 September to celebrate more than 50 years of livestock research at the site. The Princess Royal met several members of staff and visited the North Wyke Farm Platform facility.



HRH The Countess of Wessex with Jackie Stroud (centre) and schoolchildren at the LEAF event, 12 September.



HRH The Princess Royal at North Wyke with Michael Lee (Head of Sustainable Agricultural Sciences at North Wyke, centre) and Achim Dobermann (Director, right), 24 September.



EcoProMIS project colleagues in Colombia recently, with project lead John Crawford (6th from right).

New papers mark the contributions of North Wyke and the electronic Rothamsted Archive

A recent paper, led by Martin Blackwell and involving several colleagues, marks the contributions made to agricultural and environmental science and practice from research on temperate grassland carried out from 1982 to present at Rothamsted Research's North Wyke Research Station in Devon. Another recent paper, led by Sarah Perryman, gives the first official account of the electronic Rothamsted Archive (e-RA) and what it offers, highlighting how this unique historical repository of agricultural and meteorological data, which stretches back to 1843, resulted from some remarkable forward thinking. For more details, please see:

Blackwell, M.S.A., Jarvis, S.C., Wilkins, R.J., Beaumont, D.A., Cardenas, L.M., Chadwick, D.R., Collins, A.L., Dungait, J.A.J., Gibb, M.J., Hopkins, A., Lee, M.R.F., Misselbrook, T.H., Murray, P.J. & Tallowin, J.R.B. 2018. The Importance of Sustained Grassland and Environmental Research: A Case Study From North Wyke Research Station, UK, 1982–2017. In: *Advances in Agronomy*, Vol 149. (ed.) D. L. Sparks, pp. 161–235. <https://doi.org/10.1016/bs.agron.2018.01.004>

Perryman, S.A.M., Castells-Brooke, N.I.D., Glendining, M.J., Goulding, K.W.T., Hawkesford, M.J., Macdonald, A.J., Ostler, R.J., Poulton, P.R., Rawlings, C.J., Scott, T. & Verrier, P.J. 2018. The electronic Rothamsted Archive (e-RA), an online resource for data from the Rothamsted long-term experiments. *Scientific Data*, 5, 180072. <https://doi.org/10.1038/sdata.2018.72>

EcoProMIS project

John Crawford is leading a major new collaboration project in South America to harness space technology and bring sustainable productivity to rice and oil palm farmers in Colombia. The aim is to use earth observation data from satellites and drones to support the hard-pressed farmers who are seeking to improve the viability of the country's agriculture. The new project, known as EcoProMIS (Ecological Production Management Information System), is designed to create a commercially viable solution for sustainable agriculture in Colombia by April 2021, free to farmers and funded by industrial stakeholders. Through outreach programmes, smallholders and land managers will develop their skills and understanding of how crop management affects productivity, income and ecosystems. Smartphones will communicate data and knowledge directly from and to farmers in the field. Rothamsted signed the 38-month, £3.9M contract with UK Space Agency in February, and then appointed Agricompas, a data analytics company based in the UK, to jointly forge and manage a public-private partnership, which was established in mid-May. Rothamsted's partners also include, from the UK, Elastacloud, for data science, and Pixalytics, for satellite earth observation; from Colombia, the International Centre for Tropical Agriculture (CIAT), Cenipalma and Fedearroz, for local agricultural knowledge; and Solidaridad, the international organisation behind the Fair Trade movement, for socio-economic expertise. For more details, please see: <http://ecopromis.org/>

Conferences

- Penny Hirsch was an invited speaker at the Ag Microbiomes meeting in Boston, USA on 28 July.
- Ian Clark and Aimeric Blaud presented at the International Society of Microbial Ecology in Leipzig, 12–15 August. Both gave presentations.
- Steve McGrath was an invited Plenary Speaker on the subject of Soil, Micronutrients and the Link to Human Health, and a Panelist at the successful BSSS Annual Conference in Lancaster, 4–5 September.
- Penny Hirsch was an invited speaker at the British Ecological Society/Microbiology Society/Society for Applied Microbiology meeting in London on 19 September.
- Steve McGrath is co-organising the 15th International Conference on the Biogeochemistry of Trace Elements (ICOBTE), to be held on 5–9 May 2019 in Nanjing, China. For further details, please see: <http://icobte2019.csp.escience.cn/dct/page/1>

Moving in

- **Sajeev Mohankumar** joined on 23 July, working with Andy Whitmore.
- **Samantha French** joined on 1 August, as the Business Manager for the EcoProMis project lead by John Crawford (see left).
- **Thibaut Putelat** joined on 3 September, also on the EcoProMis project.
- Short-term and visiting workers and students joining recently include **Yang Gao** from CAAS (working with Andy Gregory and Xiaoxian Zhang), **Xin Wang** and **Wencan Zhang** from CAU (students working with Richard Whalley), **Di Wang** (student working with Xiaoxian Zhang).

Moving out

- **Gordon Dailey** retired in July after 39 years of service.
- **Ben Richard** left in May to take up a position at University of Hertfordshire.
- **Giacomo Fontanelli** left in September, to take up a position in Italy.
- **Susanne Schreiter** left in September.

● **Andy Gregory**



BSSS at Open Farm Sunday 2018

As you hopefully may have noticed, this year we had a real push to get more members involved with Open Farm Sunday.

The Scottish, Northern and South Western regional groups showcased our love of soils at some great locations and the interest and engagement from the public was fantastic.

All of us who attended and helped out had a great time and feedback was overwhelmingly positive.

If you would like to promote BSSS at a local farm near you in 2019, please contact leila.froud@adas.co.uk

Below is a brief overview of BSSS engagement this year.

Which regional groups got involved?

Scottish
Northern
South West

How many BSSS volunteers helped?

Up to 33. There were a lot in Scotland, well done Matt and Lorna!

Would you do it again?

An overwhelming Yes from everyone.

How many people attended the events?

There were up to 1,000 people at the Farrington's event, of which many came to see the soil pit and make colourful soil test tubes.

In Sheffield, over 150 children took part in our "what can you find in the soil?" activity finding soil invertebrates and having a closer look with a microscope. Others had fun taking photos with our soilscape or discovering the hidden world of roots with our root viewer.

In Scotland they counted 230 people throughout the day. Plus a lot of sheep.

Some of the highlights from BSSS members participating;

David Hogan

We had a very good day on OFS at West Town Farm, Ide, on the western outskirts of Exeter.

