Air Quality Expert Group Membership

Chairman

Professor Paul Monks, University of Leicester.

Specialism: atmospheric chemistry, long range and regional modeling.

Research interests include: the role of photochemistry in the control of atmospheric composition; chemistry and transport, particularly the impact of long-range transport on chemical composition; the feedback between climate and atmospheric chemistry; organic complexity and the control of regional pollution and the measurement of the chemical composition of the troposphere from space.

Professor Monks has made a number of contributions to the development of policy through the EU ACCENT S&I project as well as the Defra ROTAP processes.

Members

Dr David Carruthers, Cambridge Environmental Research Consultants

Specialism: modelling small scale atmospheric flows and local air pollution.

Research interests include: the structure of the atmospheric boundary layer with a focus on the influence of complex topography, urban environments, and the modelling and assessment of local air quality and micro-climate in these complex environments.

Dr David Carslaw, Kings College London

Specialism: transport as a source of air pollution, dispersion modelling, emissions inventories and mobile monitoring.

Research interests include: quantification primary nitrogen dioxide emissions from road traffic using ambient measurement data; the development of source apportionment approaches for urban air pollution and work to characterise the seasonal cycles of key atmospheric species.

Dr Chris Dore, Aether Ltd.

Specialism: Emissions and projections of air quality and greenhouse gas pollutants.

Research interests include: emissions inventory compilation, emission projections, reduction strategies, mitigation, abatement, emissions control. Dr Dore is Chair of the UN/ECE's Taskforce on Emission Inventories and Projections (TFEIP). He also has expertise in the areas air pollution measurement, monitoring networks, and deposition studies.

Professor Roy Harrison, OBE. University of Birmingham

Specialism: emissions characterisation (particularly for particulate matter), atmospheric chemical and physical processes, human exposure.

Research interests include: the use of chemical composition and molecular markers to infer the sources of airborne particulate matter; links between urban and ambient

particulate matter and health-particle metrics; characterisation of secondary organic aerosol; source apportionment of airborne particulate matter; composition, sources and properties of the organic component of urban airborne particulate matter.

Dr Mat Heal, University of Edinburgh

Specialism: atmospheric chemistry, particularly in relation to boundary layer composition and chemical processes and impacts of air quality on health.

Research interests include: Characterisation of airborne particulate matter, to determine its sources and atmospheric chemical evolution, and for application to epidemiological and toxicity studies; speciation of organic nitrogen compounds in rainwater and in the gas-phase; measurement of the magnitude and controlling factors on methyl bromide and methyl chloride fluxes in terrestrial systems; high resolution modelling of tropospheric chemistry, with particular focus on ozone and particulate matter.

Dr Mike Jenkin, Atmospheric Chemistry Services

Specialism: atmospheric chemistry, oxidant kinetics, degradation of pollutants, modelling.

Research interests: laboratory and chamber studies of the chemistry of air pollutants; development of atmospheric chemical mechanisms; refinement of tropospheric models and their application to science and policy issues; analysis and interpretation of primary and secondary air pollutant concentration data.

Professor Alastair Lewis, University of York

Specialism: atmospheric chemistry, composition, and environmental technology.

Research interests include: experimental observation and measurement; transport of photo-oxidants, composition of aerosols and particulate matter; emissions of persistent organic pollutants. Professor Lewis is the Director for Composition at the National Centre for Atmospheric Science (NCAS), and a theme leader for NERC guiding their strategic research programme.

Mr John Stedman, AEA Technology

Specialism: data analysis, pollution climate mapping and air quality policy analysis.

Research interests include: urban and rural air quality, air quality policy, pollutant mapping and assessment of the health benefits resulting from the measures proposed to improve air quality.

Professor Alison Tomlin, University of Leeds

Specialism: urban meteorology, combustion processes, emissions, and modelling.

