

## Conference Speakers and Presentations

### Plenary Session One

#### Professor Sir Stephen Holgate - The Special Priorities Fund for Clean Air

#### Professor Eloise Scotford - An Environment Bill-Fit for Purpose?

Eloise Scotford is Professor of Environmental Law in the Faculty of Laws and Centre for Law and Environment, University College London. Professor Scotford's is a leading scholar on the legal treatment of environmental principles, air quality law, climate change governance, waste law, and legislative and adjudicative processes as they relate to the environment. Professor Scotford has been a Trustee of the Council of Management of the UK Environmental Law Association and currently sits on UKELA's Governance and Devolution Group. She is an Associate Member of Landmark Chambers, a member of the Avosetta group of EU environmental law experts, and Analysis Editor of the Journal of Environmental Law.

*Professor Scotford will examine the latest version of the Environment Bill (possibly Act?) and what it does, or does not do, for improving air quality. She will consider the Bill's target setting process for air quality, its enforcement mechanisms, and the new measures proposed for local air quality governance. She will also reflect on the Bill in light of the COVID-19 pandemic and consider its reforms in light of the pandemic's lessons for air quality law and policy.*

#### William Wilson - COP 26 - key issues at a turning point for climate negotiations

William Wilson from Wyeside Consulting is a barrister and environmental lawyer with 25+ years of experience in government, private practice and consultancy. In past year he has given evidence to House of Commons and Welsh Parliament committees on governance provisions for environmental law after Brexit and to the EFRA Committee inquiry on air quality, and presented workshops on climate change legislation in Malaysia for the UK and Malaysian governments. He has recently set up a website and blog on 'COP26andbeyond' to try and provide new ideas and resources for young people in the run up to climate negotiations

*William Wilson's session sets out some reflections on key issues for the climate negotiations at COP26 in Glasgow in November 2021. 2020 is a key year in the timetable for climate negotiations, when the Parties to the Paris Agreement for Climate Change are due to submit more ambitious Nationally Determined Contributions, and their plans to reduce emissions of greenhouse gases. Scientists suggest that the window for achieving Paris Agreement targets is closing rapidly, while worldwide evidence of the effects of climate change increases. The politics of climate negotiations are further complicated by the response to the COVID-19 pandemic, with recovery packages of many trillions of dollars liable to set the course for future fossil fuel use, worldwide moves to support a 'Green Recovery from COVID', and big shifts towards an energy transition. With a national legal commitment to achieve 'net zero' emissions by 2050 and Chairmanship of COP 26, the UK has claimed the high ground in addressing these issues, and now needs to deliver.*

#### David Rudland - The Launch of the EPUK Petrol Station Guidance

David is a contaminated land specialist currently working in the public sector. He is a registered Specialist in Land Condition (SiLC) and Chartered Chemist (CChem). After 25 years in private sector consultancy working in the UK, Middle East and Central Europe, David entered local government and currently advises four local authorities on land contamination, pollution control and air quality matters. After some years as a petroleum inspector, he has seen both the commissioning and end of life removal of many retail and private filling stations. He is the principal author of the new EPUK

publication on petrol stations and garages that is aimed at developers and is the co-author of 2 CIRIA contaminated land guides. He is currently a member of the panel of judges for the 2020 Brownfield Briefing Awards and is immediate past chair of EPUK's Land Quality Committee.

*David Rudland's presentation will introduce the new EPUK guide "Before you Dig, What's beneath your Feet? – Garages and Filling Stations" prepared by a group of EPUK volunteers and aimed at non-specialist developers considering re-purposing former garage or petrol station sites. In the UK there is general agreement amongst the political parties that sale of new petrol and diesel-powered cars will be phased out by the middle of the 21st century. This is being driven by air quality concerns, climate change pressures and the development of new technology. Currently 2035 is the target date. As a consequence, hydrocarbons will eventually become the "alternative fuel" in world transported by electric, hydrogen or other types of vehicle, and it is predicted that the number of "traditional" petrol forecourts will decrease significantly as a result. Although we will still need dedicated sites to fuel our transport it is likely that many current petrol forecourts will be in the wrong places and become surplus to requirements. This in turn will release brownfield land for new uses. As many filling stations are in urban areas these will be ideally located for new residential development. However, as relatively small sites they may not be of interest to the more experienced developer who will know how to tackle the often complex decommissioning and decontamination challenges they present.*

