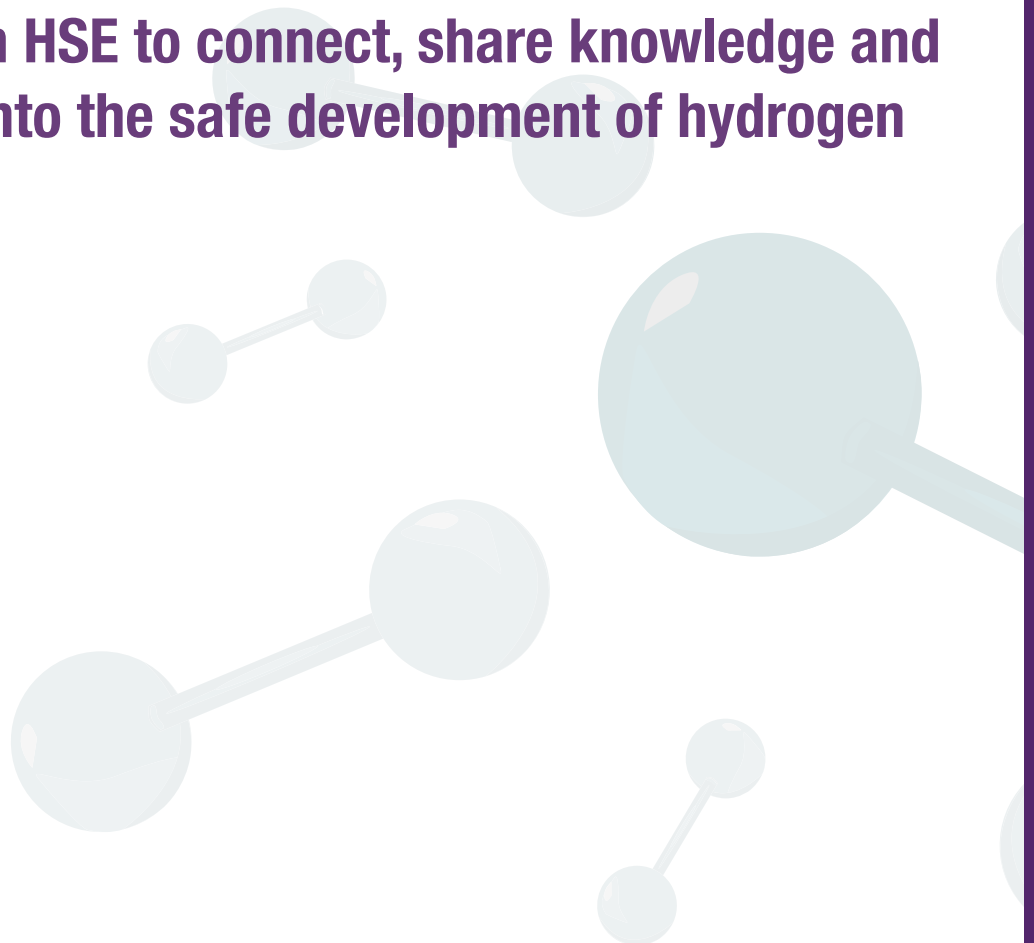


# **Safe Net Zero 2023 - Hydrogen**

**21 - 22 March 2023 - QEII Exhibition Centre, London**

## **EVENT PROGRAMME**

**An event from HSE to connect, share knowledge and gain insight into the safe development of hydrogen technologies**



# WELCOME

Welcome to Safe Net Zero 2023 – Hydrogen!

It gives me tremendous pleasure to welcome you back, not only because it's our fourth event looking into the safe development of hydrogen technologies, but also because we're back together again in person.

When we last convened in 2021, we were online and although the event was a huge success, attracting over 3000 live viewers from around the world, there's nothing quite like being in the room, especially when it comes to making new connections that are so vital for collaborative working.

Over the next two days I look forward to meeting and talking with as many of you as possible, as well as hearing from all our speakers about the progress that's being made in advancing hydrogen technologies.

Indeed since our last event, so much has changed. We're now seeing real growth in interest in aviation, the amazing work being done around the industrial clusters, and the progress and collaboration that is happening internationally.

Focusing back on the UK, much is happening too. Two years ago, the Ten Point Plan set out how the UK aimed to respond to the climate emergency and committed us to be the first country to commit to achieving net zero status by 2050.

