



The
Geological
Society

serving science, profession & society

The Future of Geoscience

A virtual summit

Delving into the perception and communication of geoscience and addressing the decline in student uptake.

Wednesday 10 June



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Agenda

-9.00am Welcome introduction and Session 1 – The perception of geoscience in society

-9.25 am Panel discussion on Session 1 - The perception of geoscience

-10.00am Session 2 - The perception of geoscience in business

-10.20am Panel Discussion on Session 2 - The perception of geoscience in business

-11.00am Session 3 – Declining geoscience student numbers

-11.20am Panel Discussion on Session 3 - Declining geoscience student numbers

-12.15pm Summary

Please note this summit is being recorded and streamed live on to Youtube



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Introduction

A note from Tom Backhouse, event convenor and lead panellist:

During this summit we will be investigating the perception of the sciences and industries that many of us watching care for so deeply. We are passionate individuals and we love what we do, what we stand for and the role we play; in business, in our education system and in society. We understand that role, we understand our value - but what is becoming increasingly clear that we need to get much better at communicating that to everyone else.

In fact, I believe we need to undertake on the single biggest collective marketing exercise that geoscience has ever seen because, to put it bluntly, we face an extinction-level event. There is evidence as shouted loudly from universities around the UK for years now) to show an unprecedented decline in the number of students choosing to study geological or Earth sciences at A-level and at university. In 2019, only 1,268 teenagers chose to take Geology A-level; a 43% decline from 2015 when almost 45% of the university enrolment included students with Geology A-level. You can do the maths. The pipeline of geo and Earth science students is almost empty.

The future of geoscience is looking pretty bleak unless we act now, act together and act fast.

This summit is not intending to propose solutions in one morning – we cannot propose solutions until we've truly understood the problem. This summit aims to raise as much awareness as possible of the challenges that the geoscience community is facing, to talk openly, and to address the difficult questions and topics head-on over the course of the new few hours.

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Session 1 – Perception of geoscience in society

If you walked out onto a busy street in the centre of a city and asked 10 people what they thought of when they hear the words, "geo/Earth science", "mining", "geology", "oil and gas" – How would they respond? And maybe more importantly, how has that response changed?

Throughout history, and only until the last 20 or 30 years, the geoscientific and professional community held power – our opinion was valuable and our word had clout. We were able to outline risk and reward and we were renowned for our ability to create wealth through energy and resource exploitation. We helped to engineer the development of the Western world as we know it, and were often revered for our understanding of the complex systems, dynamics and hazards of the Earth around us.

in 2020, things do not appear so rosy. Within our own community, we are generally agreed and aware that geoscience is integral to combatting climate change, in meeting the UN's Sustainable Development Goals, and in meeting an ever-increasing global population's wants and needs.

However, to the person on the street, we are widely perceived to be on the wrong side of the climate change debate. Where wealth creation once dominated the agenda, the voice grows louder for a longer-term, more sustainable, greener outlook for energy and resource consumption.

Our opinion no longer holds the weight it once did, and we need to address this – society needs geoscience, but we must work very hard to prove it.

Keynote speaker – Lucy Crane



Lucy Crane, a Senior Geologist at Cornish Lithium, will present on the role that geoscience will play in moving to a more sustainable global society, using mining of critical metals as an example. Lucy will use word association and her experience from public speaking to explore the generalised perceptions of geoscience within different areas of society.

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Session 1 – The perception of geoscience in society

Panellist's Bios

Ben Lepley - Senior Geologist at SRK Consulting



Ben is a resource geologist working for mining consultancy SRK Consulting (UK) Ltd. He specialises in mineral resource estimation and is also actively engaged in public engagement and education activities related to mining and geoscience.

*LinkedIn: <https://www.linkedin.com/in/ben-lepley-608a6225/>

Helen Smyth - Domain Owner for Basin Analysis at Halliburton Landmark



Dr Helen Smyth is responsible for Neflex® Insights portfolio, Permedia and Rock Physics (Drillworks and DS Petrophysics) and has 15 years' industry experience. Helen has previously worked as a Field Geologist at CASP, University of Cambridge, delivering regional geoscience and sediment provenance projects to industry clients. Helen has a degree in Geology from the Queen's University Belfast, UK and her PhD. in Tectonostratigraphy and Sediment Provenance from the Royal Holloway, University of London, UK.