## **Plenary Session Two**

### **Peter Atchison - Prospects for the Contaminated Land Sector in a Turbulent Political Time**

Peter Atchison is a geosynthetic specialist with over 35 years' experience in geomembrane and associated products. As a consultant he specialised in contaminated land issues and offers technical and commercial consultancy support in applications of specialised materials and services aimed at the sector. He is involved in both standards setting and advice to the legislative process through involvement in a number of standards committees. Involved in BSI committees since 1987, Peter has also worked in CEN as UK principal expert on WG6 "Geosynthetic Barriers" and ISO TC221 "Geosynthetics" where he was elected Chairman in 2017. Peter also holds positions at the Confederation of Construction specialists where he is Chairman of the board, a Board Director of The Property Care Association; as well as the British Geomembrane Association (treasurer) and The Radon Council (Past Chairman). Finally, the Environmental Industries Commission where he chairs the influential Contaminated Land working group. Peter's influence was instrumental in the creation of an important BSI Code of practice, BS 8485, concerning the investigation and assessment of ground gases for varying development sites.

### **Tom Burke – The Future of Environmental Policy**

Tom Burke is the Chairman of E3G, Third Generation Environmentalism, and a Visiting Professor at both Imperial and University Colleges, London. He is a Senior Associate at the Cambridge Institute for Sustainability Leadership. He is Chairman of the China Dialogue Trust and a Trustee of Black-E Community Arts Project, Liverpool. He has a wealth of experience as an environmental adviser to both private companies and government departments. In 2010 he was elected an Honorary Fellow of the Society for the Environment. He is a Patron of the United Kingdom Environmental Law Association. He is Chairman of the Advisory Council of Earth Capital Partners and a member of the Advisory Board of Glenmont

LLP. In 1993 he was appointed to United Nations Environment Programme's 'Global 500' roll of honour. In 1997, he was appointed CBE for services to the environment. He was awarded Royal Humane Society testimonials on Vellum (1967) and Parchment (1970).

### **Professor Jim Longhurst - Panel discussion with the EPUK Committee Chairs and members**

Professor Jim Longhurst is Professor of Environmental Science and Assistant Vice Chancellor for Environment and Sustainability at UWE, Bristol. He leads the university's sustainability agenda ensuring that sustainability considerations are present in the university's teaching, research, campus operations and civic engagement work. His 35-year research career has focussed on air and carbon management and urban sustainability. His national roles include Vice President of the UK Institution of Environmental Sciences, Honorary Vice President of Environmental Protection UK, chair of the Board of Directors and Trustees for the Environmental Association of Universities and Colleges (EAUC) and Director of the Bristol Green Capital Partnership CIC. He co-chairs Bristol's Advisory Committee on Climate Change, chairs the University Advisory Group supporting South Gloucestershire Council's climate action programme and on behalf of the EAUC serves on the Climate Commission for UK Higher and Further Education.

### **Air Quality Technical Session**

#### **Dr Ian Mudway - New research on health impacts - a focus on the brain**

Dr Ian Mudway is a senior lecturer at the School of Public Health at Imperial College London and a member of the MRC Centre for Environment and Health; Asthma UK Centre in Allergic Mechanisms of Asthma and NIHR Health Protection Research Unit in Environmental Exposures and Health. He has over 25 years of experience researching the impacts of air pollution on human health and in the development of assays to quantify the toxicity of the chemical cocktails that pollute the air we breathe. Over this period Dr Mudway has published over 120 research papers, reports and book chapters on these topics, as well as providing advice the local, national and international governments and NGOs. Dr Mudway is passionate about the communication of science to lay audiences and has worked extensively with artists and educationalist to promote the public understanding of the risks associated with environmental pollutants. Currently his work is focused on understanding early life impacts of pollutants on the development of the lung and cognitive function in children living within urban populations, as well as the broader impacts of air pollution on mental health and dementia risk.

