

HSE publishes new Science Review

A human cough simulator to test the effectiveness of face shield protection during the pandemic, reducing the risk of the transmission of COVID to delivery drivers and gas explosion tests in a life size replica house are just some of the studies scientists working for the Health and Safety Executive (HSE) have completed in the last 12 months.

All three are listed in HSE's annual science review, which has been published today.

Using real life work cases as examples, the publication focuses on ways science and evidence is being used to protect people and places, helping everyone lead safer and healthier lives.

The annual review illustrates the mix of activities that has helped to ensure that HSE's response to the Covid pandemic was informed by the best available evidence. In addition, it has also provided information that has helped HSE with evidence that was needed as an enabling regulator, and secure justice against those who breach the law.

This includes:

- Reducing work-related ill health: Investigation of COVID-19 in the workplace – outbreaks, mitigation measures, transmission – incorporating work from HSE's leadership of 'PROTECT' (one of the UK's National Core studies for COVID)
- Building Safety: Preliminary identification of potential serious incident scenarios for high-rise buildings
- Enabling industry to innovate safely: supporting the move towards net zero by supporting and enabling a safe transition to hydrogen in the existing gas network

The review also highlights the range of studies HSE scientists are working on to protect people and places by managing workplace health and safety risks and helping to maintaining Great Britain's record as one of the safest countries to work in.

This includes:

- Chemical regulation, enabling the safe and sustainable use of chemicals: Assessing the toxicity, hazards and risks of chemicals in order to protect human health, and new methods to monitor occupational exposure to chemicals
- Investigation of ignition of flammable mists
- Providing evidence to underpin effective working practices in the asbestos removal industry

The review shows how HSE brings people and organisations together, sharing

knowledge, expertise and data, to make a real impact on reducing death, ill health and injury.

This includes:

- A multi-centre European human biomonitoring study
- The future of health and safety in advanced manufacturing
- Developing a framework for socio-economic impact data management in India

HSE's Chief Scientific Adviser and Director of Research, Professor Andrew Curran, said: "I'm extremely proud that our scientists, engineers, analysts and clinicians have continued to deliver a world-class programme of work.

"This is aligned to the policy and regulatory needs of HSE to protect people and places and helps ensure that Great Britain is one of the safest places to work anywhere in the world."

The HSE Annual Science Review is available at [HSE – Science, engineering and evidence](#)

Notes to editors:

1. The Health and Safety Executive (HSE) is Britain's national regulator for workplace health and safety. We prevent work-related death, injury and ill health through regulatory actions that range from influencing behaviours across whole industry sectors through to targeted interventions on individual businesses. These activities are supported by globally recognised scientific expertise. www.hse.gov.uk
2. HSE news releases are available at <http://press.hse.gov.uk>

[Warehouse owner fined after worker falls 30 feet through skylight](#)

A Blackburn based warehouse owner has been fined after an employee of a roofing contractor Nizamuddin Gorji fell approximately 30 feet through a glass skylight on a warehouse roof resulting in severe life changing injuries.

Preston Crown Court heard that roofing contractor Nizamuddin Gorji was engaged by Floors 'n' Carpets Limited of Gate Street, Blackburn to over-clad the existing roof. Three operatives were employed to carry out the work which started on 13 May 2020. The following day, one of the employees, Taj Zahir fell through the roof sustaining serious injuries to his pelvis, arm, knee and face and has undergone extensive surgery since.

An investigation by the Health and Safety Executive (HSE) found that Floors

'n' Carpets Limited failed to undertake due diligence checks on the roofing contractor's documents and ensure a construction phase plan was prepared prior to work commencing. Nizmuddin Gorji previously pleaded guilty to failing to adequately plan the work and provide coverings or underslung nets to prevent or mitigate a fall through the fragile roof. He had not completed any health and safety training and did not adequately train the operatives he employed.