I went over on the previous Friday and collected the three main soil types: the strikingly red very stony loam over breccia (Crediton series), reddish brown clay loam over basalt (Trusham series) and clay soil over Culm shale and sandstone (Tedburn series, well, reddened variant anyway).

My geologist friend, Dr Peter Grainger, and I organised a table display of samples of the rocks and derived soils together with BSSS educational wall posters and leaflets and of course my (well used) SW soil map.



Display of rocks and soils of West Town Farm, near Exeter



Farm walk at West Town Farm, near Exeter



Some hands on experience for some of the visitors

Once people had stopped by, we had some interesting conversations, though young families with small children didn't make rocks and soils a priority. We had a sign-up list for an afternoon farm walk for which we had a dozen or so for about 1.5 hours. The location is good in having several distinctly different rock and soil types together with their landscapes and land cover all within a small area.

Matt Aitkenhead and Lorna Dawson

It was the first time Open Farm Sunday had been held at Glensaugh Farm near Auchenblae. There had been no rain for a month, and so (surprise!) on the morning of the event it was alternately foggy, raining, cloudy, windy and chilly. However, we were not to be daunted! I was there nice and early to prepare and present some soil pits, and the farmer Donald Barrie showed me to a fine paddock with a flock of lambs. After showing me up with his pickaxe skills (the man's a machine), Donald warned me to let him know if the sheep made a nuisance of myself, and went off to look after the preparations elsewhere.



Hey ewe, get off of my spade!



Visitors to Glensaugh Farm near Auchenblae being greeted by "Pete"

Watch out for the sheep, indeed. My leg is not so easily pulled, thought I to myself.

Then this fine fellow wandered over.

I spent the next six hours alternating between chasing them out, scraping the holes free of the soil they had knocked back in, and trying to explain to disappointed visitors why my pits were barely even worthy of the term (Glensaugh has great soil for grass but you don't have to go down far before you start needing dynamite to get the hole deeper). However, I was obviously keeping some people happy and interested.

BSSS at Open Farm Sunday 2018

Leila Froud, Tegan Darch, Verena Pfahler and Andy

We all had a fantastic day at Farrington's Home Farm. There were lots of old tractors to look at, a guess the weight of the pig competition, a hog roast, plenty of cups of tea and ice-cream. There was also a tractor trailer ride for the kids and, of course, a giant soil pit to inspect!

The gates opened at 09:30 and by 09:35 we had plenty of people asking us about soil, children discovering that iron man is red like the iron rich soils and learning a little chemistry in the process (that Manganese is also an element, like iron man); that worms were burrowing really far down in the soils as seen by all the worm holes, much farther than anyone thought they would; and how the sticky clay at the very bottom is just like playdough, and therefore when squashed hard, water would run over it, not through it (and how that might cause problems sometimes). It was great fun seeing the kids get excited about soil.

On our stand, people could make colourful soil test tubes, see the difference in grass growth with various P inputs, play a phosphate game, do some texture testing, and take home lots of fun leaflets and worm comics... Big thanks to North Wyke for the extra resources.

It was great fun, and even the gazebo was required in the end, not to keep the rain off but as shade from the hot sun.



A young visitor planting



A warm welcome from hosts Tegan Darch and Verena Pfahler



Soil pit showing reddish fine and coarse loamy soils



“What you can find in the soil” painting

Lizzie Parker, Sheffield

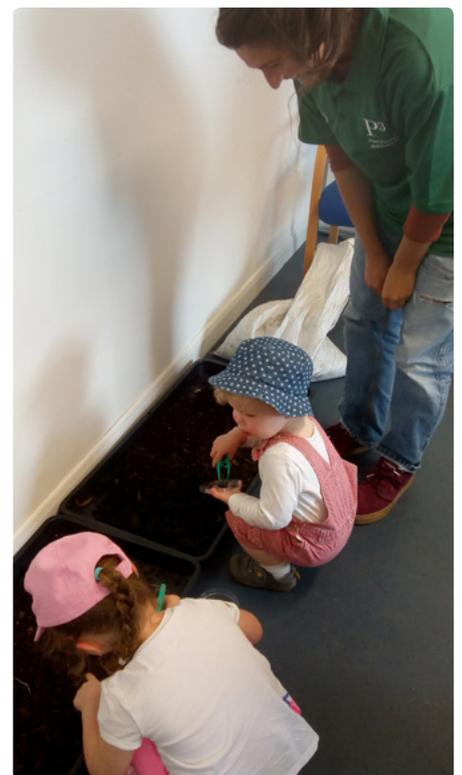
6 researchers from the University of Sheffield (P3 plant production and protection) helped at Open Farm Sunday at Our Cow Molly farm, Dungworth nr Sheffield.

Over 150 children took part in our “what can you find in the soil?” activity finding soil invertebrates and having a closer look with a microscope. Others had fun taking photos with our soilscape or discovering the hidden world of roots with our root viewer.

The team, who are excellent soil publicists, can be found on Twitter @P3_plantscience and #soilsecretagents



Soilscape



“Getting down and dirty!”

Early Career Researcher:

Update from Dan Evans

December! The month has arrived again; when the weak and waning winter's Sun rolls sluggishly off the horizon; when Jack Frost sits beside the river, completing a jigsaw of ice over a refrigerated stream; when the trees, stripped from their sleeves of leaves, sketch long shadows over frost-dusted ground; when colour is chased from the skies and the icicles of stillness creep over the world.

Outside, against a bleached sky, small and dainty flakes of white fluff are descending with balletic elegance to the frosted ground; whirling and pirouetting with that bewitching charm only natural wonders seem to master. It reminds me of our Society. We are like those snowflakes: all of us are unique, all of us are on very individual journeys and, when the opportunity is afforded, we 'snowball' our ideas and experiences together.

I've witnessed that, this year. Our early career community have come together at regional events, the Annual Conference and the World Congress to exchange ideas, discuss careers, make new colleagues and maybe life-long friends. For me, one particular highlight from this year was the Campus Challenge that followed the Annual Conference whereby four teams, each comprising of a mix of students from different institutions and backgrounds, set out on a trail around the Lancaster University, partaking in several soil-related (but fun) challenges. Thank you to all those who took part.