The latest strategy, the British Energy Security strategy published last year, doubles the UK's previous ambition for hydrogen production from 5GW to 10GW by 2030, and recent moves to create a government department dedicated to net zero and energy security now consolidates the need for clean, green energy with the need for security of supply.

And while there is absolutely no question that the climate emergency is still the most important driver for urgent change, securing energy supply adds further impetus to the need to develop cleaner, greener and reliable sources of energy, quickly but safely.

All these developments remind us we must remain agile in our approach, but at the same time stay alert to risk and ensure safety is considered at every step of the way, which is very much the aim of these two days of knowledge exchange, discussion and networking.

Thank you once again for supporting this event and I very much hope you enjoy the next two days.



**Stuart Hawksworth**

Head of HSE's Centre for Energy and Major Hazards

# PROGRAMME Tuesday 21 March 2023

Session 1: Welcome and Opening		
09:30	Welcome	<b>Stuart Hawksworth</b> , Head of Centre for Energy and Major Hazards, HSE
09:40	Keynote	<b>Sarah Newton</b> , Chair, HSE
09:55	HSE Net Zero Hub Overview	<b>Catherine Spriggs</b> , Net Zero Hub Programme Manager, HSE
10:15	Introducing the Science	<b>Stuart Hawksworth</b> , Head of Centre for Energy and Major Hazards, HSE
Break		
Session 2: Industrial Clusters and Hydrogen Production and Use Session Chair – Danielle Stewart, National Gas Transmission		
11:00	Project Union	<b>Danielle Stewart</b> , Project Director, Project Union, National Gas Transmission
11:15	HyNet - Hydrogen Production for Industrial Clusters	<b>David Parkin</b> , HyNet Programme Director, Progressive Energy
11:35	North East - Teesside Hydrogen Production Projects	<b>James Brocklebank</b> , Engineering Manager BP, Project Partner in the East Coast Cluster
11:50	FutureGrid	<b>Shaun Bosomworth</b> , Senior Delivery Engineer, FutureGrid, National Gas Transmission
12:05	The Outlook for the H2 Forecast	<b>Frank Ketelaars</b> , Operations Manager UK & Ireland, DNV
PANEL DISCUSSION		
LUNCH BREAK		
Session 3: Applications in Aviation Session Chair - Mark Eldridge, Element Materials Technology		
14:15	Decarbonising Aviation	<b>Mark Eldridge</b> , Director of Hydrogen, Element Materials Technology
14:30	Pathway to Aviation Decarbonisation	<b>Professor Simon Weeks</b> , Chief Technology Officer, Aerospace Technologies Institute
14:45	Regulating for Net Zero	<b>Helen Leadbetter</b> , Innovation Services Principal, Civil Aviation Authority
PANEL DISCUSSION		
Break		
15:40	Hydrogen Fuels in Aviation	<b>Professor Sarah Sharples</b> , Chief Scientific Adviser, Department for Transport
16:00	Hydrogen in Design	<b>Adam Harris</b> , Global Head of Test Facilities Engineering, Rolls-Royce <b>Adam Newman</b> , Chief Project Engineer – Aviation Futures, Rolls-Royce
16:20	Designing for Hydrogen	<b>Dave Pace</b> , H2 Fuel Test Strategy, Airbus <b>Abrar Bajwa</b> , Hydrogen Expert, Airbus
PANEL DISCUSSION		
Networking Reception Hosted by Ricardo		

