

SITE SAFE NEWS

MAY 2002

SITE SAFE NEWS 3



Fatal fall

A 23-year-old worker from Fife was killed after falling through a roof.

William Hodge was involved in roof maintenance work - mostly cleaning and painting - on the roof of a farm building at Auchenblae, Aberdeenshire.

The cattle shed was made of fragile asbestos cement sheeting and had several plastic roof lights - also fragile.

The roof lights were not covered and there was nothing to prevent people falling through them. There were just a few wooden planks, belonging to the farm operator, which were lying around by the shed. But these were not enough to cover the roof lights properly.

As he worked on the roof, William fell through one of the roof lights and onto the concrete floor 7 metres below. He died from head injuries.

William's bosses and the farm company which employed them were both prosecuted.

HSE inspector John Radcliffe said: 'The measures that needed to be taken were obvious, basic and inexpensive. The accident could easily have been prevented if simple precautions had been taken during the construction work. Both parties clearly benefited economically by the failure to ensure appropriate precautions were taken.'



The underside of the roof light where a man fell to his death

* See page 3 for more on working at height.

BRIDGE TRAGEDY

Two major contractors have been fined a total of half a million pounds following an accident which killed four men.

The men were thrown 25 m to their deaths while working on an upgrade of the Avonmouth Bridge.

Ronald Hill, Jeff Williams, Paul Stewart and Andrew Rogers died when a gantry collapsed. They were working from the gantry, which was suspended under the bridge, when it was derailed and blown across the river.

The gantry was running on open-ended beams. Strong winds blew it towards the end of the beams and there was nothing to stop it coming off the end of the rails.

There was nothing wrong with the gantry, and the men who died were not to blame. The accident was caused because management failed to operate a safe system of work.

After the accident, there was a review of gantry operations which took almost nine months. This made major changes including a permit system, improved training and changes to hardware - such as end stops on runway beams and an effective wind monitoring system.

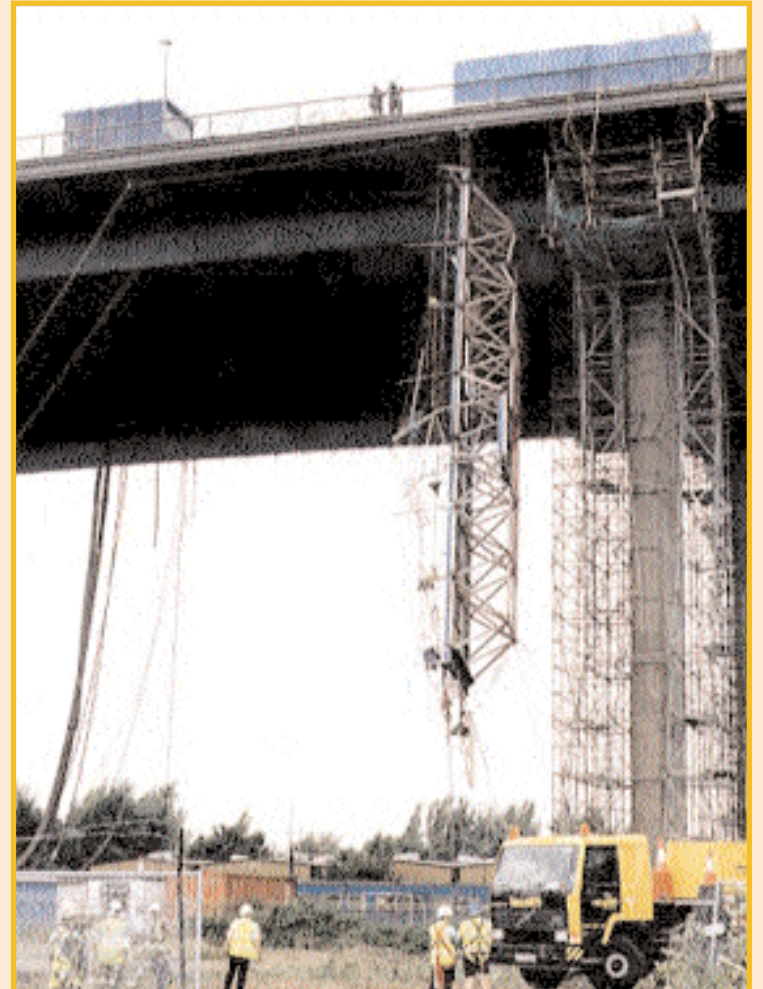
The two contractors who were partners on the job were prosecuted for failing to plan, organise, control, monitor and review the way gantries were used.