There comes that inevitable moment when the snow that carpets the fields and lays like a thick, white scarf over the shoulders of our hedgerows seems to fade, flake by flake, from sight. Although they transform into droplets, you can bet yourself a mince pie that they will unite as snowflakes again in the future. As a community of Early Career Researchers, we are the same. After snowballing our knowledge and research at this year's Annual Conference, we broke away, flowing back into our own separate work channels. Next year, however, we shall meet again. I'm delighted to invite you to our fully-funded **BSSS ECR Conference** at Sheffield University on the 16th to the 17th April 2019. Abstract submission and registration is still available online so before you have that next egg nog, do make sure you've sent in your abstract for either a poster or an oral presentation. The closing date for both abstract submission and registration is the 27th January 2019.

The ECR conference will be a fantastic, informal and friendly experience to hone your presenting skills, to network with colleagues and to consider careers and future opportunities. In addition to the usual slots, we'll be introducing a few novelties this time round: a greater-valued, fun and engaging poster session format, opportunities to grab some fresh air in the wonderful green space around the conference venue, and you'll also get the chance to contribute towards a very special Early Career Researcher's Time Capsule, which we plan to unearth at a reunion event to mark the society's 100th anniversary in 2047. There will also be breakout workshops, focussed on careers both within and beyond academia. Your ECR Regional Reps are working hard to make this the most engaging and inclusive ECR conference to date! If you have any ideas, send them to student@soils.org.uk





Fully-funded **BSSS ECR Conference** • **Sheffield University** • **16th–17th April 2019**

Abstract submission and registration is still available online.

The closing date for both abstract submission and registration is the 27th January 2019

As I draw to a close, I would like to take this opportunity to thank all of our regional reps who have been fantastic ambassadors for the society. Thank you to all those in the office who have helped make this year a pleasure for me to be your national ECR representative. But most of all, thank YOU, the members I proudly represent. It remains an honour and privilege and I look forward to seeing you next year. Until then, may I wish you all a very peaceful Christmas and my very best wishes for the year ahead.

📍 **Dan Evans, National ECR Rep**

You can also follow me on Twitter

🐦 @DanEvansol

and email me with your comments and questions:
student@soils.org.uk

ECR Conference Poem:

Whether your unearthing of the soil has just begun,
or whether the day of your viva is about to come,
whether you measure or pipette, label or detect,
or whether you observe and collect, expand and inspect,
Come spend two days away from R,
and share your work as an ECR!

From the data that are sound and methods that are dud
To the patterns underground that are as clear as the mud,

From the results that are collected,
and trends that are connected,

To the theories that are rejected and
those that are protected

Meet your colleagues from both near and far
And share your experience as an ECR!

From the success and the feats, the troubles and the toils,
Come to Sheffield and share your passion for soils!
There'll be workshops and walks, orals and posters,
Chats over coffee and over bar coasters,
And we hope to settle post-PhD fears
By spotlighting relevant jobs and careers!

Bring your cutting-edge work in you field
To 'The Edge' in Sheffield!
Submit your abstract soon as the deadline is near
We look forward to meeting you at the ECR next year!

National ECR Rep

Dan Evans

South East England Rep

Emily Dowdeswell-Downey

South West England Rep

Rupert Goddard

Midlands Rep

Ernesto Saiz Val

Wales Rep

Paul George

Northern Rep

Kirsty Elliott

Scotland Rep

Vacancy

72nd Annual General Meeting — *minutes*

Minutes of the 72nd Annual General Meeting of the Society, held at Lancaster University, Lancaster, UK on Tuesday 4th September 2018.

Society President, Professor Wilfred Otten chaired the meeting. 60 members present.

1 Welcome

Society President Professor Wilfred Otten chaired the meeting and welcomed the 60 Members present to the 72nd Annual General Meeting of the British Society of Soil Science.



Society President Professor Wilfred Otten

2 Apologies

Apologies received from Professor Andy Moffatt, Willie Towers, Professor Sacha Mooney, Nigel Titchen, Professor David Hopkins, Professor Bernard Tinker, Dr Murray Hart, John Hollis.

3 Minutes of the previous (70th AGM) Meeting

Published in *The Auger*, June 2018 pages 18–23.

4 Matters Arising from the Minutes

There were no matters arising.

5 Acceptance of the minutes by Members present

The minutes were accepted by the meeting. Proposer, Professor Mike Goss and seconded by Dr Jacqueline Hannam.

6 President's Report

Professor Wilfred Otten thanked members for attending the meeting and began by reminding them that the Society produces an annual Trustee Report that details what the Society has achieved in the previous 12 months. It contains reports from the various Council Officers plus a detailed financial report that is independently audited by the Accountants HSA and Co. The report is available on the Society website and was also publicised in the pre AGM correspondence. It is assumed that members attending will have read the report ahead of today's meeting.

Wilfred then summarised some of the key activities undertaken so far in 2018. These included the MSDG Annual Workshop "*Soil Resource Conservation and Sustainable Management*" at BGS (36 delegates attending), the SWESDig meeting "*Soil structure part 2*" at Taunton (15 delegates), SEESOIL meeting "*Farm Soil – discussion meeting for farmers and researchers*" on farm at Wantage (37 delegates) and Open Farm Sunday events.

The Society also had a large presence at the 2018 World Congress of Soil Science in Brazil, hosting an exhibition stand to promote the 2022 Congress in Glasgow. Feedback was very positive and the stand was incredibly busy over the four days.

During the World Congress the President represented the Society at the establishment meeting of the European C Soil Science (ECSS) and at a number of IUSS Council meetings. Wilfred announced that the 2026 World Congress of Soil Science was awarded to China and will be held in Nanjing. There had also been a strong bid from Canada but the Council vote showed a majority vote for China.



Wilfred also highlighted the recently announced Best Paper in Pedometrics had been awarded to the EJSS article “*Multivariate mapping of soil with structural equation modelling*” Angelini, M.E., Heuvelink, G.B.M., and Kempen, B.

He congratulated Professor Murray Lark who was awarded the Richard Webster Medal for Pedometrics at the 2018 World Congress of Soil Science.

Also at the World Congress of Soil Science the Society was awarded the “*Alvaro Barcellos Fagundes Medal*” for its support of the Congress and Dr Bruce Lascelles was also confirmed as “*Vice President Congress*” for 2022 and will become a member of the IUSS Executive.

And Wilfred highlighted Dr Jenny Jones achievements as a children’s author. Jenny has already published a book and is about to publish a second.

