

HSE is proud to publish this year's Annual Science Review: 'COVID-19: Collaboration in a time of crisis'

HSE's Annual Science Review 2021 has been launched, focusing on ways science and evidence is being used to prevent death, injury and ill-health in Great Britain's workplaces.



The Review illustrates how our robust scientific evidence has been supporting the government's response to the pandemic. We look at HSE's contribution to the evolving global evidence base and the routes we have used to share that knowledge, including:

- Work to support the rapid increase in supply of suitable PPE to the NHS front line
- Biosafety training in relation to COVID-19, including for workers handling bulk quantities of live virus for vaccine research
- Enabling additional hand sanitisers to reach the market quickly
- Developing an understanding of transmission through computational fluid dynamics simulations.
- Supporting and informing the Scientific Advice to Government in Emergencies (SAGE) response to COVID-19

The review also highlights the range of studies HSE scientists are working on to support healthy and safe work in Great Britain, including:

- The safe introduction of hydrogen technologies and supporting the UK target to achieve net zero emissions
- Assessing the evidence for safe levels of exposure to toxicological hazards
- The evidence supporting an award-winning campaign that reduced the risk

of Legionnaires' disease outbreaks

- Supporting industry on a commercial basis, such as using our world class experiment facilities to test the heat resistance of components for jet engines

HSE's Chief Scientific Adviser and Director of Research, Professor Andrew Curran, said:

"We are proud of the impact our science has had on keeping people and work environments healthy and safe.

"It is difficult to pick any particular highlights. However, in terms of sheer scale, I am particularly impressed by the work our technical experts have been doing to ensure that any personal protective equipment that enters the supply chain in Great Britain will protect the person who wears it.

"During these difficult times, it is easy to forget that many businesses continued to operate with COVID-secure measures in place.

"While Great Britain remains one of the safest places to work in the world, unfortunately workplace incidents have still occurred. We have continued to carry out forensic incident investigation, having ensured that our science and research facility in Buxton is COVID-secure."



HSE's Buxton Science and Research Facility from the Air

The HSE Annual Science Review is available at
<https://www.hse.gov.uk/research/review.htm>

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. [hse.gov.uk](https://www.hse.gov.uk)
2. More about the legislation referred to in this case can be found at: [legislation.gov.uk/](https://www.legislation.gov.uk/)
 3. HSE news releases are available at <http://press.hse.gov.uk>
 4. HSE is a scientific and evidence based organisation and employs over 850 scientists, engineers, physicians and analysts. It is recognised as one of the world's leading providers of health and safety solutions to industry, government and professional bodies.
 5. HSE Annual Science Review are available here: <https://www.hse.gov.uk/research/review.htm>
 6. Follow HSE Science on twitter @CSA_HSE

The post [HSE is proud to publish this year's Annual Science Review: 'COVID-19: Collaboration in a time of crisis'](#) appeared first on [HSE Media Centre](#).

[Woodworking company fined after worker suffered multiple leg injuries](#)

Arnold Laver & Company Ltd have been sentenced for safety breaches after a worker was struck by objects falling from an articulated trailer.

Bradford Magistrates' Court heard that on 24 July 2019, the 45-year-old worker had been unloading the bottom deck of the double deck articulated trailer, which was being used for overflow storage at the company's Manningham Sawmill site in Canal Road, Bradford.

An investigation by the Health and Safety Executive (HSE) found that the trailer was being used to store mainly composite decking on the lower deck. The upper deck contained packs of MDF architrave, timber stock, and various promotional materials.

Another operative needed to place a pallet of decking on the bottom deck, and to make more space to do that he removed a side support, which helped to hold the top deck of the trailer up. However, another side support had already been disengaged and when the second support was removed the loaded top deck of the trailer partially collapsed. Part of a pack of architrave slid off the top deck and hit the worker. He suffered a broken left femur and other bones in his left foot.

Arnold Laver & Company Ltd of Bramall Lane Sheffield South Yorkshire pleaded guilty to breaching Section 2 (1) of the Health & Safety at Work etc Act 1974. The company has been fined £150,000 and ordered to pay £1,719 in costs.

Speaking after the hearing, HSE inspector David Beaton said: "The use of the trailer as a storage facility had not been properly risk assessed.

"This incident could so easily have been avoided by simply using correct control measures and safe working practices."

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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> [3]
4. Please see the link below to the page on HSE's website that is the best guide to doing it the right way: <https://www.hse.gov.uk/work-equipment-machinery/power.htm>

The post [Woodworking company fined after worker suffered multiple leg injuries](#) appeared first on [HSE Media Centre](#).

[Chemical company fined after worker suffered multiple fractures](#)

Esseco UK Ltd has been sentenced for safety breaches after an employee fell 2.7 metres onto a concrete floor and suffered a fracture to his skull.

Health and safety inspectors have also said it was fortunate nobody was injured in an explosion at a chemical plant in Wakefield in November 2014, for which the company was also fined.

Leeds Crown Court heard that on 11 May 2015, the employee entered the first floor of a building on Calder Vale Road, Wakefield known as 'the Wendy House', in order to inspect the building prior to demolition. As he walked across the metal decking on the first floor, he fell through a gap, which had been created by removal of a piece of equipment, to the floor below. He suffered a fractured skull, fractures to five vertebrae a broken clavicle, broken ribs, a cut on the leg and a dislocated finger.

An investigation by the Health and Safety Executive (HSE) found that the building was redundant and due for demolition. A section of the metal decking floor had previously been removed on 24 April 2015 leaving a gap measuring 0.9m by 0.7m.