Research interests include: modelling systems for predicting reactive air pollution dispersion both across the European region and within UK cities; urban atmospheric measurements of ozone, carbon monoxide, nitrogen dioxide and size dependant particulate concentrations and coupling these with analysis of local air and traffic flows in order to identify the causes of pollution hot spots; development of detailed combustion kinetic models which can be used to predict emissions of harmful pollutants from a range of combustion processes.

Professor Martin Williams, Kings College London

Specialism: Air quality science and policy

Research interests include: the application of atmospheric science to policy on air quality; the relationship between air quality and health; linkages between air quality and climate change; urban and regional air quality; ozone chemistry and modelling.

Professor Williams was the Deputy Director of the air quality programme in Defra responsible for air quality policy and research from 2005-2010. He is currently the Chair of the Executive Body of the UNECE Convention on Long Range Transboundary. He is lead author of policy section of the UNEP Assessment of Short Lived Climate Forcers.

Ex Officio member for the Central Management and Control Unit of the automatic urban and rural networks

Dr Richard Maggs is Practice Manager for the ambient air quality team at Bureau Veritas. He gained his PhD from Imperial College in 1996 having studied the impacts of air quality on agricultural crops in Pakistan, and having worked with the Punjab EPA to set up a number of pollution monitoring networks. After completion of his studies, Richard continued at Imperial College in the field of air quality where he researched the impacts of diesel particulates on lung-function at the National Heart & Lung Institute; the impacts of traffic management schemes on personal exposure to pollutants; and undertook a review on the critical loads of pollutants in relation to ecosystem changes in upland habitats. He specialises in the management of air quality networks and is current Project Director for the Central Management and Co-ordination Unit (CMCU) of the UK Automatic Urban and Rural Network. He has previously advised the Secretary of State on the efficacy of local authority action plans under the UK Local Air Quality Management regime.

Ex Officio member for the National Atmospheric Emissions Inventory

Dr Tim Murrells has over 25 years' experience in the areas of emissions inventories, transport emissions, air pollution and combustion and atmospheric chemistry at Ricardo-AEA. He is Technical Director of the UK's National Atmospheric Emissions Inventory and Greenhouse Gas Inventory Programmes for the Department of Environment, Food and Rural Affairs and the Department of Energy and Climate

Change. Tim specialises in emissions from the transport sector. He graduated with a PhD in physical chemistry at Queen Mary College, University of London and has undertaken laboratory research into atmospheric chemistry at the University of Colorado and NOAA laboratories in Boulder Colorado, before starting his career as a research chemist and then environmental consultant at AEA Technology.

Ex Officio member for the particle characterisation networks

Dr Paul Quincey is a Principal Research Scientist in the Analytical Science Division in the National Physical Laboratory. He joined NPL from Oxford University in 1986 with a background in physics and materials science, moving into the Environmental Standards Section in 1994. He currently oversees the scientific quality of the Black Smoke Network and the Particles Network for Defra. He is also responsible for scientific work within DBIS's National Measurement System covering airborne particle measurements, including nanoparticle characterisation and elemental carbon / organic carbon (EC/OC), with associated work within European projects and standardisation committees.

Ex Officio member for the Quality Assurance and Quality Control of the automatic urban network and the Non-automatic monitoring networks

Paul Willis is currently AEA Knowledge Leader for Automatic Air Monitoring and Public Information projects. He has an MA in Natural Sciences from Cambridge and has worked for over 20 years in Air Quality, initially at Warren Spring Laboratory and then at AEA. Paul has a background in atmospheric chemistry, and extensive knowledge of both air quality policy and the practical aspects of air quality monitoring, data analysis and reporting.

Paul provides technical input for many projects including: QA/QC of the UK Automatic Urban and Rural Air Quality Monitoring Network, UK Air Pollution Forecasting, the UK-AIR database and website, measurement and reporting of Stratospheric Ozone. Paul's other skills include interpretation of air pollution episodes and collaborating with other European experts on e-reporting and air quality forecasting systems.