He acknowledged the award of Commander of the British Empire (CBE) to Professor Lorna Dawson.

Wilfred felt that all of these achievements help to show how vibrant and respected the Society membership is regarded within the soil science community and we should take pride in.

7 Editor in Chief EJSS Report

Professor Margaret Oliver began by updating members on the 2017 Impact Factor (IF) results for the Journal. Both the 2 and 5 year IF have decreased and the ranking of the journal is now 10 of 34. Margaret is still investigating the reasons with Wiley.

The amount of papers being submitted continues to grow. Over 260 had been received by end of August. 10 papers have been published as open access.

A particular success for the journal was the recent announcement of the Best Paper in Pedometrics Angelini, M. E., Heuvelink, G. B. M. & Kempen, B. (2017). *Multivariate mapping of soil with structural equation modelling*. *European Journal of Soil Science*, 68(5), 575–591

Of the 13 papers nominated (2 in EJSS and 7 in *Geoderma*), 5 were shortlisted and this one was selected as being very innovative and appreciated for the application of structural equation modelling to digital soil mapping. Pedological knowledge was incorporated explicitly in the DSM modelling through the mathematical implementation of a conceptual model.

The senior editorial team has remained stable and is working well. We have had some new Associate Editors (AE’s), some retirees and two additional AE’s in areas where we needed more expertise.

72nd Annual General Meeting — *minutes*

We have introduced short communications into the journal and published 3 already.

Following on from the reduction in the journal IF the aim of the next meeting with Wiley is to understand the reasons for the poor level of citations in 2015 and 2016 which had a negative effect on the IF. We will also be looking for ways of improving citations, for example by using social media more frequently.

We published the Anniversary issue to celebrate 70 years of BSSS with 11 papers from all over the world. One of these stimulated a letter to the Editor with a rejoinder from the authors and another engendered social media interest.

In the 2019 January issue we shall have Landmark paper 8 by Burgess and Webster (1980) with reflections and commentary. It will be followed by the Pedometrics special issue with around 14 papers. The soil organic matter special issue is taking shape and should be published in the middle of next year. Plans are in place for a special issue and some special sections on topics from the World Congress in Brazil to be published in 2020.

Last year the UK was second in number of papers accepted (26) by the journal, China was first with 34. I encourage members to submit relevant papers to EJSS and also to advertise interesting papers that they see to their network of contacts. Well written innovative papers gain citations. Help our citations by promoting EJSS where possible, but not by citation stacking please!

In closing there is a lot of interest in our journal in China where I was invited this year to a publishing workshop. There are many changes in publishing in the pipeline, such as a change in the format of EJSS. Next year the journal will have a very different appearance. There is also an increasing likelihood that the journal will go completely online in the near future, but not open access. This will still have to be paid for.

Finally, I have had the support of an excellent team. I thank the Deputy Editors, Statistics Editor, the Statistics Panel, Associate Editors, Reviewers, the Wiley team and in particular PrePress, authors and our readers for their tremendous support – without which the journal would not function.

Wilfred passed on his thanks to both Editors and their teams for their work on the Society Journals. He also informed delegates that Margaret Oliver will be standing down from her role as Editor in Chief EJSS at the end of February 2019. If any members would be interested in applying to take over the role then they should look out for the recruitment advertisement which will be issued soon. Alternatively you can submit initial interest in a confidential email addressed to President@soils.org.uk

Professor Liz Baggs

8 Editor in Chief SUM Report

Professor Mike Goss began his short presentation with the decline in the 2 year and 5 year IF for the Journal. As with EJSS it is not known the reason for the decline and this will be discussed at the forthcoming Editor's meeting with Wiley. The journal is now ranked 24 of 34.

It has been a busy year for the team producing the journal with 243 papers already submitted.

The Editorial team has had meetings using Skype and there was a meeting with the Associate Editors during the World Congress in Brazil in August.

The main promotion for the journal was at the World Congress in Brazil.

The journal will be producing a special issue devoted to social aspects of soils knowledge transfer.

There will be a new layout for the journal in 2019 and the journal will be moving towards the use of negative indices in units rather than a solidus and positive indices.

Mike wished to acknowledge the support of his team; Deputy Editors Dr Fiona Nicholson and Dr Matt Aitkenhead, the AE's, Reviewers, Wiley and PrePress.





Professor Cheryl Palm

9 World Congress 2022 Update

Bruce Lascelles gave a short presentation to the AGM that had been used at the closing ceremony of the 2018 World Congress of Soil Science in Brazil.

The Working Group had been established to deliver the 2022 World Congress. There are still some vacancies within the group. Bruce is working to fill these. If any members is interested in getting involved either with the Working Group or to assist with the planning of the Congress they should **contact Bruce via email**. He stressed that in order to deliver a successful Congress the entire membership needs to be committed to supporting it.

The Society has members acting as Vice Chairs in all 4 IUSS Divisions and one of their key responsibilities is to help deliver an innovative and attractive scientific programme for the Congress.

The Society has selected a Professional Conference Organiser (PCO) *speakeasy* and two members of their team attended the 2018 World Congress to gather information and contacts to assist with organising the 2022 Congress. The Society is currently in the process of setting up a new legal entity to manage the financial risk of organising the Congress. Once this has been completed then a formal contract will be negotiated between the Society and *speakeasy*.

Bruce confirmed the venue for the Congress will be the Scottish Exhibition Campus (SEC). There was a positive feel for coming to Glasgow from many of the 2018 Congress delegates that we met on stand. We need to capitalise on the fact that Glasgow is a fun and memorable city for the Congress and has easy access to the rest of the United Kingdom and Europe.

The Patron has also written a formal invitation letter plus a shorter adapted invite which has been produced as an A5 postcard. This was very popular with visitors to the stand in Brazil. Copies are available from the BSSS office.

Finally Bruce shared a short welcome video from the Lord Provost of Glasgow that has been produced by the Glasgow Convention Bureau (Congress Partner). This had also been shown to delegates at the closing ceremony in Brazil.

Francis Parry Roberts suggested that we should ensure that the 2022 Congress is "Carbon neutral". He offered to help with researching this further.

72nd Annual General Meeting — minutes



ECR Poster and Oral Presentation Winners Roisin O’Riordan and Victoria Janes-Bassett with Professor Wilfred Otten

10 Finance Update

Wilfred updated the members present on the Society’s current financial position. More detailed information is contained within the Trustees Report and the accounts have been independently verified by HSA & Co (Society Accountants).

