

# NET ZERO 2023 AMBASSADORS' DAY

## Strategic Elements & Critical Materials

19 January 2024 | Birmingham Centre for Strategic Elements and Critical Materials, University of Birmingham  
<https://ambassadorsday.org>

Chair of the Day: Sebastian Munden, Chair, WRAP



08.30 – 09.00 Registration and Morning Refreshments

09.00 Opening/ Organiser and Host Welcome

**09.00 – 10.30 Critical Materials for the energy transition - Birmingham Centre for Strategic Elements and Critical Materials:**

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AND CRITICAL MATERIALS**

09.10 Why are Materials Critical to the Net Zero transition by **Dr. Gavin Harper**, Critical Materials Research Fellow, UKRI Interdisciplinary Centre for a Circular Economy in Technology Metals & Faraday Institution ReLIB Project & EPSRC TReFCo Project

09.25 Rare Earth Permanent Magnets: From Off-Shore Wind to Electric Motors, Driving the Electric Revolution by **Prof. Allan Walton BSc**, PhD, Professor of Critical and Magnetic Materials, Co-Director of the Birmingham Centre for Strategic Elements and Critical Materials

09.40 What does it take to deliver Zero Emissions Personal Transport by **Prof. Paul Anderson**, Professor of Strategic Elements and Materials Sustainability in the School of Chemistry at the University of Birmingham, and Director and founder of the Birmingham Centre for Strategic Elements and Critical Materials

09.55 Solving the Criticality Challenge through alternative Future Battery Chemistries by **Prof. Emma Kendrick BSc**, MSc, PhD, CChem, FIMMM, FRSC, Professor of Energy Materials, School of Metallurgy and Materials, group lead for the Energy Materials Group, University of Birmingham

10.10 Market Failure: Policy and Legislation Challenges by **Prof. Aleks Cavoski**, Professor of Environmental Law, College Director of Global Engagement, Birmingham Law School, editor-in-chief of the journal Environmental Law Review

**10.30 – 11.30 Panel Discussion: Critical Materials and Net Zero in Value Chain, Supply Chain, Manufacturing**

- Making critical materials value chain sustainable: from mining to production
- Creating sustainable future supply of commodities
- Holistic integration of Net Zero into supply chain
- Mitigating salient risks in supply chain
- Incentivising action among suppliers
- Collaborating with competitors on Net Zero transition: defining the scope, creating supply chain, ensuring adequate supply and demand of greener products and services and ensuring fair standards
- Role of regulations in managing behaviours along the supply chain
- Effective ways of tracking the data along value chain
- Developing comprehensive circular economy for mining and waste
- Green production and manufacturing for circularity
- Sustainable and promising innovation in manufacturing, lifecycle extensions
- From targets to action
- Using responsibly sourced and easily recyclable materials

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### Panelists:

**Dr. Nigel Steward**, Chief Scientist, Development & Technology, Rio Tinto

**Sarah Gordon**, CEO, Satarla

**Jeremy Wrathall**, Founder & CEO, Cornish Lithium

**Cathy Davis**, Technology & Innovation Sustainability Director, BAE Systems

**Neil Glover FEng CEng FIMMM**, IOM3 President and Head of Materials Research, Rolls Royce

11.30 - 11.50 *Networking refreshment break (20 mins)*

11.50 – 12.50 **Critical Materials in consumer products and impact on environment**

### Expert presentations and talks from:

**Dr. Karen Hanghøj**, Director, British Geological Survey

**Prof. Richard Herrington**, Head of Earth Sciences, Natural History Museum

**Roberto Magalotti**, Principal Research Engineer, Bowers & Wilkins

**Jon Godfrey**, Director, Intelligent Lifecycle Solutions

12.50 – 13.40 *Networking Lunch (50 mins)*

13.40 – 14.20 **Panel Discussion: Critical Materials in Electric Transport**

### Panelists:

**Ian Howells**, Executive Vice President EMEA, Honda Motor Europe Ltd.

**Dr Christian Marston**, Co-Founder, Chief Technology Officer, Altium

**Chris Gall**, Group Engineering Director, Alexander Dennis Limited

14.20 – 15.00 **Net Zero lessons from other industries**

- Effective lessons for reducing scopes 1, 2, 3

### Presentations with Q&As:

**Greg Slater**, Head of Design, Decarbonisation & Environment, Treveth Holdings LLP

**Oscar Benjamin**, Head of Sustainability, Brompton Bikes

15.00 – 16.00 **Panel Discussion: Improving Circularity in Critical Materials**

- Regulations for Waste Electrical and Electronic Equipment
- Maximising the value and use of resources whilst minimising waste and moving towards a more circular economy
- Identifying pathways for technology circularity

### Panelists:

**Margery Ryan**, Industrial Market Research & Strategy Manager - Platinum Group Metals, Johnson Matthey

**Keith James**, Head of Policy & Insights, WRAP

**Dr Usama Attia**, Technology Manager, Materials Technology Department, Programme Lead, Circular Materials, Manufacturing Technology Centre

**Alexander Thompson**, Innovation Project Manager, European Metal Recycling

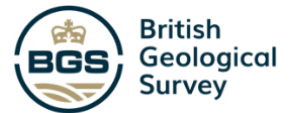
**Professor Robert Lee**, Professor of Law, Birmingham Law School

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16.00 - 16.30    *Networking refreshment break (30 mins)*  
16.30            End of Day

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