They had had warnings about the risk - and a similar accident almost happened a year earlier - but had not acted on them.

They had let the gantries operate unsafely for at least six months before the accident. And they had not trained workers properly.

Both companies had been prosecuted by HSE for previous accidents on the same project.

The contractors were fined, between them, £500 000 - plus costs of over £525 000 - one of the highest fines for an industrial accident. The judge said the accident was caused by 'widespread failings of the most serious nature'.



The G Type gantry platform hanging vertically at pier 10 on the north side of the river following the incident

HSE'S new construction division



Kevin Myers

On 8 April this year HSE set up a new Construction Division, reporting directly to Kevin Myers as a full-time Chief Inspector of Construction.

The new Division will work to ensure the industry makes changes in its culture to meet the challenging health and safety targets it has set.

Everyone agrees that the health and safety performance of the construction industry needs radical improvement. Construction has the largest number of fatal incidents to workers of any industry. Occupational ill health is another major cause for concern.

So will the new division mean more site visits by inspectors?

In some cases, yes. There is likely to be a sustained programme of visits and

'blitzes'. These will be aimed at encouraging companies to improve their performance in dealing with key hazards - things like falls from heights, workplace transport accidents, manual handling accidents, noise-induced hearing loss or exposure to asbestos.

But inspectors will also be meeting with designers, architects and planners to encourage them to address health and safety issues in the design and planning stages.

Kevin Myers himself has already promised that: 'I will encourage inspectors to continue to take tough enforcement action where the law is being ignored or flouted - wherever in the chain of responsibility such failures occur.'

And small firms will not be overlooked. They too are expected to take their responsibilities for health and safety seriously. So they'll find themselves being encouraged to develop their knowledge and competency.

For all the organisational changes on the horizon, the way to reach an inspector will not change... they will still be found in a local HSE office near you.

In the last issue of **SITE SAFE NEWS**, we asked for ideas to highlight site safety issues. Here are some examples.

TODAY'S HAZARD-Tomorrow's accident

'Today's hazard - tomorrow's accident' is the hard-hitting message on posters used by one construction company.

Mansell Construction Services, based in Slough, have put together a series of 'hazard awareness posters' for their sites. Each covers just one aspect of work - such as ladders or buried services.

Group safety health and environment manager Mike Short explains: 'Most of the posters show working practices on our own sites, and are designed to raise awareness among our own staff and subcontractors.'

'There are some quickfire reminders at the bottom of each poster and a reference to our standard risk control arrangements for more information.'



SAFETY QUESTION TIME



Videos are the choice of George Wimpey UK Limited for getting the safety message across.

They are showing their 'bespoke' videos to employees and contractors.

The latest video is on using telescopic handlers safely. Operators already have the manufacturer's handbook to refer to, but the firm thought that videos would have more impact.

And there's even a video quizzing the boss. Managing Director Keith Cushen is featured in *Health, safety and environmental question time* answering questions from site managers.

Edward Woods, Director of health, safety and environment, said: 'The videos have proved to be one of the most effective means of getting important messages over. They are popular so the key points are more likely to be understood.'

DRAMATIC APPROACH

Citex Prime Solutions took the dramatic approach to site safety - bringing in actors for a fire and rescue exercise on site.

The exercise at their Andover North Site Redevelopment involved fire service, ambulance and paramedics - as well as casualty actors made up to look injured. It also involved site staff and first aiders.

The aim was to assess emergency procedures at the site by creating a 'just in case' scenario.