The Society is in good financial shape and therefore it was agreed by the Board of Trustees to run a deficit budget for 2018 of up to £50k. This takes into account additional spend required to support members attending the World Congress in Brazil through grants and for the BSSS team to also attend and manage the stand to promote the 2022 Congress in Glasgow.

Council committees had submitted 2019 budget proposals during the summer and these would be discussed at the next face to face meeting on 19th September 2018.

11 AGM 2018 Member Resolutions

Council had discussed membership subscriptions at the previous face to face and audio meetings and a pre-written resolution had been circulated to members beforehand for voting either electronically or in person at the meeting.

The resolution states *“It is now 3 years since BSSS subscriptions were last increased. During that period inflation as measured by CPI has averaged 2% and RPI by 2.9%, thereby increasing the costs of running the society. BSSS Council has therefore proposed an increase in subscriptions of 2% effective 1st January 2019. This will go some way to ameliorate the impact of inflation upon the society, whilst recognising the hardship that some members have endured through a period of low wage growth. Conference is therefore asked to endorse an increase in all subscription classes for 2019 of 2%.”*

The resolution was read by Wilfred and displayed on the screen for all delegates to read.

A vote was then called and the results from those attending was as follows;

- In favour — 47 votes
- Against — 3 votes
- Abstain — 6 votes
- Not eligible to vote — 4 members

In addition 26 votes “in favour” had also been received electronically from members unable to attend the AGM. There were no votes against or abstentions.

Result: Resolution passed

12 2019 Council / Board Confirmation

Members were shown the listing of Board and Council Members for 2019 and asked to accept them;

Board consists of;

<i>President</i>	Professor Sacha Mooney
<i>President Elect</i>	Dr Bruce Lascelles
<i>Past President</i>	Professor Wilfred Otten
<i>Treasurer</i>	Mr Nigel Titchen (covering)
<i>Professional Practice Committee Chair</i>	Dr Tom Aspray
<i>Professional Practice Committee Chair Elect</i>	Dr Mike Palmer
<i>Professional Practice Committee past Chair</i>	Mrs Ana Becvar
<i>Governance Secretary</i>	Professor David Hopkins
<i>HR Trustee</i>	Mr Nigel Titchen

Board positions proposed by Professor Margaret Oliver and seconded by Professor John Quinton.

Council consists of;

Board Trustees

<i>Hon Editor EJSS</i>	Professor Margaret Oliver
<i>Hon Editor SUM</i>	Professor Mike Goss
<i>Education Committee Chair</i>	Dr Jacqueline Hannam
<i>Scottish Regional Group Chair</i>	Dr Sarah Buckingham
<i>Welsh Regional Group Chair</i>	Mr Ian Rugg
<i>South West Regional Group Chair</i>	Dr Leila Froud
<i>Midlands Regional Group</i>	Dr Sami Ullah
<i>Northern Regional Group Chair</i>	Vacancy
<i>South East Regional Group Chair</i>	Vacancy
<i>Early Career Representative</i>	Mr Dan Evans
<i>World Congress Working Group Chair</i>	Dr Bruce Lascelles

Ordinary Member

Dr Eleanor Reed

Ordinary Member

Dr Leila Froud

Ordinary Member

Vacancy

Council positions were proposed by Dr Paul Newell Price and seconded by Dr Andrew Tye.

13 Membership Benefits sub committee

Dan Evans presented an overview of the results of the recent membership survey that had been sent to all members. 167 members responded to the survey which was an encouraging response rate (22%). There was also a reasonable spread of responses from across the different membership categories (ranging from 10% to 33%).

The main reasons for joining the society were free access to the society journals, networking with Regional Discussion Groups and the Auger magazine. There were also further responses around career, respected organisation and included as part of a studentship programme.

There seemed to be a high level of recognition (120 out of 167) of the benefits associated with BSSS membership from those who responded. When looking at why our members belong to other societies this also appeared to be down to discounts on offer, journal access, meetings and conferences etc.

When asked about additional benefits that members would like to receive as part of their BSSS membership there was a request for more networking opportunities and more regional events. This included one off lectures, links to industry, webinars, Forums, one day workshops and links to business.

Regarding discount cards for supermarkets and/or other retail outlets. There were responses for both ends of the spectrum. In the main there seems to be a general lack of interest in supermarket discount cards but some interest for any reduction in outdoor clothing shops.

At the end of the formal presentation Dan opened the session to the floor for any further discussion or ideas.

There was a general discussion on how the society should be involved with representation on lobby groups. Differing opinions were voiced from members from the society should have a position to the society should look to bring together the differing viewpoints and facilitate discussion.

The meeting was formally closed at 16.05

Meet a Soil Scientist

Ken Smith

**Site Manager, Hawbush Community Gardens
and Chair of Trustees (Charity number – 1170413)**



Introduction

I rather stumbled into Soil Science at Newcastle University, having first opted for Medicine, with the possibly misguided aim of wishing to do “*something useful*” in my life. Subsequently, as a failed Medical Student, Soils/Agriculture seemed a good option since I had always loved gardening and any connection with farming.

I found my Soils and Agriculture studies fascinating and, in contrast to my time at Medical School, I was able to commit to the necessary effort, with enjoyment. I particularly enjoyed the opportunity for practical application of my soils studies which led me into summer holiday working on farms in Bedfordshire and Somerset.

At first, unable to find an ideal graduate employment opportunity, I worked for several months as a dairyman at a farm in Northumberland attached to a special school for youth offenders. My education and early employment experience, together, proved an ideal grounding for a career as an advisory Soil Scientist in ADAS and, even now in retirement, for my work with two Black Country community projects.

Can you describe your work in general? And what are you currently working on?

I first became involved in a church-based community support project¹ aimed at helping struggling families in an area of high unemployment, social deprivation, antisocial behaviour – helping with debt issues, crisis management, CVs, job applications and food bank; in an attempt to help families with improved nutrition through sourcing fresh fruit and vegetables, I later started work at Hawbush Community Gardens (HCG)².

The work at HCG developed significantly with links to different groups, including local schools (gardening club, soils workshops, lessons on growing and visits to the Gardens), special needs students (sensory garden project), Dudley Youth Offenders Service, family support referrals from Social Services.