Floors 'n' Carpets Ltd of Gate Street, Blackburn pleaded guilty to a breach of Regulation 4(1) of the Work at Height Regulations 2005 and was fined £96,000 and ordered to pay costs of £36,919.75

Speaking after the hearing, HSE inspector Jackie Western, said: "The risks from working at height are well known. Those with control of work at height have a duty to ensure safe methods of working, which should include ensuring the use of suitable work equipment and adequate supervision."

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2. More about the legislation referred to in this case can be found at: [hsg33.pdf \(hse.gov.uk\)](http://hsg33.pdf(hse.gov.uk)) [Construction – Fragile surfaces industry health & safety \(hse.gov.uk\)](http://Construction – Fragile surfaces industry health & safety (hse.gov.uk))

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Solvay Derbyshire named winner of Risk Reduction Through Design Award 2022

Solvay Derbyshire has triumphed at this year's Risk Reduction Through Design Awards for its innovative solution that helps protect workers from developing musculoskeletal disorders (MSDs).

The chemical engineering and manufacturing specialists

won the prestigious award after overcoming stiff competition from innovators across a wide range of sectors.

The Risk Reduction Through Design Award 2021/22, sponsored by The Health and Safety Executive (HSE) and [Chartered Institute of Ergonomics and Human Factors \(CIEHF\)](#), recognises design innovation to reduce the risk of MSDs. MSDs include injuries and conditions that can affect the back, joints and limbs.

Winning company, Solvay Derbyshire, worked with designer Haviland Industrial Ovens to develop an innovative design solution for loading of resin mixing bowls into a warming oven.

Previously, two workers lifted 38kg mixing bowls containing resin up to 48 times per shift. They did this from a trolley at ground level into and out of the warming oven at the front of the resin film coating production line. This activity involved manually handling the resin mixing bowls and was identified by the company as a significant ergonomic risk.

The winning design replaced the high-level oven with a floor-level one. A bespoke trolley with a removable handle was designed, allowing the resin bowls to be wheeled directly into the new oven, eliminating the need to lift the bowls and reducing the manual handling risks. There are also fewer risks of resin spills and contact with the hot oven. The new design only requires one person to carry out the task, increasing productivity.

Head of HSE's Health and Work Branch and chair of this

year's judging panel Ali Wellens said: "We would like to congratulate Solvay Derbyshire for their efforts to reduce the risks of MSDs in the workplace.

"The Risk Reduction Through Design Award is intended to highlight the important contribution that design changes can make in reducing risks of musculoskeletal disorders. This year, we were thrilled to receive so many innovative designs from businesses across a wide range of industries. The high volume of entries demonstrates some of the great work businesses are doing to protect their workers' health.

"MSDs are a significant risk to workers' health and we urge all businesses to consider how they could make design changes to eliminate or reduce the risks in their workplaces."

Solvay Derbyshire, was proud to receive the Risk Reduction Through Design Award in recognition of their work to reduce MSDs in the workplace.

A spokesperson for Solvay Derbyshire said: "The team at Solvay Heanor are delighted to have won this award and accept it on behalf of all the people involved with the problem solving process that effectively dealt with a significant ergonomic issue.

"We continue to strive to eliminate or reduce the risks associated with manual handling tasks on site."

The award was presented at the CIEHF's annual (virtual) awards ceremony on the 17 June 2022.

Commendations were given to two further entries to the awards. Airbus Operations Limited received a commended entry for their design for the assembly of A350 aircraft wing outer trailing edge. British Wool were also commended for their solution for transporting and weighing of 'wool sheets'.

Iris Mynott, Membership & Partnership Manager of the Chartered Institute of Ergonomics & Human Factors said: “We are delighted to collaborate with HSE on these awards to recognise innovation that can make a significant contribution to life, wellbeing and performance.

“Congratulations to our winner and two commended entries and thank you to everyone who entered.”

Notes to Editors:

For more information on the award winner and commended entries visit: <https://www.hse.gov.uk/msd/awards.htm>

More information about Chartered Institute of Ergonomics and Human Factors (CIEHF) can be found here: <https://ergonomics.org.uk/>

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Demolition company fined after fall from height fatality

A dismantling and demolition company has been fined after a worker fell 30 feet to his death when part of a pipe bridge platform gave way.

