

THE DAILY HAZARD

CONSTRUCTION WORKERS FIGHT BACK AS DEATHS AND INJURIES SOAR

Building carnage



Construction Safety Campaign picket at HSE press conference challenges official apathy

June 1988. A teenage building labourer is catapulted from the seat of a dumper truck into a ditch below him. He is killed as the truck rolls down the bank on top of him. Nineteen-year old Michael Kilty was employed on a S.E. London site. The inquest at Southwark Coroner's court was told by the pathologist that Michael had died from a brain haemorrhage following fracture of his skull. The coroner, Sir Montague Levine, commented, "Death must have been mercifully very quick indeed".

He made no reference to the fact that Michael died a good fifty years prematurely, nor to any negligence on the part of Michael's employer.

The verdict - accidental death.

June 1987. Jimmy Corcoran, a 35-year old carpenter from Hackney, falls 60 feet while working on the seventh floor of a building extension at the BBC Television Centre at Shepherds

Bush. Jimmy has been in a coma ever since. His condition has deteriorated and he is unlikely to recover.

At the end of June 1988 the company he was working for, Getjar Limited, were fined £1000 for allowing the accident to happen.

Latest HSE accident figures for fatalities in the construction industry are frightening. *Blackspot Construction** shows that there are two deaths each week, and that the incidence of fatal and reported major accidents is rising fast - by 30 per cent during the five years covered by the report. The most chilling conclusion is that 90 per cent of these accidents could have been prevented, and that 70 per cent were due to the negligence of management.

A powerful new campaign has emerged in response to the rising toll of death and injury on Britain's building sites - the Construction Safety Campaign

(CSC). Members of the Campaign - largely building workers from both private and public sectors - know all too well the story behind these figures. "Building site deaths are at their highest for 30 years - in London alone in 1987 there were 37 deaths. It is an obscenity that while profits in the construction industry continue to soar, those who create the wealth continue to die. As safety costs money, we can only conclude that employers' greed comes before our safety needs" said Tony O'Brien, CSC Secretary.

The Health and Safety Executive's much publicised 'blitz' of construction sites resulted in 1000 prohibition notices being issued. Although this means that the sites were found to present an imminent risk to workers, only 25 prosecutions resulted. When at a recent press conference building workers from the Campaign questioned Jeff Hinksman, Senior Area Director of the HSE, about the pathetic lack of enforcement of the law he responded, "We shan't be expending scarce resources on prosecuting employers." Obviously they too have concluded that employers can laugh off the paltry fines doled out by magistrates courts. However, instead of insisting on criminalisation of employer negligence, they seek to encourage responsible attitudes from management through glossy literature and slickly presented public relations events.

The harsh reality for workers on building sites is that health and safety law is not going to be upheld by profit-hungry bosses, nor is it going to be enforced on the thousands of London building sites by a handful of kid-gloved HSE inspectors. In the words of the construction safety campaign, "the only people who can end this horror are the construction workers themselves."

**Blackspot Construction, HSE Accident Prevention Unit, HMSO, £4.00*

The aims of the Construction Safety Campaign are:

- to get the labour and trade union movement to make deaths and serious injury in the construction industry a major political issue.
- for local authorities to refuse to employ contractors and sub contractors with a proven record of wilful and serious negligence.
- to make a prison sentence on the employer mandatory where gross negligence is proven, or in the event of death or serious injury.
- to ensure no sacking of workers who raise health and safety issues on sites and a statutory right of immediate re-instatement.
- to canvass the support of the medical profession.

The Campaign holds regular meetings and is producing a special four-page bulletin on construction hazards for use on building sites. They are planning a conference in the new year. For details contact: Tony O'Brien, Construction Safety Campaign, 72 Copeland Rd., London SE15. Tel. 732 3711.



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Home helps demand safety improvements

NUPE home helps in Islington through effective organisation have won major improvements in their terms and conditions. Health and safety, however, remains a neglected issue. So at a recent area section meeting they decided to ask the London Hazards Centre to help NUPE run health and safety training for all home carers.

Some of the hazards discussed during the training sessions included chemicals, filth, violence, racism, vermin, dog shit, stress and poor equipment. Many home carers (home helps) had been subjected to assault and abuse, with some clients refusing care from Black or Irish

workers. The council may have policies on equal opportunities and racism, but their response to this has been extremely inadequate.

Problems are increasing as cutbacks bite. As more NHS facilities close, carers are noticing that more of their clients are disturbed or violent. Clearly council workers cannot be expected to cope with all these changes in their work without information, training or support.

