

# HSE contributes to award-winning hydrogen safety research in aviation sector

The Health and Safety Executive (HSE) has played a key role in a major research project that has been recognised with a national award for innovation in sustainable transport.

The research project focused on critical safety research to support the safe deployment of hydrogen in aviation taking place over a three-year period between 2022 and 2025.

Project ZEST (Zero Emission Sustainable Transport), led by Airbus, received the 'Shaping the Future' award at the Aerospace Technology and Innovation Conference 2025 on 5 November.

HSE has been at the forefront of hydrogen safety research for more than two decades. It is 21 years since it was a founding member of HySafe, the European network of excellence supporting the safe introduction of hydrogen technologies.

As part of Project Zest, HSE carried out key experimental work to understand the risks associated with technologies for potential future hydrogen use.

Professor Stuart Hawksworth, Head of the Centre for Energy and Major Hazards at HSE's Science Division, said:

"This award confirms the key role we play in leading research into the safe deployment of hydrogen. The Health and Safety Executive continues to drive international collaboration and publish influential research in this area."

HSE's work spans multiple sectors, from supporting the gas industry to assess hydrogen safety in infrastructure, to contributing to aviation research through the Aerospace Technology Institute's (ATI) FlyZero programme. As founding members of the International Association for Hydrogen Safety and contributions to activities such as Research Priorities Workshop, HSE has helped set global expectations for research and collaboration.

The ZEST project builds on this legacy, reinforcing HSE's commitment to advancing hydrogen safety as technologies evolve. HSE supported the Zest project working in collaboration with partners including Trelleborg, Senior Aerospace, Cranfield University, Warwick Manufacturing Group, Manchester Metropolitan University, the Universities of Bath and Strathclyde, and London South Bank University.

## **Notes to editors:**

1. [The Health and Safety Executive](#) (HSE) is Britain's national regulator for workplace health and safety. We are dedicated to protecting people

and places, and helping everyone lead safer and healthier lives.

2. The Aerospace Technology & Innovation Conference is an annual event showcasing advancements in aerospace research and development.
3. For more information on HSE's work on hydrogen safety, visit [www.hse.gov.uk](http://www.hse.gov.uk).

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## **Stove manufacturer fined £200,000 after employee loses leg**

- Worker suffered life-changing injuries.
- There had been a similar incident at the company in 2021.
- Company fined £200,000 and ordered to pay full prosecution costs.

A manufacturer of wood-burning stoves on the Isle of Wight has been fined £200,000 after an employee had his lower leg amputated following crush injuries caused when heavy metal sheets fell on him.

The man was working for A J Wells & Sons Ltd in Newport, when the incident happened on 15 August 2023. He had been moving a trolley loaded with approximately 30 pieces of sheet metal, each weighing more than 20kg, when it toppled over and fell onto his legs. His lower right leg was later amputated as a result of the injuries he sustained.



Trolley used to move large metal sheets, similar to that involved in the incident

An investigation by the Health and Safety Executive (HSE) found that the work was not being carried out safely. Failures included the use of a trolley that was not suitable for transporting such loads, unclear routes throughout the factory for moving trolleys, and inadequate training for employees in the safe movement of heavy materials.

HSE also identified that a similar incident had occurred in November 2021,

yet the task of moving heavy sheet metal had still not been adequately risk assessed. As a result, a safe system of work had not been introduced. Had appropriate changes been made following the earlier incident, this life-changing injury could have been prevented.

Employers are required to assess work activities and identify suitable measures to ensure tasks can be carried out as safely as reasonably practicable. Work equipment must be suitable for its purpose and employees must receive appropriate training. Further guidance on the [Safe use of work equipment – Provision and Use of Work Equipment Regulations 1998 \(PUWER\)](#) can be found on HSE's website.

A J Wells & Sons Ltd, of Bishops Way, Newport, Isle of Wight, PO30 5WS, pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc. Act 1974. The company was fined £200,000 and ordered to pay £9,056 in prosecution costs at Isle of Wight Magistrates' Court on 25 November 2025.

HSE inspector Nicola Pinckney said:

"This is a particularly unfortunate case as lessons from a previous similar incident had not been learnt. This young man will be affected by this accident for the rest of his life and has to suffer the consequences of the company's failings.