There were two exercises - a 'fire' rescue at the office building and a rescue from a trench specially dug in the car park.

To make the exercise as realistic as possible, only a few key safety staff knew the exercise was happening - and the emergency services didn't know what to expect when they arrived.

Health and safety co-ordinator Ged Baren said: 'We learned that our systems were working well, and highlighted a few points we could improve. And the exercise got people thinking about the impact of an emergency on site - and emphasised the fact that this could happen when you least expect it.'



Upgrade to safety

**Dock construction 1896-1907 - 20 fatal accidents per year.
Dock upgrade 1997-2001 - no fatal accidents.**

Safety officers at a dock upgrade at Devonport Royal Dockyard are proud of their safety record.

The multi-million pound project involved demolition of the original dry docks and construction and fitting out of new structures.

Safety features included:

- ▼ An 18-minute video as part of workers' site safety induction. This highlighted the safety measures needed in an active dockyard.
- ▼ Risk assessments for each element of the work. Method statements looking at any outstanding risks had to be approved before any work could start and workers were briefed on the parts relevant to their own jobs.
- ▼ Training - site safety inductions, briefings and toolbox talks - made up nearly 1% of the working time.

Managers recorded accident rates and these showed a steady improvement over the four-year construction period. For example, more than 170 000 cubic metres of concrete were placed without an incident of dermatitis or concrete burns.

LETTERS

Dear SSN

SITE SAFE NEWS is an excellent publication that gives informative pictures to accompany the accident investigation text.

On a very large project I have recently worked on, it was a site requirement that the top 1 metre of all stepladders were sprayed red. No operative was allowed to stand on treads in the red zone, thereby eliminating the risk of standing too high on the steps and making them unstable.

James Stapleton, MCIQB, Nottingham

*See Ask **SITE SAFE NEWS** on page 3 for more about working on ladders.

Dear SSN

As a Civil Engineer and being involved with health and safety, I cast a glance at nearly every 'construction site' that I pass. I cannot help doing so. I cringe at the number of potential hazards that I see.

Occasionally, I have attempted to intervene, but all too often been turned away with very bad grace. I have, on such occasions, wished that there were some sort of 'citizens arrest' available. The workload of the construction HSE inspectors is so high that by the time they get to the site, the work has been completed and there is no case to answer.

The items in **SITE SAFE NEWS**, in the main, cover larger companies operating contracts that are probably covered by the CDM regulations. I would hazard a guess that an analysis of construction deaths and serious injuries may well identify that in many cases the injured person works for very small firms.

If I had a hobby horse to do with health and safety, it would be target the training of operatives and managers of small outfits. That is where the cowboys operate, and it is the cowboys who need to be culled.

David Hugman, Bromyard

Dear SSN

In your recent issue (SSN 2), your article on Skills Cards stated that Shepherds were the first construction company to gain the award.

My management team passed the exam on 28th August 2001 at Durham City and we were informed that we were the first to sit the test and were congratulated accordingly.

Incidentally, we were also informed that we were the first northern building company to attain BS 5750 back in April 1991.

A P Abbott,

Managing Director, G Abbott & Co Ltd, Hartlepool

Send your letters to: **SITE SAFE NEWS**, Health & Safety Executive, Room 306, Daniel House, Trinity Road, Bootle, Merseyside L20 3TW. Please note that long letters may be edited.

There is a FREE copy of 'Health and safety in construction' (HSG150) - the construction health and safety 'bible' - for all letters published.



FOCUS ON

working at height

SAFETY CAMPAIGN

Which white van will you be leaving work in today? That's the hard-hitting question in HSE's latest advertising campaign on construction site safety - with its stark picture of an ambulance at a building site.

You may have seen adverts in the papers - or even on diesel nozzles at filling stations.

The campaign, aimed at smaller construction firms and self-employed people, focuses on accidents from falls.

Kevin Myers, HSE's chief inspector of construction, said: 'Last year 106 workers died as a result of accidents during construction work. Falls accounted for 45% of these deaths and almost 60% of fatal accidents to the self-employed. People in the industry have to wake up to the realities and the consequences of taking unnecessary risks to save a few seconds or pounds.'