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Joel Gill - Founder of Geology for Global Development



Dr Joel Gill is Executive Director of the charity Geology for Global Development, International Development Geoscientist at the British Geological Survey, and will take on the role of Secretary (Foreign and External Affairs) from June 2020 at the Geological Society of London. For the last decade, Joel has worked at the interface of Earth science and international development and plays a leading role internationally in championing the role of geoscience in delivering the UN Sustainable Development Goals.

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Session 2 – Perception of geoscience in business

It has taken some of the greatest scientific minds to unravel the history of our planet, to piece together the jigsaw puzzle of time and reveal the wealth of resources, energy, shelter and security that the ground beneath our feet provides humanity.

Why is this important for the perception of geoscience in business? It's because it has taken great minds to understand the Earth – knowledge is power, and our knowledge has largely remained in the form of the written word for centuries. If we took every geologist, engineer, geo or Earth scientist from throughout history, combined their knowledge and made it digitally available, just imagine what we could be capable of with the technology available to us in 2020.

We're proud of our history in capturing that knowledge in the form of geological survey, informing our interpretation of what we know is (at best) patchy insight into the world beneath our feet. We used to be influential because technology did not delineate how we communicated risk and reward to decision-makers.

However, unlike other scientific communities and their associated industries, we have largely remained somewhat stuck in the past, and we have not yet truly embraced the future of a modern, tech-enabled and digital world.

Those who work in banks, in Government, in planning: they all have a world of instant information at their fingertips – but is their decision-making enriched with the knowledge held by the geoscientific community? If it isn't – why, and what impact will this have on the decisions made throughout the world of business, without us there to guide them?

Keynote speaker – Tom Backhouse



Tom is an award-winning geologist, entrepreneur, CEO and Founder of Terrafirma. He champions young geoscientists in being creative, innovative and free-thinking and lobbies within regulatory bodies to change the way we act upon ground risks. He is the Director of the Council of Property Search Organisations, and is a member of council for the Geological Society of London. Tom is a passionate communicator of the value of geoscience in our society. He has featured across public media on Channel 5 and the BBC.

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Session 2– Perception of geoscience in business

Panellist's Bios

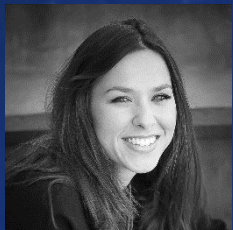


Holger Kessler - Principal Geologist, British Geological Survey (on secondment to the Geospatial Commission)

Holger Kessler joined the British Geological Survey in 1998 and was instrumental in the digital transformation of the BGS throughout the early 2000s. Holger is currently on full-time secondment to the Geospatial Commission at the Cabinet Office as a Geoscience Technical Adviser, shaping the UK's first national geospatial strategy and leading stakeholder engagement for the National Underground Asset Register.

*LinkedIn: www.linkedin.com/in/holger-kessler-059a0011/

*Twitter: @holgerhke



Rosina Smith - Head of Client Success at Insurdata

Rosina is a rising star in the insurance sector, passionate about the use of Insurtech focused on improving the quality of location exposure data in the industry. Prior to working at Insurdata, Rosina spent seven years building geospatial teams at Allianz.

*LinkedIn: <https://www.linkedin.com/in/rosina-smith-56421530/>



Francis Cram - CEO and Founder at MapStand

Francis is an entrepreneur and geologist who worked in multiple early-stage and start-up petroleum businesses before founding MapStand in 2018. MapStand is a technology start-up aiming to solve the issues companies face in analysing the activities of the upstream oil and gas industry by providing global spatial datasets.

*LinkedIn: <https://www.linkedin.com/in/francis-cram/>

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Session 3 – Declining geoscience student numbers

In the words of Peter Loader, the former Chief Examiner for A-level Geology for over 25 years, we face an extinction-level event.

There is evidence (as shouted loudly from universities around the UK for years now) to show an unprecedented decline in the number of students choosing to study geological or Earth sciences at A-level and at university. In 2019, only 1,268 teenagers chose to take Geology A-level – a 43% decline from 2015, when almost 45% of the university enrolment included students with Geology A-level. You can do the maths. The pipeline of geo and Earth science students is almost empty.

Why is this? There are many outreach and education initiatives run by charities, universities, businesses and the public sector – do we need to address that, for one reason or another, they are not making the impact we need?

If the trend continues, by 2030 we may not have any geoscience students at A-level, and barely a handful at university. This is a universal problem that spans the different disciplines and industries across geoscience. We must all commit our time, energy and resources into understanding this decline and the reasons behind it before we attempt to reverse it.