# PROGRAMME Wednesday 22 March 2023

Session 1: International Hydrogen Safety Projects Session Chair – Stuart Hawksworth, HSE		
09:00	Welcome	<b>Stuart Hawksworth</b> , Head of Centre for Energy and Major Hazards, HSE
09:10	The Work of HySafe	<b>Nick Smith</b> , President, International Association for Hydrogen Safety, HySafe
09:25	Liquid Hydrogen Safety Research	<b>Thomas Jordan</b> , Head of Research Group, Karlsruhe Institute of Technology, Project Partner in ELVHYS
CONVERSATION WITH SPEAKERS		
Break		
Session 2: Applications in Marine Session Chair – Dr Nigel Holmes, Scottish Hydrogen and Fuel Cell Association		
10:40	Chair's Introduction to Maritime	<b>Dr Nigel Holmes</b> , Chief Executive Officer, Scottish Hydrogen and Fuel Cell Association
10:50	Regulating Liquid Fuels in Maritime	<b>Gwilym Stone</b> , Deputy Director Regulations and Standards, Maritime and Coastguard Agency
11:05	Hydrogen Highways	<b>Derek McGlashan</b> , Head of Environment, Port of London Authority <b>George Skinner</b> , Project Manager, Port of London Authority
11:20	Safety Considerations for Hydrogen as a Marine Fuel	<b>Samie Parkar</b> , Decarbonisation Risk Specialist, Lloyds Register
PANEL DISCUSSION		
LUNCH BREAK		
Session 3: Liquid Fuels and Systems Session Chair – Dr Nigel Holmes, Scottish Hydrogen and Fuel Cell Association		
13:20	Chair's Introduction to Liquid Fuels and Systems	<b>Dr Nigel Holmes</b> , Chief Executive Officer, Scottish Hydrogen and Fuel Cell Association
13:35	The Role of Ammonia as a Hydrogen Carrier	<b>Henrik Solgaard Andersen</b> , Global Vice President for Low Carbon Solutions, Equinor
13:50	HyRes and Hi-ACT	<b>Professor Joan Cordiner</b> , HyRes Safety Team Lead, University of Sheffield
14:10	Cryo Fuels and LNG to LH2	<b>Yura Sevcenco</b> , Principal Hydrogen Consultant, DNV
14:30	Project Hii	<b>Dr Marcus Walls-Bruck</b> , Head of Hydrogen Technologies, National Composites Centre
PANEL DISCUSSION		
CONFERENCE END		

# SESSION CHAIR BIOGRAPHIES



**Dr Stuart Hawksworth**

Stuart leads HSE's Centre for Energy and Major Hazards and has over 25 years' experience in the area of major hazards, many of these focusing on the safety of hydrogen as an energy vector. Stuart is also the past President of the International Association for Hydrogen Safety; Task Leader in the European Hydrogen Safety Panel and advisor to the EPSRC Hydrogen and Fuel Cells Supergen Project.

**Sarah Newton**



Sarah Newton was appointed as chair of HSE in 2020.

Sarah has thirty years' experience of strategic planning, leadership and change management, dealing with complex issues across the business, voluntary and governmental sectors. She has considerable experience of building partnerships between diverse people and organisations to deliver shared aims. She has served on a wide range of boards and is currently a Non-Executive Director of the Royal Cornwall Hospitals NHS Trust.

Between 2010 and 2019 she was an MP and served for three years as a Member of the Science and Technology Select Committee before becoming a Minister in the Home Office and latterly at the Department of Work and Pensions, where she had the honour of working with the HSE and leading the Health and Work unit. Amongst other responsibilities while at the Home Office, she led work on tackling modern slavery, human trafficking and human exploitation.

Before entering the House of Commons, she was Director of the International Longevity Centre - UK, Age Concern England and American Express Europe. She also served as a Councillor in the London Borough of Merton.



**Dr Danielle Stewart**

Danielle is responsible for the development and delivery of National Gas Transmission's hydrogen strategy and infrastructure development programmes. Danielle has 12 years' broad energy sector experience and contributes to multiple collaborative UK and European innovation programmes for a clean energy transition. Danielle is a chartered engineer, holds a PhD in Physics and an MBA from the University of Warwick, and has won several industry awards.

### Dr Mark Eldridge



**Dr Mark Eldridge is Director of Hydrogen for Element Materials Technology and is responsible for leading the hydrogen initiatives and evolving matrix organisation across the group.**

**Prior to joining Element, Mark led the UK energy business of Kiwa as Divisional Director for their global hydrogen focus and has worked in aerospace with GKN and across the steel industry.**

**Mark holds a PhD in Welding Metallurgy and has worked closely within the materials testing industry for over 20 years in various technical, operations and senior leadership roles.**

**Enabling the hydrogen economy and supporting energy transition through materials expertise are his primary drivers.**

### Nigel Holmes



**Nigel Holmes has been a member of the Scottish Hydrogen and Fuel Cell Association (SHFCA) since 2005, and became Chief Executive Officer of SHFCA in April 2011. Over the past ten years he has trebled the SHFCA membership and has established SHFCA as one of the most proactive H&FC industry associations in Europe.**

**SHFCA is recognised as one of the most proactive hydrogen and fuel cell industry associations in Europe. SHFCA now has more than 130 members, with an increasing number from across Europe and overseas and want to become more involved in Scotland.**