Ask SITE SAFE NEWS

Q. When is it safe to use a ladder to work from?

A: Ladders are seen and used everywhere in the construction industry. The fact that they are so commonplace means that people often seriously underestimate the risks involved. Simple precautions could prevent most ladder accidents.

When ladders are used, there is a clear risk of people falling off them. You should not use ladders without first thinking whether there is a better way to get access or do the work.

You must plan work properly in advance, and consider how to bring materials safely to where they are needed. You can use properly secured ladders for temporary access, but you should avoid carrying materials up ladders if at all possible.

You should avoid doing all but the lightest and quickest work from a ladder. Use other kinds of working platform such as a mobile elevating work platform, tower scaffold or scaffolding. If you need to move materials such as tiles and bricks you should use a hoist or gin wheel. You should never do heavy work such as demolition from a ladder.

Remember the ten golden rules when using a ladder:

- 1 Is there a better, safer way to gain access to a place of work?
- 2 Should a working platform be provided to allow the work to be done?
- 3 Always inspect a ladder to make sure that it is in good condition. This includes the plastic anti-slip blocks on the bottom of metal ladders.
- 4 Always erect a ladder to the correct angle - 1 out to 4 up.
- 5 Avoid erecting a ladder on sloping ground.
- 6 Always make sure a ladder rests on a solid surface and not on fragile or insecure material.
- 7 Always make sure a ladder is secured.
- 8 Always try and keep three points of contact on the ladder - eg two feet and one hand.
- 9 Never lean out from a ladder to reach just a little bit more.
- 10 Never use a home-made ladder.

Have ladders had their day? What do you think? Write to **SITE SAFE NEWS and make your point.*

Toppled over

A worker was killed and another man injured when a mobile elevating work platform ('cherry picker') overturned at a football club.

A new stand was being built and two sub-contractors, Andrew Kitchen and Robert Raynor, were using the cherry picker to dismantle steelwork from the gable end of one of the old stands.

The company responsible for supplying and erecting the steelwork had sub-contracted a lot of the work. The day before the accident, two of their employees brought the MEWP into the area and noticed three manhole covers.

No-one had considered these covers before and they weren't referred to in the health and safety method statement for the work. One of the site management team also saw the covers.

The next day, Andrew and Robert arrived on site. They were given a copy of the method statement, but this had not been altered to include the manhole covers and nobody mentioned them.

During the morning the men dismantled steelwork using the MEWP - travelling backwards and forwards over the manhole covers.

Eventually, one of the manhole covers broke under a wheel of the MEWP and the machine toppled over. The man-riding platform, which was about 30-40 feet from the ground, landed on the concrete floor of the new stand. Robert broke his arm and Andrew suffered a fatal head injury.

The company should have recognised that the manhole covers posed a risk and taken suitable precautions. It would have been easy to arrange for steel spreader plates to be put over the covers. They were prosecuted and fined £200 000 in Sheffield Crown Court.

HSE inspector Brian Fotheringham said: 'The accident emphasises the need for careful planning, communication and supervision when MEWPs are used - and the importance of ensuring good ground conditions, including checking for areas which are likely to give way under the weight of the machine. One man died and another was badly injured through an accident that was entirely preventable.'



Slipped and fell

Falls are the largest cause of accidental death and injury in the construction industry.

In **Tewkesbury**, roofer Robert Taylor was almost killed while installing a roof on an industrial unit.

As he was positioning a roof sheet he slipped, fell under the intermediate guard rail along the edge of the roof and plunged 7.5 m to the ground. There were guard

rails but the gap between the edge of the roof and the guard rail was too big.

Robert suffered multiple injuries and was in hospital for six months.

In **Croydon**, another worker fell to his death in a similar accident. Daniel Goodman was working on a building site when he slipped and fell through wrongly positioned guard rails. He fell 5 m to the ground and was killed.