Keynote speaker – Iain Stewart



Iain Stewart is professor of Geoscience Communication at the University of Plymouth and is the Director of its Sustainable Earth Institute. As well as being a prominent public advocate for the Earth sciences, he is a UNESCO Chair in Geoscience and Society.

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Session 3 – Declining geoscience student numbers

Panellist's bios



Marie Cowan - Science Director at British Geological Survey

Dr Marie Cowan is a Science Director with the British Geological Survey and Director at its Belfast office, the Geological Survey of Northern Ireland. She is a Professional Geologist with the Institute of Geologists of Ireland, a Member of the Institute of Directors and a Member of the Royal Irish Academy.

*LinkedIn: <https://www.linkedin.com/in/marie-cowan-07996641/>



Catherine Owen - Head of Geography at the King Alfred School in Somerset

Catherine Owen is Head of Geography at The King Alfred School in Somerset, a Geographical Association Centre of Excellence. She writes and leads CPD events for organisations including the GA, Oxford University Press, Hodder Education, Seneca Learn and Tutor2u. Catherine is a GA Consultant and RGS Chartered Geography Teacher.

Twitter: @geogmum



Natasha Dowey - Geology Lecturer at University of Hull

Dr Natasha Dowey is a Lecturer in Geology at the University of Hull, and runs the website "Geoscience for the Future". Previously, she spent 7 years in the petroleum industry working on uncertainty and play risk, after gaining her PhD in Volcanology from the University of Liverpool.

*LinkedIn: <https://www.linkedin.com/in/natashadowey/>

Twitter: @DrNatashaDowey

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Thank you for coming along to our virtual summit, we hope that you found this interesting and useful.

Forthcoming events at the Geological Society

Virtual events

. June Public Lecture: Strategies in times of crisis – lessons from past marine ecosystems

Speaker: Daniela Schmidt, University of Bristol

2.30pm on 23 June 2020, via Zoom

<https://www.geolsoc.org.uk/strategiesintimes>

. Conference: Mineral resources estimation – recent advances and current best practice

19 October 2020, via Zoom

<https://www.geolsoc.org.uk/10-gsl-mineral-resource-estimation-2020>

New conferences

Sulfur in the Earth system: From microbes to global cycles through Earth history

16 to 17 November 2020

The Geological Society, London

<https://www.geolsoc.org.uk/11-gsl-sulfur-2020>

The role of subsurface research labs in delivering net zero: realising the potential of UKGEOS

3 to 4 February 2021

The Geological Society, London

<https://www.geolsoc.org.uk/02-gsl-geo-observatories-2021>

Please note that we will be sending around a survey to attendees in the next week and we would welcome your feedback.

If you would like to find out more about all the benefits of becoming a fellow at The Geological Society [click here](#). You can also find out more about our [Corporate Patron membership](#).

Finally, it costs the Geological Society, which is a registered charity, over £10,000 a year to run our free events, which engage a broad audience with key themes in Earth Science. If you would like to make a donation to support this cost, [donate here](#). **Thank You** for your generosity.



WING
Women in Geothermal

WING UK: Career in Geothermal

Wed, Jun 10, 2020 4:00 PM - 5:00 PM BST

Join us on Wednesday 10th June at 16:00 for an online careers panel discussion, aimed at current students and recent graduates.

**What top 3 questions would you like to ask the panel?
Submit your questions upon registration.**



Lucy Crane

Exploration Geologist
- Cornish Lithium

Lucy works as an Exploration Geologist exploring for lithium in geothermal waters in Cornwall.



Dr. Chris Rochelle

Senior Geochemist -
British Geological Survey

Chris is a Senior Geochemist with over 30 years research experience into various aspects of the geochemistry of fluid-rock interactions, including many lab-based studies.



Iain Stewart

Professor of Geoscience
Communication -
University of Plymouth
- Director Sustainable Earth Institute

Iain's research focuses on communicating geoscience to non-specialist audiences and in applying geoscience thinking to sustainable development challenges.



**Joseph Fitzpatrick
Ireland**

PhD Student -
QUADRAT Doctoral Training Programme

Joseph is a PhD student of the QUADRAT Doctoral Training Programme investigating the efficiency of Geothermal doublet well systems in shallow aquifers (<150m).



Lucy Cotton

Deep Geothermal Group Project
Geologist -
GeoScience

Lucy works as a Project Geologist exploring deep geothermal energy resources.

To register for WING UK: Career in Geothermal, Wed, Jun 10, 2020 4:00 PM - 5:00 PM BST:

<https://attendee.gotowebinar.com/register/6502570447687160589>

To become a WING UK member:

<https://www.womeningeothermal.com>