*Dr Mudway will present on the emerging evidence that air pollution has significant impacts beyond the heart and lungs, on the brain. These impacts are felt across the life course, from associations with developmental neurological disorders, to poor cognitive development in childhood, adverse mental health throughout life and ultimately dementia risk in later life. The burden of these health impacts have not been incorporated into current economic evaluations of the cost of air pollution to the executor and therefore the emerging evidence suggests the current estimates are a significant underestimate of the financial burden falling on national health services and social care.*

#### **Neil Wait - Air Quality Issues associated with new transport infrastructure: the case of high-speed rail.**

Neil Wait is the HS2 Air Quality Manager, and is responsible for drafting, enforcing and ensuring all air quality requirements across all phases of the scheme. He also promotes

innovation across the topic, working with contractors, trade bodies, private companies and academia to maximise opportunities to deliver future best practice. Neil is has a background in Environmental Health and prior to joining HS2, fulfilled a local authority role within the Environmental Health sector, covering air quality, industrial regulations, public health and licensing.

*In delivering the HS2 Air Quality Strategy commitments to avoid and minimise impacts from construction on local Air Quality. HS2 has set strict emission requirements for both on- and off-road vehicles and plant. HS2 aims to raise the bar on vehicle emission standards and leave a legacy for future projects, by becoming industry leaders in setting vehicle emissions standards and extending them across the country. We are determined to use the project's scale and duration to help cut the release of harmful combustion engine emissions by stipulating contractors building Britain's new high-speed rail network use the cleanest vehicles and machinery available. The presentation will touch on the key commitments HS2 has from an Air Quality perspective, highlighting some of the key challenges and progress to date, and provide a brief overview on some of the innovations HS2 has been involved in.*

### **Nick Molden - Schrödinger's Car: the plug-in hybrid conundrum**

Prior to founding the AIR Alliance in 2017, Nick set up Emissions Analytics in 2011 in order to understand real-world fuel economy and emissions from vehicles. The concept was to find a way to characterise vehicles in a relatively short test and be able to conduct a large number of comparable tests independently of government and the industry. The AIR Alliance uses this database to publish the AIR Index rating of the cleanliness and efficiency of vehicles across Europe and the USA. Nick is chairman of the European standardisation CEN Workshop 90 on collecting real driving emissions data, which has led to the publication of the *AIR Index* by the AIR Alliance, of which he is a co-founder. He is also chairman of CEN Workshop 103 on standardising the collection of vehicle interior air quality data, with a particular focus on particle ingress and carbon dioxide build-up.

#### ***Schrödinger's Car: the plug-in hybrid conundrum***

- *Are plug-in hybrid vehicles (PHEVs) a rapid and practical route to carbon dioxide reduction, or a uncontrollable and expensive diversion from other more promising types of powertrain?*
- *Many vehicles are being launched with CO<sub>2</sub> emissions below 49g/km on the WLTP cycle, to gain CO<sub>2</sub> supercredits and tax advantages*
- *What does independent real-world testing tell us happens in practice?*
- *How dependent on driver behaviour are the CO<sub>2</sub> benefits?*
- *Are the advantages of PHEVS being correcting represented in manufacturer marketing?*
- *How technology-neutral AIR Index ratings can help demystify the situation for policy makers and car buyers.*

## **Land Quality Technical Session**

### **Steve Forster, - The New AGS Guidance Document**

Steve, BSc, MSc, CEnv, FGS, MIEEnvSc, has over 30 years' experience in all aspects of the investigation, assessment and management of asbestos and contaminated land in various roles. He is Chair of the Joint Industry Working Group on Asbestos in Soil and Construction & Demolition Materials, which is a broad cross-sectoral initiative to promote and guide the development and implementation of UK non-statutory industry guidance for the investigation, analysis, assessment, remediation and management of asbestos in the ground.

Steve authored the definitive industry guidance interpreting the Control of Asbestos Regulations 2012 and Approved Code of Practice L143 for application in the assessment and management of land contaminated by asbestos – CAR-SOIL (published by CL:AIRE in 2016) – developed in conjunction with the Health & Safety Executive. On behalf of CL:AIRE, Steve developed and delivers a range of industry-focussed training courses including CAR-SOIL, Asbestos Awareness and Non-Licensed Work, for Professionals and Groundworkers working within the brownfield land sector, with over 1000 candidates having received face-to-face or e-Learning training since 2016. He was awarded the Independent Asbestos Training Providers Industry Contribution Award 2014 in recognition of his work and efforts directed at improving knowledge and understanding of asbestos issues in the brownfield land sector of the construction industry.