Esseco UK Ltd of Calder Vale Road, Wakefield, West Yorkshire pleaded guilty to breaching Section 2 (1) of the Health & Safety at Work etc Act 1974. The company has been fined £140,000 and ordered to pay costs of £7,642.

Speaking after the hearing, HSE's head of operations (Chemicals South and East and Human Factors) Catherine Cottam said: "Falls from height remain the one of the largest single causes of death and serious injury within the workplace, and as such it is vital that employers ensure that work with associated with height risks is properly planned, executed and monitored."

Esseco was also prosecuted by HSE following an explosion at the company's chemical plant, also in Wakefield. Nobody was hurt in the blast on 19 November 2014, which caused damage to the steel structure and a release of sulphur dioxide into the atmosphere. The construction of a new process plant at the site was near completion and commissioning of the plant had started in September 2014. Trials were being run on the new plant, which involved the use of the chemicals used in the production process of agricultural liquid fertilizer, including sulphur prill (granules of solid sulphur). There were problems with the enclosed bucket conveyor feed system, which transported the prill from a hopper into the chemical reactor tank. Sulphur dust was created within the conveyor due to physical break down of the prill. The sulphur dust cloud ignited, which caused the explosion.

An investigation by HSE found that commissioning of the plant with inert materials would have identified that the conveyor system was not aligned correctly, resulting in physical degradation of the prill to form an explosive dust cloud. The specification of components of the conveyor system had not been checked by the dutyholder resulting in the presence of potential of ignition sources within the conveyor system.

The company pleaded guilty to breaching Regulation 4 of the Control of Major Accident Hazard Regulations 1999, was fined £90,000 and ordered to pay costs of £7,642.

Catherine Cottam added: "It was fortunate nobody was injured when this explosion happened. Risks associated with the commissioning of new plant must be considered in detail at early planning stages, and commissioning must be carried out in a detailed and controlled fashion to ensure that risk is reduced to a level as low as is reasonably practicable."

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2. More about the legislation referred to in this case can be found at: legislation.gov.uk/ ^[2]
3. HSE news releases are available at <http://press.hse.gov.uk> ^[3]
4. Please see the link below to the page on HSE's website that is the best guide to doing it the right way:

([Working at height: A brief guide \(hse.gov.uk\)](https://www.hse.gov.uk/working-at-height/))

The post [Chemical company fined after worker suffered multiple fractures](#) appeared first on [HSE Media Centre](#).

Construction company fined after worker breaks back in fall from height

A construction company has been sentenced for failing to comply with work at height regulations after a worker fell through a fibre cement roof sheet sustaining serious injuries.

High Wycombe Magistrates' Court heard that on 6 September 2018, Ross Sly was replacing the roof of an agricultural building in Reading when he stepped across a roof-light onto a fibre cement roof sheet, which gave way. He fell approximately four metres on to the workshop floor, sustaining multiple fractures to his spine.

An investigation by the Health and Safety Executive (HSE) found that sole trader Mark Wakefield, trading as Mark Wakefield Construction, had failed to take reasonably practicable precautions to safeguard his workers during the re-roofing work.

The workers had been put at risk of falling through fragile roof sheets above areas of the buildings where safety nets had not been installed, underneath the fragile roof sheets. The employer had also failed to put edge protection in place around the perimeter of the main building and workshop to prevent the risk of a fall.

Mark Wakefield of Hilltop Farm, Greenhill, Swindon pleaded guilty to breaching Regulation 4 (1) of the Work at Height Regulations 2005 and was fined £1,400 and ordered to pay costs of £2,000.

Speaking after the hearing, HSE inspector Chris Redfern said: "Falls from height remain the most common cause of work-related fatalities and serious injuries in the construction industry.

"The risks associated with working at height are well-known. It is important that those in control of work at height identify the risks and implement appropriate control measures to safeguard workers.

“HSE will not hesitate to take appropriate enforcement action against those who fall below the required standards.”



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3. HSE news releases are available at: <http://press.hse.gov.uk>
4. Further information on working safely at height can be found at: <https://www.hse.gov.uk/work-at-height/key-messages.htm>

The post [Construction company fined after worker breaks back in fall from height](#) appeared first on [HSE Media Centre](#).

[Company fined following fatal gas explosion](#)

An asbestos removal contractor has been fined after a worker was fatally injured and another worker seriously injured in a gas explosion.

Hamilton Sheriff's Court heard how on 5 October 2017, workers were removing a boiler and pipework, and overspraying walls to remove asbestos residue, at

the former Pastoral Centre in Bonkle Road, Newmains in Wishaw.

The work was being carried out prior to demolition. The plan was to cut the boiler and pipework into sections to make it easier to remove. However, the gas supply had not been isolated and the workers cut through a live gas outlet pipe, the gas ignited causing an explosion.

Two workers received extensive burns to their body and underwent surgery. One of the employees died in hospital several days after the incident.

An investigation by the Health and Safety Executive (HSE) identified that the risk assessment and plan of work for the job had identified services were present in the boiler room, but the company failed to ensure the gas pipe was isolated and purged of gas before work commenced.

Enviraz (Scotland) Limited of Kelvin Avenue, Hillington Business Park, Glasgow pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc Act 1974. The company was fined £150,000.

Speaking after the hearing, HSE inspector Helen Diamond said: "This incident could so easily have been avoided if the company had ensured that the gas pipe in the boiler room had been isolated and purged prior to removal. Within the asbestos licensing permissioning regime, HSE expects licensed contractors to have adequate management arrangements in place to control non-asbestos risks.

"Given the potential consequences of using a power tool on live or unpurged pipework, the management system to establish the status of the pipework needs to be robust and there should be written confirmation of isolation.

"Tragically, one man has lost his life as a result of this incident and a second worker has sustained life-changing injuries."

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