We also run family fun events in school holidays and have recently been awarded a grant towards our “*Growing in the Community*” project via Dudley MBC voluntary sector Innovation Fund. Incidentally, freshly dug potatoes were, at first, regarded with suspicion by some food bank visitors in 2017, but are now very popular; and HCG tomatoes, especially so!

We want to meet more soil scientists!

So, if you know of a soil scientist you think would be good for us all to meet in “meet a soil scientist”, or perhaps you have had an interesting route to soil science yourself, then please let us know.

Contact leila.froud@adas.co.uk to submit your entry

¹www.brierleyhillproject.org.uk

²www.hawbushcommunitygardens.co.uk

List 5 things that make your job interesting...

1. **New challenges – constantly pushed beyond my “comfort zone” is exciting and prevents stagnation and, hopefully, becoming boring!**
2. **Meeting people in poverty, some with crushing problems, can be difficult and challenging; but also a privilege and a joy, where help is possible.**
3. **Contact with enquiring, school-age children is exhilarating, but exhausting!**
4. **Good to find my soils knowledge and experience can still make a difference.**
5. **Now growing my own crops and learning what I didn’t know as a consultant soil scientist!**



Early season work with volunteers (Tim and Jess)



Talking potatoes with Year 2 class from Hawbush Primary School

Can you recommend any information resources that have been useful for you in your work?

In my specialist field of wastes and manure management I have always found the community of the “muck specialist”, not only a great and wide source of information, invaluable experience and potential collaboration but of warm and lasting friendship. This is nowhere exemplified better than the excellent network RAMIRAN (Research Network on Recycling of Agricultural and Industrial Residues in Agriculture) which links researchers and consultants across Europe and, increasingly, the world (see website: <http://ramiran.uvlf.sk/>). Conferences/workshops held every two or three years have provided a great forum for information exchange and development, with associated published proceedings a valuable source of reference.

Could you tell us an interesting fact?

In view of my career-long association with organic manures, this has to relate to “MUCK”!

The total annual production of livestock manures in the UK for housed stock was estimated at ca. 90 million tonnes (Mt), in the 1990s (Smith & Chambers, 1998). Recent survey and research data were used to update these estimates, taking account of grazing or housing periods, including straw or other litter additions and partitioning between slurry and solid manures.

Total manure output for 2010 was thus estimated at 83 Mt, including 67 Mt manure from cattle (Smith & Williams, 2016); with potential financial value of this “muck”, well in excess of £200m/year!

What is the most exciting or interesting thing you have ever done?

After a life full of exciting and amazing experiences, including time not just visiting, but working in many countries around the world, I have to say the most exciting and wonderful experience has been to put my trust in God in following Jesus Christ as my Lord, with all that this entails.

It is especially wonderful to know that my failures (of which there are many) and weaknesses are not a problem and still used by our loving Father God — “My grace is sufficient for you, for my power is perfected in weakness”, 2 Corinthians 12 v 9.

Who would you most like to have dinner with, and why?

The soil science community across the world were shocked and deeply saddened by the untimely death of Professor Brian Chambers on the morning of August 30th 2014, at the age of just 53. I remember, too well, the huge sense of loss and grief as I took the phone call with this dreadful news – much too soon, the loss not just of an outstanding scientist and wonderful character, but to many, a very dear friend.

Knowing the great pressure and extreme demands of his normal schedule, I had for some time avoided all but essential contact. How much would it mean to be able to catch up and say things, far too long left unsaid?

What advice would you have for anyone looking at a career in soil science?

This advice applies in any field of science and has served me well throughout my professional life.

Soon after graduation and early in my career as an advisory Soil Scientist, I had the misguided view that I knew quite a lot (at least in my expertise). Now considerably older and, hopefully, a little wiser, I have become increasingly aware of how little I really know or understand!

Sir Isaac Newton, perhaps one of the greatest scientists of all time, was once praised for his perspicacious “Laws of Motion”. He replied “I am like a small boy playing beside the sea; he takes his bucket and fills it with water; his little bucket of water is my theories; but before us all is the great Ocean of Truth”.

It is a humbling and beneficial truth to acknowledge the limits of our understanding; never any disgrace to admit uncertainty in the face of a difficult challenge, with the offer to “find out and come back later” with a more informed answer.

I would like to send our thanks to Ken for his very heartfelt and enlightening article. Thank you Ken.

World Congress of Soil Science 2022 Update – Glasgow



We are now scarily into the last 4 years of planning for the World Congress of Soil Science 2022 in Glasgow. Having the opportunity to experience the Congress in Rio in August, with our minds on what we have to do, has been a huge benefit.

We have come back with a wealth of reflections and ideas on what really worked and what we need to ensure we are focused on. Particularly striking was the giant monolith at the entrance (pictured above) – this drew people throughout the Congress; if you have any thoughts on what we could do to create a similar focal point please let me know.

We have progressed this year on a number of fronts, setting a strong foundation for the next few years. I have summarised below the key aspects.



World Congress Working Group

Our Working Group is now fully in place and we are starting to set out more detail under each of the workstreams. The structure is shown again below. The Terms of Reference require this structure to be reviewed on an annual basis and it is clear that further skills and resources will be required as we get closer to 2022.

The current appointments are as follows:

<i>Chair (joins BSSS Council)</i>	Bruce Lascelles
<i>Vice Chair</i>	To Be Confirmed
<i>BSSS Executive Officer</i>	Ian Brown
<i>Scientific Committee Leads (interacting with the Divisions)</i>	Peter Gregory / David Manning
<i>Liaison with Glasgow, local and arts community</i>	Willie Towers
<i>Sponsorship lead</i>	To Be Confirmed
<i>Liaison with Government and associated bodies</i>	Ian Rugg
<i>Liaison with Learned Societies (UK and International)</i>	Wilfred Otten
<i>Tours (UK and beyond)</i>	John Hollis

Critical to the development of a successful scientific programme will be the IUSS Division Vice Chairs. As a reminder these are:

Division 1: Soil in space and time –
Jack Hannam & Matt Aitkenhead

Division 2: Soil properties and processes –
Leo Condrón & Paul Hallett

Division 3: Soil use and management –
Bob Rees & Tom Aspray

Division 4: The role of soil in sustaining society and the environment – Chris Evans & Christine Watson

If you are interested in supporting or have specific thoughts on any of these areas please get in touch.



speakeasy

Professional Conference Organiser (PCO)

We are continuing to finalise contract documents with our PCO and are meeting them in late November to start developing a detailed action list. It was really helpful that Colette and Jonathan from *speakeasy* attended the Rio Congress, giving them an in depth understanding of the Congress, what worked well and what areas we need to really focus on.