"I hope this case serves to highlight to the industry the importance of ensuring health and safety is taken seriously and all parts of workers' employment are properly risk assessed, and risks are controlled."

This HSE prosecution was brought by HSE enforcement lawyer Matt Reynolds and supported by HSE paralegal officer Farhat Basir.

#### **Further information:**

1. [The Health and Safety Executive](#) (HSE) is Britain's national regulator for workplace health and safety. We are dedicated to protecting people and places, and helping everyone lead safer and healthier lives.
2. More information about the [legislation](#) referred to in this case is available.
3. Further details on the latest [HSE news releases](#) are available.
4. Relevant guidance can be found here [Safe use of work equipment – Provision and Use of Work Equipment Regulations 1998](#).
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# Shell UK fined £560,000 following major hydrocarbon release

A large offshore oil and gas company has been sentenced and fined £560,000 after failing to properly maintain pipework for seven years.

Pipework on Shell UK's Brent Charlie platform in the North Sea deteriorated to such an extent that contained hydrocarbon fluids escaped, forming a potentially catastrophic explosive and flammable mixture that could have ignited.

In addition to the release, ventilation fans designed to prevent, control or mitigate the effects of escaped hydrocarbon gas did not function properly as they were also not suitably maintained. This led to a large release of mixed phase crude oil and gas from the corroded pipework.

Aberdeen Sheriff Court heard on Tuesday 25 November 2025 how, on 19 May 2017, there was an uncontrolled hydrocarbon release incident from a Return Oil Line (ROL) pipework inside concrete leg Column 4 of the Brent Charlie offshore installation. The release involved 200kg of gas and 1,550kg of crude oil – the largest uncontrolled hydrocarbon release on the UK Continental Shelf reported to HSE in 2017.

The release placed over 170 platform personnel at risk from a potentially catastrophic fire and explosion had the escaping hydrocarbon gas ignited inside the concrete leg.

An HSE investigation found that deficiencies in Shell's safety management system led to the release. The ROL pipework in Column 4 was not properly maintained for several years. The pipework was installed for short-term use and was due to be removed in 2010 but remained in place for seven years, during which time it suffered corrosion damage. It failed on 19 May 2017 and a large volume of gas was uncontrollably released into the leg. Ventilation extract and supply fans designed to prevent and mitigate this major accident hazard were also inadequately maintained, which exacerbated the risk to the 176 people on the platform.

HSE were involved in the production of the Energy Institute's [Guidance for corrosion management in oil and gas production and processing](#), as well as several other topic-specific documents. Extensive guidance and resources for the oil and gas industry are available on HSE's website here [Offshore oil and gas – HSE](#).



Spool with the corrosion failure identified.

Shell UK Limited pleaded guilty to two charges under the Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995 (PFEER). Sheriff Ian Duguid, in his sentencing remarks, observed that Shell UK "ought to have recognised that the temporary carbon steel spool was not suitable for such a line and should have been replaced." After considering mitigating factors, Shell was fined £560,000.

Speaking after the hearing, HSE Offshore Health and Safety Inspector Dozie Azubike said: "At more than 1,750kg, Shell Brent Charlie's hydrocarbon release was the largest reported to HSE in 2017. This release occurred in a confined space with limited access – it is simply fortunate that no one was in the leg at the time, or they could have been asphyxiated from the hydrocarbon-rich atmosphere, quite apart from any fire and explosion risk."

"Although the offshore industry has managed to reduce its overall number of hydrocarbon releases, in most years there are still several which, if

ignited, would result in potentially catastrophic consequences.

“This case highlights the importance of oil and gas dutyholders reviewing their current management of change processes for temporary spools and their subsequent removal, strengthening inspection regimes to identify potential internal corrosion within pipework, and ensuring that inspection frequency of safety-critical equipment considers full analysis of the equipment’s maintenance history.”

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## **Fine for company after man seriously injured at wind farm**

- Incident happened at Tom Nan Clach Wind Farm near Inverness.
- Worker was seriously injured following electrical flashover.
- HSE guidance is available.

A wind farm management services company has been fined £80,000 after a worker was seriously injured by an electrical flashover.