The gap between the guard rail and the roof was too big so it was not able to prevent the fall.

In **Sunderland**, a painter was seriously injured while working on a nightclub refurbishment.

Jackie Hall was working on the first floor of the club, painting the ceilings. Earlier that morning, a joiner had cut a hole into the floor to make room for fitting a curved staircase. There was no edge protection or covering for the hole.

Jackie was looking up as he painted the ceiling. He stepped back and fell through the hole, landing on the concrete floor nearly 4 m below. He suffered serious injuries and was in intensive care for ten days.

Guard rails

Guard rails should:

- ▶ be strong and rigid enough to prevent people from falling; and
- ▶ be fixed to a structure, or part of a structure, capable of supporting them.

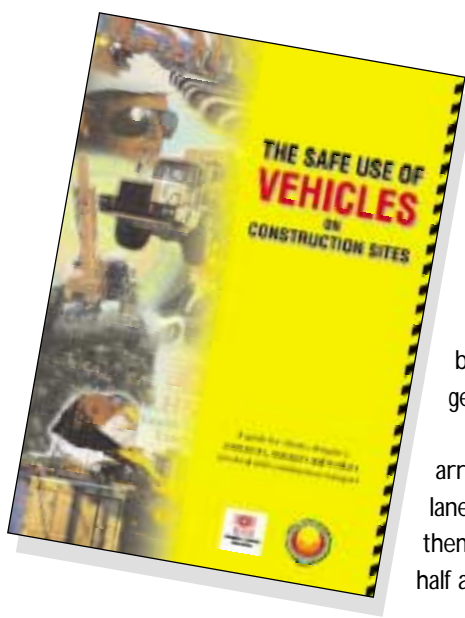
They should include:

- ▶ a main guard rail at least 910 mm above the edge;
- ▶ a toe board at least 150 mm high; and
- ▶ enough intermediate guard rails to make sure the unprotected gap is no more than 470 mm.

Most accidents involving falls could be prevented.

Rules to prevent falls

- ▶ Don't work at height unless it is essential.
- ▶ Make sure the working platform is secure.
- ▶ Provide guard rails, barriers etc at open edges of floors, floor openings, edges of roofs and edges of working platforms. The law says these should be provided whenever someone could fall 2 m or more.



KNOCKED DOWN BY A LORRY

A site agent was knocked down by a lorry while working on the M9 near Newbridge, Edinburgh. He was seriously injured and very lucky not to have been killed.

Paul Johnstone was responsible for organising pedestrian barriers to go alongside the site offices. There were problems getting hold of barriers in time.

On the day the work was due to start, the site accommodation arrived and was installed on the hard shoulder. Next to it was the lane used for site vehicle access. There was no barrier between them. There was no step in front of the site office - a drop of about half a metre - and just one metre from the door to the traffic lane.

Early that morning, Paul left the site office talking on the radio. He jumped down from the door and landed in the traffic lane. A 30-ton tipping lorry was just passing - at around 10 mph. The driver braked but not in time to stop Paul being hit.

When the barriers did not arrive on site in time, there should have been temporary barriers set up, or the vehicle access should have been re-routed.

The contractor - a civil engineering and construction company - was prosecuted and fined £5000 - the maximum possible for this offence.

***You can find more information in the HSE book *The safe use of vehicles on construction sites* (HSG144)**

Updated guidance

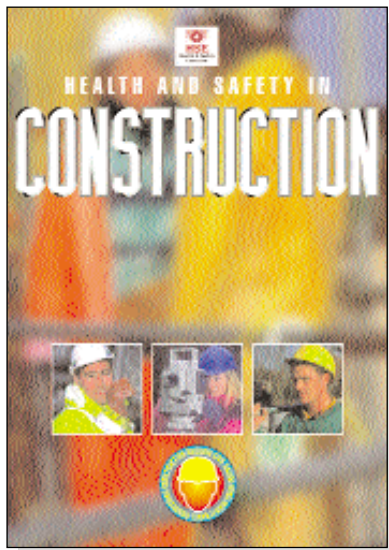
HSE's most popular construction guidance book *Health and safety in construction* (HSG150) has been updated.