Kirkcaldy Sheriff Court heard that John Gary Robertson, known as Gary Robertson, employed by CBR02 Limited (formerly known as Brown and Mason) suffered multiple injuries following a fall from height at Longannet Power Station, Fife on 6 February 2019.

A joint investigation by the Health and Safety Executive and Police Scotland into the incident found that the section of metal grating on the pipe bridge which the deceased had been standing gave way under his weight, as it had been extremely corroded. By failing to record the extremely hazardous condition of the pipe bridge the Company failed to undertake a suitable and sufficient risk assessment. In particular, the risk assessment, which formed part of the final, revised method statement, did not address the severely corroded nature of the pipe bridge, despite that being previously highlighted and requested by the client, Scottish Power. The Company failed to put necessary control measures in place, to inform employees of the hazardous condition of the pipe bridge, and to prevent access to it.

CBR02 Limited of Hertford Road, Middlesex pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc Act 1974. The company has been fined £5,000.

Speaking after the case HSE principal inspector, David Charnock, said: "Falls from height remain one of the most common causes of work-related fatalities in this country and the risks associated with working at height are well known.

"In this case, adequate communication of suitable information and instructions would have made employees aware of the unsafe condition of the pipe bridge platform."

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2. More about the legislation referred to in this case can be found at: www.legislation.gov.uk/
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Company and director fined after worker sustained life-changing injuries

A manufacturer of concrete architectural elements and garden ornaments, and its director, have been fined after an employee sustained life-changing injuries when his arms became trapped in a cement mixer.

Nottingham Crown Court heard that on 8 August 2018, the employee was using the cement mixer at the company's premises on Nottingham Road, Alferton, to prepare the concrete mix for the ornamental castings. The employee attempted to stop the machinery to retrieve something from the mixing pan. However, when he reached inside, his arms came into contact with the mixing paddles, and he was dragged almost entirely into the mixer. He managed to pull himself out but was seriously injured. As a result of the incident his left arm was amputated at the upper arm level and his right arm had to be amputated at the mid forearm. He also sustained injuries to his ribs, face, back and shoulders.

An investigation by the Health and Safety Executive (HSE) found that David Sharp Studio Limited had failed to take sufficient steps to guard against the risks of entrapment and injury posed by the cement mixer. The employee had been exposed to the risk of serious injury by requiring him to operate the mixer with the lid open whilst standing next to it. There was a failure to provide guards or to interlock the operation of the mixer in order to reduce the risk of accidental entrapment or foreseeable misuse. There was also a failure to train, instruct and supervise the employee to ensure that he was aware of, and followed, safe procedures for working on or near the mixer whilst it was in operation. The HSE investigation also established that the company Director, David Sharp, was aware of the unsafe conditions and allowed them to continue.

David Sharp Studio Limited of White House, Clarendon Street, Nottingham, pleaded guilty to breaching Regulation 11(1) of the Provision and Use of Work Equipment Regulations 1998. The company was fined £1,000.

David Sharp, also of Clarendon Street, Nottingham, pleaded guilty to a charge under Section 37 of the Health and Safety at Work etc. Act 1974. He was fined £2,000, disqualified from being a company director for seven years and ordered to pay full costs of £30,802.35.

HSE principal inspector Samantha Farrar said: "This incident could so easily have been avoided by simply providing effective guarding to prevent access to dangerous parts of machinery.

"Companies and individuals should be aware that HSE will not hesitate to take

appropriate enforcement action against those that fall below the required standards.”

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2. More about the legislation referred to in this case can be found at: www.legislation.gov.uk/
3. HSE news releases are available at: <http://press.hse.gov.uk>
4. Further guidance on machinery safety can be found at: [Why is machinery safety important? \(hse.gov.uk\)](http://www.hse.gov.uk/machinery/safety-important/)