The AGS is hoping to publish its long-awaited revision to interim guidance on asbestos risk assessment for the protection of Site Investigation and Geotechnical Laboratory Personnel (SIARA) by the end of 2020. Developed largely by an AGS working group, Steve Forster has been assisting with the drafting of the document over the past year and will share some insights into what the new guidance will contain. Particular focus will be given to:

- What must be included in your preliminary asbestos risk assessment before getting to site
- Risk assessment, classification of sites and application of appropriate control measures

### **Dr Tom Henman - Examining the risk of carbon dioxide arising from former coal workings and the implications for development.**

Dr. Tom Henman has over 20 years' experience of contaminated land assessment and remediation, gained in both consultancy and for a problem-holder. He is a Director based in RSK's Glasgow office and is also responsible for leading technical quality within RSK's 200-strong Geosciences business. Tom is a Chartered Chemist and a Chartered Scientist. He is also a registered Specialist in Land Condition (SiLC), a Suitably Qualified and experienced Person (SQP) under the National Quality Mark Scheme (NQMS) and a SiLC assessor. He has a keen interest in developing and promoting technical excellence and has been actively involved in industry initiatives led by AGS, CIRIA and CL:AIRE furthering the development of industry standards. He has represented the environmental consultancy sector on the Scottish Government Contaminated Land Advisory Group. Tom has collaborated with a number of universities, including the University of Strathclyde and the University of West of Scotland amongst others, on innovative research projects, co-authoring research papers. He was recently elected to the post of Deputy Chair of the SiLC Professional and Technical Panel.

*RSK was commissioned by the Scottish Government following the Gorebridge incident to investigate the prevalence of carbon dioxide and other emissions from disused mineral mines and the consequences for residential buildings. This webinar, delivered by one of the authors of the RSK's research report, covers the background to this issue and present some of the key findings of the report, including implications for the planning and development process. This talk will cover:*

- *Introduction and context to the Scottish Government research project*
- *The Gorebridge incident in Scotland and other identified incidents of mine related CO2 emissions in the UK and beyond*
- *The nature of abandoned mine-workings and circumstances where risks related to CO2 emissions are raised*

- *Key findings of the research report including expert views on the adequacy of current standards and guidance versus use of mandatory gas protection measures in coalfield areas*
- *The role of uncertainties including groundwater rise, climate change effects and cumulative development*
- *Implications for planning and building standards, bolstering local authority expertise and the need for supplementary guidance and research in this area.*

### **Francesca Giancomello**

*Francesca Giacomello is an Environmental Engineer with 11 years' experience. She has worked in multidisciplinary teams on a wide range of projects which involving numerous developments and rehabilitation remediation schemes for UK water companies, land quality inputs on highway schemes in the UK and Italy, contaminated site projects on military sites for the US Air Force in Italy and UK, flood alleviation schemes and numerous environmental Impact assessments.*

*Francesca has been part of the Land Quality Team in Jacobs-Winnersh since 2019 as a senior geo-environmental engineer, previously she worked for other consultancies in UK and Italy working mainly within land quality teams. Currently she covers the role of land quality task lead for a PFAS research that Jacobs is undertaking and she is part of a Jacobs community on emerging contaminants which involves talks within a worldwide network of experts in the PFAS field.*

*Polyfluoroalkyl and perfluoroalkyl substances (PFAS) are a broad group of synthetic fluorinated organic chemicals which are extremely persistent in the environment. PFAS are used in a wide variety of consumer products and industrial applications because of their unique chemical and physical properties. Increasing awareness of the widespread presence of PFAS in environmental media and biota has heightened concerns about their potential risks to human health and the environment. Monitoring activities have detected PFAS in the environment and the production and use of PFAS in products has resulted in the contamination of drinking water supplies; therefore, PFAS management has become a topic of interest. During this presentation Francesca will give an overview of PFAS properties and usage and where these substances are likely to be used.*

## **Noise Technical Session**

### **Dr Oliver Bewes - Reducing noise as far as reasonably practicable: Delivering HS2s commitments relating to operational noise**