As a result of the discussions, the carers drew up a list of items for negotiation. Some things, like their list of protective clothing, they won immediately when they went back to work. Other

tions and reduce the hazards.

Job design raises a number of interesting points around computerisation, job specialisation and rotation, and ways to make boring jobs more varied and interesting.

Stress at work explores the causes of what is at last being recognised as a common problem and suggests possible solutions for trade unionists confronting this issue.

● *Stress at Work, Users Guide to VDUs, Job Design*. £40 each or £90 the set for trade unionists and educational bodies, from Team Video, Canalot, 222 Kensal Road, London W10.

Video resource

Team Video Productions has just launched three new videos aimed at trade unionists covering related aspects of office work: *Job Design, A Users Guide to VDUs* and *Stress at Work*.

The VDU video covers well trodden ground of health risks from poorly designed VDUs and office equipment and the need for meaningful consultation prior to the introduction of new technology. The film ends with a discussion of the scope for combining VDU and non-VDU work in order to increase job satisfac-

Centre in cash crisis

As we went to press, we learned that the Centre faces a drastic and immediate cut in its funding. The London Boroughs Grants Committee, which has funded the Centre since the GLC was abolished, is cutting the 1988-89 grant by 15 per cent.

The cut has to be made immediately and is backdated to the start of the financial year in April. Because grant given in the first quarter must be paid back, the real effect is a cut of 20 per cent for the rest of the year.

The Committee also intends to cut the grant by a further 15 per cent from April 1989.

This is obviously going to have serious effects on the Centre. Our budget for publish-

ing, an important source of alternative income, has been slashed. There may not be cover for two maternity leaves, leaving us short staffed for several months. Redundancies can probably be avoided this year, but next year's prospects are uncertain.

The workers and management committee are still assessing what the Centre can do to survive as a useful resource. In the meantime, you can support the Hazards Centre's work:

● Please write to your local council's representative on the London Boroughs Grants Committee about the plan for further cuts in 1989 (and send us a copy).
● Please make sure you or your organisation are affiliated.

Negotiating issues

Harmful materials – a chemicals/dangerous substances approval policy, together with training, protective clothing and information on chemical hazards, handling and use.

Equipment – sufficient, suitable and properly maintained.

Clients – safety information to be made available to clients. Agreed criteria for assessment of clients, and development of health and safety procedures and standards.

Responsibility – clear lines of

responsibility for health and safety, and clear instruction on how safety structures work within the council and the NHS.

Racism – care withdrawn if clients refuse to accept council anti-racist policy.

Safety policy – negotiate new, comprehensive policy.

Supervision – duty officer available for advice/help at weekends.

Training – adequate induction training and regular refresher courses.

demands are being taken up by shop stewards. Generally, it was felt that the organisers – the carers' immediate boss – should have more training, particularly about employers' duties under the Health and Safety at Work Act. It was suggested that, when organisers first assess a client,

they should also assess the health and safety situation for the worker and explain to the client the service home carers can provide. Carers have agreed that health and safety will be a standing item in future meetings, to ensure that management act on all the proposals.

VDUs threaten workers . . .

Women who used video display units (VDU) more than 20 hours per week during the first three months of pregnancy had more than twice the miscarriage rate of women performing similar work without a VDU, according to a new US study. The researchers also found limited evidence that their offspring had an increased rate of birth defects.

The findings, published in the June issue of the *American Journal of Industrial Medicine*, add to recent Swedish evidence about the potential risks of VDU work in early pregnancy. "I don't think these are definitive findings, but we did identify a statistically significant association," said Marilyn Goldhaber, co-author of the report.

. . . or workers threaten VDUs?

HAPHAZARD

With an ever-growing number of keyboard workers suffering from repetition strain injuries and new evidence coming from the USA that VDUs double the risk of miscarriage, we live in hope of a flood of calls from employers asking what they can do to control the hazards.

We are still waiting. For a moment in May we thought it had started when a training officer from Customs and Excise in Southend phoned to ask if we had any videotapes dealing with new technology and hazards.

The duty advice worker began to suggest titles from our free lending library of tapes . . . *Technology at Work, Repetition Strain Injuries at Work, Teno* . . .

The training officer cut him short. 'No, that's not what I had in mind at all. Our problem is to protect the machines from the workers. You see, they spill coffee down the back and get food into the keyboard.'