Continued engagement with Membership, the venue, Glasgow and the wider soils community

Now that the World Soils Globe has been formally handed to us and the Rio Congress is over, we will be starting to increase communication about 2022. *speakeasy* will be key to ensuring we get this right and use the wealth of media opportunities available. We will also pick up conversations with stakeholders to develop the scientific and wider aspects.

There remains much to do but I am confident we are moving forward well and with the right structures in place.

Please get in touch if you have any ideas for the Congress or can offer support.

📍 **Bruce Lascelles,**
WCSS 2022 Working Group Chair

NEXT STOP — GLASGOW 2022

World Congress of Soil Science 2022
in Glasgow, Scotland UK • 31st July — 5th August

SEC Scottish Event Campus

BRITISH SOCIETY OF SOIL SCIENCE

International Decade of Soils 2015-2024

PEOPLE MAKE GLASGOW

A 21st Century Revival In Soil Survey?

Dr. D.E. Parry F.I. Soil Sci., FIPSS

The 21st century global concern for food and water security has highlighted how vital the planet's soil resources are, and may have breathed fresh life into the mapping and evaluation of those resources.



Irrigated alluvial terraces in Koshi watershed, Middle Mountains region growing potatoes on deep brown (>1m) clay loam-silty clay loam soils (Dystrustepts)

The last 30 years has seen a steady decline in soil survey for agricultural planning and an increase in land assessment using remote sensing techniques with limited or no ground verification. Governments and funding agencies seeking new agricultural and irrigable land are recognising the need to re-instate a more 'hands-on' approach involving field surveys of soils, land-use and land systems to provide a more robust verification of the remotely sensed data.

The Nepal Irrigation Master Plan Update funded by the Asian Development Bank (ADB) provided an opportunity for integrating traditional ground-based soil and land resource survey techniques, with GIS-based natural resource maps in order to update the country's soil database and provide an improved tool for national irrigation planning. The task involved aggregating multiple-source analogue and digital soil data at scales varying from 1:10,000 to 1:3 million to produce unified soil maps showing type, texture and depth, an updated land-use map and a map showing the irrigation potential of the country.



Deep red sandy clay loam soil (Typic Rhodustalf) over boulder and fan deposits of the Upper Siwaliks Group (2- 1.5Ma) supporting Sal (*Shorea robusta*) woodland

In total some 2,099 GPS-referenced soil profiles were described of which 1771 were soil auger bores and 328 (16%) were soil pits in the 'gap' and 'check' areas, with some 100 soil samples subjected to physical and chemical analyses. The surveys, which were carried out in the extremely challenging mountain, hill and plain environments of Nepal over a period of 10 months in 2016 and 2017, resulted in the production of new soil and land capability maps for each of Nepal's 75 districts at a scale of 1:100,000. The soils were classified at USDA Soil Taxonomy Sub-group level, thus producing a unified soil classification for the country's 75 districts that were aggregated in the GIS to produce soil, land-use and irrigability maps for the three river basins.

Nepal has two national scale soil maps: The Soil and Terrain database for Nepal (SOTER) at 1:1 million scale, and The World Reference Base (WRB) Soil Map, at 1: 3 million scale. Both are very generalised and provide limited information on soil textures, structure, depth and drainage, soil parameters that are essential for mapping irrigation command areas.

The first task was to identify where there were gaps in the soil data base, i.e. where there were no soil maps at scales larger than the national soil maps, and devise a field sampling programme that, together with recent high-resolution satellite imagery, could fill those gaps and enable the compilation of updated soil maps for Nepal's 75 Districts.

My role, together with soil scientists from Tribhuvan University and the National Agricultural Research Council (NARC) Soil Survey Division, was to devise the field sampling program to be carried out in the three main river planning basins, the Karnali, Narayani and Koshi basins, and to supervise the field surveys carried out by local soil scientists and land-use planners experienced in the application of GIS for thematic natural resource surveys.



Fine sandy alluvial terrace soil at Damak in the Terai (Quartzipsamment) supporting a *Eucalyptus spp.* plantation

World Congress of Soil Science 2018

Rio de Janeiro, Brazil

The 21st World Congress of Soil Science was held in Rio de Janeiro, Brazil between 12th and 17th August 2018 and BSSS hosted a stand in the main exhibition hall to promote both the society and the 22nd World Congress it will be hosting in August 2022 in Glasgow.



Professor Victor Chude and Tom Storr on stand duty

Our stand was in a prominent position and the bright decoration and vibrant atmosphere we created attracted a large number of visitors throughout the four days of Congress. There was much interest in the next World Congress and many delegates said they are looking forward to savouring the delights of Glasgow.



The BSSS stand with volunteers and visitors

We created some new display material for use on the stand and will be able to use it at various future conferences and events as we head towards the 2022 World Congress. In fact the UK Soil Map (courtesy of Cranfield University) made an appearance at this year's Annual Conference as a backdrop to the speakers.

The society hosted two whisky tasting sessions on stand during the Congress. At the end of the first full day of the Congress we welcomed around 20 members to try out four Scottish malt whiskies. On the second day we hosted a tasting session for invited guests which attracted around 30 guests from the IUSS Executive as well as the Presidents from other European Soil Science Societies.

Winners of the 2018 Presidential Awards included the society for "recognition of services provided to the achievement of the World Congress and World Soil Science"



Invited guests at the society whisky tasting event on day 2

Whilst Lynne Boshier and I were on the stand throughout the four days of the Congress there was a great deal of support from BSSS members plus Council and Board Members. Their presence certainly helped to create a buzz on the stand and many delegates commented what a great atmosphere there was on the stand when they visited. So thanks go to Wilfred Otten, Bruce Lascelles, Margaret Oliver, Mike Goss, Sacha Mooney, Benjamin Butler, Olivia Cousins, Tom Storr, Jasmine Burr-Hersey, Sebastian Blunk, Leo Condron, Caleb Melenya, Jamal Hallam, Tinashe Mawodza, Lloyd Cockram, Hannah Cooper, Georges Nzdana, Carmen Sanchez-Garcia, Jacqueline Hannam, Sunday Aboh, Siobhan Staunton, Victor Chude and a special note to Vinicius De Oliveira who, as a native Brazilian, provided some much needed assistance with the television remote control...