Oliver Bewes is the Head of Noise Assessment at High Speed Two. He is responsible for overseeing the delivery of HS2 policies relating to noise and vibration across all phases of the scheme. Oliver is a chartered engineer with 15-years' experience working in the field of noise and vibration control from transport infrastructure. He started in the industry as a research engineer working for a firm who manufacture components for railway track investigating noise radiation from railway bridges and viaducts and the design of railway track to control noise. He has since contributed to noise control in the planning and delivery on many major railway and transport projects such as the Docklands Light Railway, Thameslink, London Underground, Crossrail, High Speed Two and the Heathrow Expansion Project.

*High Speed Two has committed to reduce noise from the operational railway “as far as reasonably practicable”. Our main works contractors are currently preparing the civil engineering designs for the railway which include noise mitigation such as earthwork bunds and noise barriers. Oliver presentation will describe, using examples of recently approved noise mitigation designs, the design processes implemented by our contractors to deliver this commitment which takes into account noise and other non-acoustic factors such as the cost effectiveness of noise mitigation, engineering practicability, impact on other environmental disciplines (such as landscape and visual impact) and stakeholder considerations*

### **George Gibbs - Environmental Noise after Covid-19: Issues and Opportunities**

George is an Associate Director at Noise Consultants Limited (NCL). He is a Chartered Engineer and has over 13 years' experience in acoustics, noise and vibration prediction, measurement and assessment. George started his career working in Local Authority as part of an environmental protection team, moving to a multidisciplinary engineering consultancy in 2009 before joining Noise Consultants Limited in 2018. George has experience providing expert noise and vibration advice for projects across multiple sectors including wind development; nuclear new build; transportation; residential new-build; military; airport expansion; mineral extraction; and waste and recycling. George's most recent roles, including as Baseline Lead for the Heathrow Expansion Project, have looked to integrate strategic noise mapping as a pivotal factor in the in the assessment and evaluation of environmental effects. Developments in this area led to the creation of the NCL's Site Suitability Indicator (SSI).

*Strategic noise maps are a requirement of the Environmental Noise Directive, and have been used by transport authorities, planners and academics to inform an understanding of noise and its impacts on health and quality of life. This paper is a discussion to explore how noise exposure data generated from strategic noise maps could be used to inform further environmental indicators, such as NCL's Site Suitability Indicator.*

### **Dr Antonio J. Torija Martinez - Environmental Noise after Covid-19: Issues and Opportunities**

Dr Torija Martinez is a Lecturer in Acoustic Engineering at the University of Salford and Visiting Fellow at the University of Southampton. In 2010, he obtained his PhD in Environmental Acoustics from the University of Granada (Spain). Dr Torija Martinez has been the recipient of a prestigious Marie Curie Fellowship, and from 2015 to 2019, he has been a Senior Research Fellow at the Institute of Sound and Vibration Research (University of Southampton).

Dr Torija Martinez is internationally recognised researcher with an excellent track record in the modelling of transportation noise (from road traffic to novel aircraft) and the assessment and management of community noise impact. He has published more than 30 papers in world-leading peer-reviewed journals, including Nature Energy, 44 papers in national and international conferences, 4 books/book chapters, and 1 patent (WO/2014/020213). Dr Torija has participated in several research projects funded by EPSRC, Innovate UK and industry.

*Dr Torija Martinez will focus on the recent coronavirus disease (COVID-19) pandemic, during which a significant part of the population has been under lockdown to maintain social distancing. Both commercial aviation and ground transportation have been severely restricted, which has led to important reductions in environmental noise levels. Some studies suggest a reduction of 8 decibels in ambient noise due to lockdown. This significant reduction in*

*transport related noise has changed urban soundscapes, making natural sounds more audible. This is an opportunity to work towards quieter and more pleasant urban soundscapes. For instance, protection of the population from transportation noise could be achieved by a long-term strategy on mobility, incentivising active travel (e.g. walking, cycling). This presentation will provide an overview of the main issues and opportunities for environmental noise after the coronavirus pandemic. Looking at the future, noise might become a limiting factor for the wider adoption of both air quality and decarbonisation interventions. This presentation will also discuss important research gaps for appropriately addressing these noise issues.*