**In May 2019 the Scottish Government announced the ambition to become Net Zero by 2045. This further reinforces Scotland as one of the leading locations in Europe for deployment of hydrogen and fuel cell solutions into developing low carbon energy systems. Highlights include the expanding hydrogen bus fleet in Aberdeen, local hydrogen energy solutions in Orkney, along with many other innovative projects such as Acorn in St Fergus and the proposed H100 development at Methil.**

**These projects in locations including North-East Scotland, Fife, the Western Isles, and the Orkney Islands are leading the way and 'learning by doing'. SHFCA's proactive approach involves events and networking activities which build the understanding and connections which help to identify and progress these opportunities for the development and deployment of low carbon technologies. SHFCA is particularly keen to engage with locations and projects which are leading the way with a 'learning by doing' approach, and who are similarly willing to share best practice and experience.**

**[www.shfca.org.uk](http://www.shfca.org.uk)**

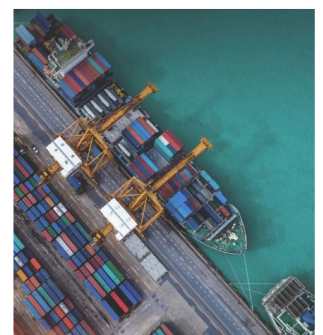
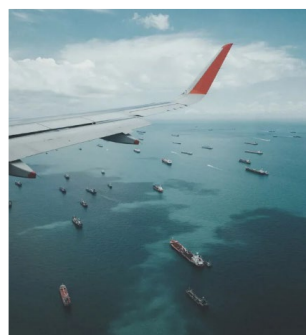
# EVENT SPONSOR



Ricardo plc is a global strategic, environmental, and engineering consulting company, listed on the London Stock Exchange. With over 100 years of engineering excellence and close to 3,000 employees in more than 20 countries, we provide exceptional levels of expertise in delivering innovative cross-sector sustainable outcomes to support energy transition and scarce resources, environmental services together with safe and smart mobility.

Our global team of consultants, environmental specialists, engineers and scientists support our customers to solve the most complex and dynamic challenges to help achieve a safe and sustainable world.

We are working with governments and industry to deploy hydrogen as a key enabler in achieving net zero targets. Our expertise means we are well placed to guide customers looking to hydrogen to safely decarbonise challenging energy or transport applications.



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# EVENT EXHIBITOR

## BESPOKE RESEARCH AND CONSULTANCY FROM



HSE's Safe Net Zero solutions integrate health and safety into the development and deployment of the new and novel technologies underpinning the UK's decarbonisation activities.

We combine our regulatory insight, our world class science and engineering capabilities and our experience, learned from over a century of accident analysis, process safety development and major accident hazard and risk management, and apply it to the deployment of new technology, or novel use of existing technology, with the aim of making the transition to net zero as safe as possible, as fast as possible.

### Contact us for help with new energy technologies

If your business is based in the energy sector and you'd like to benefit from HSE's expertise to design in health and safety for new and innovative energy technologies, please contact:

<https://solutions.hse.gov.uk/safe-net-zero>



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6 ENGINEERING

Net Zero future should mean Zero incidents and harm. As a specialist process and functional safety engineering consultancy, 6 Engineering help clients reduce their risk exposure by avoiding major accident hazards. We assist throughout the full process safety lifecycle delivering HAZID, HAZOP and LOPA leadership, SIL calculations and ALARP demonstration.

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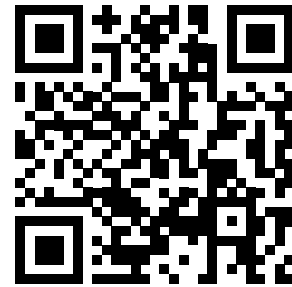
To find out more about HSE's Safe Net  
Zero solutions, visit [solutions.hse.gov.uk](https://solutions.hse.gov.uk)

# TRAINING AND EVENTS FROM



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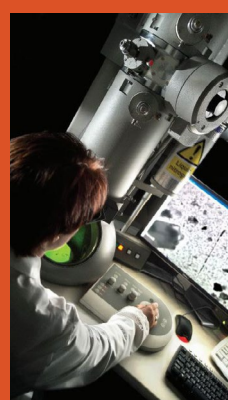
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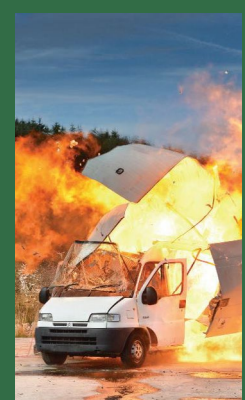
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