Membership Benefits Questionnaire

As part of efforts to ensure that the Society continues to provide meaningful benefits, we sent out a questionnaire to all members earlier this year that focused on three areas. Firstly, what encouraged members to join the Society; secondly, how aware are members of their existing benefits; and thirdly, what additional benefits may members desire in the future.

The questionnaire was answered by just under a quarter of the Society membership (167 members) with most membership types represented in the responses. With regards to why members originally joined the Society, the majority of participants referred to free access to the Society journals, the Auger and the monthly email newsletter, including the networking opportunities within the regional groups. This emphasis on communication and interaction was a prominent theme in later sections of the survey, particularly in relation to the additional benefits members would like to have in the future. Just under half of the survey participants suggested that they would like more networking opportunities, such as more frequent regional events, one-off seminars, lectures and webinars, joint meetings with other societies and, in particular, greater interaction beyond academia.

Following this survey, and the presentation of its results at this year's AGM, there have been further discussions about innovative and novel ways in which to afford greater engagement between members, particularly about the Society's existing IT infrastructure and how this could be improved to support suggested webinar sessions and managed audio conferences. Whilst these specific technologies are investigated, regional committees will be responding to the call for more networking opportunities. Members should look out for upcoming events that are announced through regional group emails (make sure you have signed up), on the regional pages of the BSSS website, the monthly newsletter and here in the Auger.

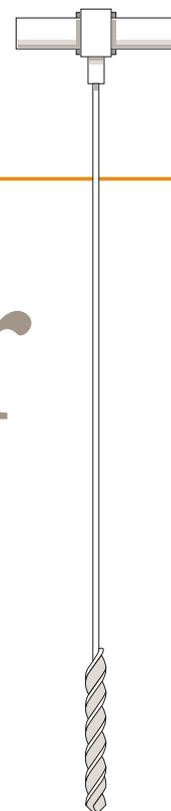
Improving links to industry was a relatively popular request from the early career members who responded, reflecting the potential for future career opportunities within industry. In addition to the continued work the Society is doing to promote activities beyond the academic community, Dan Evans (National ECR Rep) will be liaising more with the Society's Professional Practice Committee within the next year and it is anticipated that opportunities within industry will be spotlighted at the upcoming ECR conference.

One of the interesting and encouraging results to stem from this survey was that 98% of the members who participated had either some, if not full, awareness of the current BSSS membership benefits. Those members who wish to remind themselves of these benefits for each membership type can do so on the membership section of the BSSS website www.soils.org.uk/why-join-us. What was also apparent from the survey was the fact that the membership benefits offered by BSSS are not too dissimilar to those from other societies. The top five benefits that survey respondents mentioned in reference to other societies included: discount, journals, meetings, conferences and Society magazine.

If you did not have the opportunity to respond to this questionnaire and would like to relay your comments and ideas to the Society about your membership benefits, please do not hesitate to get in touch with the Society office: admin@soils.org.uk

Further info...

In the next Issue:



Auger Print Deadline

If you would like to contribute articles to the next print edition of the Auger please send them to exec@soils.org.uk by 1st April 2019. Please send in plain text format and images as separate high resolution files.

Annual General Meeting

The next Society Annual General Meeting is on Wednesday 4th & Thursday 5th September 2019.

Council Meeting

The next meeting of Council will be on Wednesday 13th March 2019.

- Meet the new PPC Chair...
- Report on the 2019 ECR Conference...
- Updates from the Regional Groups...

Connect with us on our social media channels...

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

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

 [instagram.com/
britishsocietyofsoilscience](https://instagram.com/britishsocietyofsoilscience)

Don't forget that the Society has a range of interesting videos on YouTube...

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



Augering on...

DIARY DATES 2019

Council Members 2018:

President & Trustee:	Professor Sacha Mooney
Past President & Trustee:	Professor Wilfred Otten
President Elect & Trustee:	Dr Bruce Lascelles
Hon. Editor EJSS:	Professor Margaret Oliver
Hon. Editor SUM:	Professor Mike Goss
Professional Practice Committee Chair:	Dr Tom Aspray
Professional Practice Committee past Chair:	Mrs Ana Becvar
Professional Practice Committee Chair Elect:	Dr Mike Palmer
Treasurer & Trustee:	Mr Nigel Titchen <i>(covering)</i>
Governance Secretary & Trustee:	Professor David Hopkins
HR Trustee:	Mr Nigel Titchen
Chair of Education Committee:	Dr Jacqueline Hannam
Midlands Regional Group Chair:	Dr Sami Ullah
Northern Regional Group Chair:	<i>Vacancy</i>
Scottish Regional Group Chair:	Dr Sarah Buckingham
South East Regional Group Chair:	Ms Harriet Robson
South West Regional Group Chair:	Dr Leila Froud
Welsh Regional Group Chair:	Mr Ian Rugg
Early Career Representative:	Mr Dan Evans
Ordinary Members:	Dr Eleanor Reed Dr Leila Froud
Executive Officer:	Mr Ian Brown

Diary Dates 2019:

Details of all events listed can be found at:
www.soils.org.uk

If you would like to advertise an event on our website please email details to:
events@soils.org.uk

13th March 2019

Council Meeting
Leicester

7th to 13th April 2019

European Geosciences Union (EGU)
Vienna, Austria

16th & 17th April 2019

BSSS Early Career Researcher Conference
University of Sheffield

4th & 5th September 2019

Annual Conference
University of Sheffield

18th September 2019

Council Meeting

December 2019

Council audio call

5th December 2019

World Soil Day



**BRITISH
SOCIETY
OF SOIL
SCIENCE**

British Society of Soil Science

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

www.soils.org.uk

www.soilscientist.org

e: admin@soils.org.uk

t: +44 (0)1234 752983

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Promoting the study and profession of soil science

What we do

Publications

With your membership you have access to our two journals; The European Journal of Soil Science and Soil Use and Management.

Newsletter

You will receive The Auger twice a year along with e-mail updates detailing meetings, activities and general membership news.

Conferences

The Society sponsors a number of conferences, joint meetings with other organisations and regional discussion days. As a member you will be entitled to reduce registration fees.

Grants

A variety of grants are awarded ranging from individual grants to funding for teachers organising projects on the study of soil.

Professional Status

Full Members gain recognition as fully qualified and experienced professionals.

Chartered Status

Members are eligible to apply for Chartered Scientist status.

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