The new version of the book is full of practical examples which have been revised and expanded. They take into account new information on the causes of accidents and ill health, and modern safety devices.

The main aim is to give practical guidance but the book also has a section on health and safety law, which has been updated to include changes in legislation since it was originally published.

Bill Callaghan, the Chair of the Health and Safety Commission, said: 'This is an invaluable guide to managing risks in all the most common

construction processes. The guidance contains all the important information any construction company, large or small, needs to operate safely and without risks to health.'



One year on

One year after the Construction Safety Summit which pledged to cut accidents in the industry, HSE has published its first report on progress.

Written by HSE's Chief Inspector of Construction, Kevin Myers, the report looks at what has been achieved since the summit. One key issue is competence - finding ways of getting a qualified workforce through card registration schemes. And another is improving workforce involvement in health and safety.

Kevin Myers said: 'It is too early to judge whether the effort being invested is producing lasting results because there are no quick fixes for improving the industry's health and safety record.'

'Further success will depend on the industry bodies driving their action plans down into member organisations and individual companies. The ultimate measure of success will be a significant and sustained reduction in fatalities, injuries and ill health.'

You can read the report on the HSE website at www.hse.gov.uk

***John Prescott called a Construction Safety Summit in February 2001 because of the industry's shocking health and safety record. HSE held a follow-up conference *From Concern to Action* in October last year.**

▼ Falls through fragile material cause more fatal accidents in the construction industry than any other single cause.

HOW TO GET SITE SAFE NEWS

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Letters and items of interest for Site Safe News should be sent to The Editor, SITE SAFE NEWS, Health & Safety Executive, Room 306, Daniel House, Trinity Road, Bootle, Merseyside L20 3TW.

Health and Safety queries can be answered by HSE Information Services. You can either write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG, or phone 08701 545500 or e-mail on hseinformationservices@natbrit.com and they will answer your questions. The HSE website is at www.hse.gov.uk. Please note we do not carry product information.

Cable danger

HSE has issued a warning to the construction industry to make sure safe working practices are followed when working near electrical cables.

The warning follows the prosecution of a Middlesex company, following an accident to a 17-year-old labourer.

Tomor Mucolli was involved in excavation and digging work near an electrical substation. He was using a pneumatic breaker to excavate a post-hole when he struck a live 11 kV electric cable. He suffered severe burns to his face, arms and neck.

HSE investigating inspector Peter Lennon said: 'This was a preventable accident. Work near underground services, including live electrical cables, is a hazardous activity. Although the company had assessed the risks and drawn up a method statement for carrying out the job, they failed to follow it.'

'This case highlights the need for everyone working near underground services, including live electrical cables, to ensure that a safe system of work is followed. This includes using hand, rather than power tools, scanning the area for services using a cable detector, marking the location of cables and ensuring the work is properly supervised.'

The company was tried at the Old Bailey and fined £10 000 plus £5000 costs.

You can get more advice from the HSE guidance book *Avoiding danger from underground services* (HSG 47).

Dangerous playtime

Four children were severely burned when a can of paint thinners they were playing with exploded.

Jodie Blackburn (8), her brother Simon (13) and twins Oliver and James Richards (8) were playing on a building site near Knaresborough in Yorkshire. They found a can of gun wash lying on the site and took it into their den. They started a fire in the den and the can ignited.

Jodie was badly burned and James had to have skin grafts on his legs.

The building work was almost completed - two of the four houses on the site were finished - and the perimeter security fence had been removed. The site manager had removed the container used for storing materials and

equipment. Some waste was left in a skip. The can of gun wash - marked 'highly flammable' - was left by a wall in front of the site offices.

The perimeter fencing should have been left in place until all the work was finished, and any hazardous materials should have been locked up.

The construction company were ordered to pay a total of £9000 in fines and costs.

***You can get advice on protecting the public from the HSE Book *Protecting the public - your next move* (HSG151).**