Natural Power Services Limited had sent the then 38-year-old to carry out maintenance work in an electrical substation within the Tom Nan Clach Wind Farm, near Inverness on 23<sup>rd</sup> June 2020. His injuries resulted in him sustained life-changing injuries that have required multiple surgeries.

An investigation by the Health and Safety Executive (HSE) found that the incident happened following a departure from the prepared switching

programme. This meant work was allowed to be carried out on one of the two electrical cabinets while the other remained live, allowing part of the electrical system to be energised during the maintenance work.

The HSE investigation found that had the initial switching programme prepared by Natural Power Services Limited been correctly followed, the incident would not have occurred. The company did not have a suitable system or process in place to check or review switching programmes to ensure that the procedures were correctly observed at all times, or to approve any changes to the initial switching programmes.

Free guidance for employers is available on the HSE website, [hse.gov.uk](https://www.hse.gov.uk), about [electrical safety](#) and [managing health and safety](#).

Natural Power Services Limited pleaded guilty to breaching Sections 3(1) and Section 33(1)(a) of the Health and Safety at Work etc. Act 1974. The company was fined £80,000 at Inverness Sheriff Court on 25 November 2025.

Speaking after the hearing, an HSE spokesperson said: “This was a wholly avoidable incident caused by the failure of the company to implement a safe system of work.

“The company should have ensured there was a suitably rigorous process for checking and reviewing the work. This would have ensured those doing the work were adhering to switching programmes in a manner that was suitable and safe.

This would have been a reasonably practicable measure to address the risks arising from the subsequent introduction of additional parallel works that might interfere with the previously planned switching programme.”

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# Roofing company fined £16,650 after employee fell through skylight opening

- Employee sustained serious injuries after fall from height
- Company failed to implement safety measures for work at height activities
- Kingsley Roofing Contractors Limited fined £16,650

A Northampton roofing company has been fined £16,650 after an employee suffered serious injuries when he fell through a skylight opening.

Ryan Robinson, 31, was working for Kingsley Roofing Contractors Limited to recover a flat roof of single-storey extension at a domestic property on Sywell Road in Northampton.

Covers that had been installed over two large skylight openings had to be removed as part of preparation. Mr Robinson fell through one of these openings whilst removing material from the other, falling over three metres to the ground. His injuries required surgery and long-term treatment.

An investigation by the Health and Safety Executive (HSE) found that Kingsley Roofing Contractors Limited failed to properly plan work at height activities and implement measures that would have prevented their employees from falling through the skylight openings.

HSE guidance states employers must ensure that work at height is properly planned, appropriately supervised and carried out in a manner that is, so far as is reasonably practicable, safe. This means that control measures must be in place to prevent or protect from falls. In this case, a crash deck or safety netting under the openings would have prevented serious injury from occurring. Further guidance for working at height can be found at [Health and safety in roof work – HSE](#).

Kingsley Roofing Contractors Limited of Chartergate, Clayfield Close, Moulton Park, Northampton pleaded guilty to breaching Section 3(1) of the Health and Safety at Work etc Act 1974. The company was fined £16,650 and ordered to pay £7,205 in costs and £2,000 victim surcharge at Birmingham Magistrates' Court on 20 November 2025.

HSE Inspector, Chris Bennet, said: "Falls from height are the most common kinds of fatal accidents, accounting for over a quarter of fatal injuries to workers in 2024/25. This could be avoided through proper planning and implementation of effective controls.

"The fine imposed on Kingsley Roofing Contractors should underline to everyone in the construction industry that the courts, and HSE, take a failure to plan works at height extremely seriously. It is the duty of employers to ensure that everyone working on a building site returns home safely."

**Further Information:**

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2. More information about the legislation referred to in this case is available.
3. Further details on the latest HSE news releases is available.
4. Further relevant guidance can be found at [Roof work – HSE](#) and [Health and safety in roof work – HSE](#).
5. HSE does not pass sentences, set guidelines or collect any fines imposed. Relevant sentencing guidelines must be followed unless the court is satisfied that it would be contrary to the interests of justice to do so. The sentencing guidelines for health and safety offences can be found [here](#).