'How to get rest breaks without really negotiating'

Questioning of the training officer revealed that the workers have to sit in front of terminals all day. There are no agreements to limit hours at the screen and ensure regular rest breaks. No wonder the occasional coffee reaches the electronic parts if that's the only way to get a break . . .

The bacterium that causes Legionnaires disease, *legionella pneumophila*, is not new, nor is it a rarity. It is found in most lakes, rivers and ponds and has probably been around for hundreds of years. Its new status as a mass killer comes not from any mutation in the bacterium but rather from new environments, such as sealed, air-conditioned buildings, ideal for its growth and distribution to large numbers of potential victims.

Legionella was first recognised in 1976, when 182 people attending an American Legion convention were affected by a mysterious form of pneu-

monia that eventually killed 29. It gets its first name from the Legion epidemic. Pneumophila denotes its fondness for the human lung. Since 1979 nearly thirteen hundred cases of Legionnaires disease have been recorded in England and Wales. There have been major outbreaks, at Glasgow, Kingston, Gloucester, Reading and most recently at the BBC in Portland Place. With hindsight, epidemics of respiratory disease dating back to 1959 have been blamed on legionella.

In the world's worst outbreak, at Stafford General Hospital in 1985, 30 people died. In the aftermath of that disaster, a Public

Health Laboratory survey found legionella present in the water systems of 70 per cent of hospitals and over half the hotels they sampled.

Aerosols

Twelve strains of *legionella* have been identified so far. They thrive in any warm, non-sterile water particularly if it contains sludge, iron, algae and amoebae. Dust in the system or in the air can greatly increase the risk. The Welsh School of Architecture estimated that 90 per cent of cases were in the vicinity of building work. The bacteria grow best at blood temp-

erature (37 degrees C), but can survive at over 55 degrees.

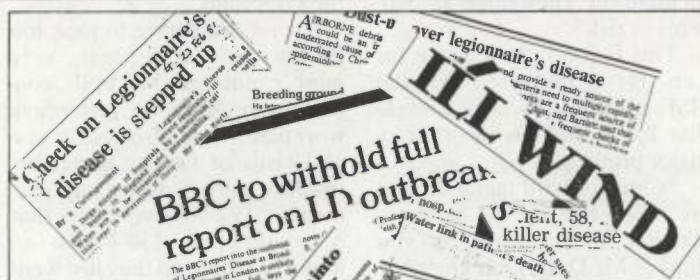
Bacteria are carried in tiny airborne water droplets in the fine mists given off by water cooling towers, air conditioning, humidifiers, showers and other water systems. Air movement can spread these aerosols hundreds of metres from their source. In the BBC outbreak, one victim lived 500 metres from the contaminated cooling tower. Inhaling droplets of water carrying the bacteria is the only proven way to catch the disease, though it may be possible to contract it from swallowing contaminated water or food. You cannot catch it from another person.

Two diseases

Legionella causes two kinds of illness, the full-blown Legionnaires Disease and the milder Pontiac Fever.

1. Legionnaires disease. The most lethal of the building related illnesses (see *Daily Hazard* 12). It has a relatively low attack rate. Only about one per cent of those exposed to the bacteria go on to develop Legionnaires disease, but it is fatal in between twelve and eighteen per cent of cases. Because symptoms are almost identical to pneumonia, statistics underestimate the scale of the problem. At least five per cent of 'pneumonia' cases are in fact Legionnaires disease.

After an incubation period of between two and ten days, sufferers develop a sudden high fever, chills, and muscle pains, followed by a dry cough and difficulty breathing. Some



go on to develop diarrhoea and vomiting, or confusion and delirium, with complete respiratory failure resulting in death. In non-fatal cases, victims can sometimes be left with permanent lung or kidney damage.

2. Pontiac fever. In Pontiac epidemics, 95 per cent of those exposed develop the disease. The incubation period averages 36 hours. It does not produce pneumonia and has not proved fatal. Symptoms are otherwise similar to

Legionnaires disease. Under-reporting is probably greater.

Some people are known to be more susceptible to the bacteria than others, for instance the elderly, those who are already ill from respiratory or heart disease and those on immuno-suppressive drugs. Smokers are more vulnerable to *legionella*, and in all circumstances men are more likely to contract Legionnaires disease: only three out of ten sufferers are women.

Water temperature (°C)

0-20 Mains cold water; air cooling coil condensation; spray humidifiers
★ Legionella are dormant, but become active as temperature rises.

20-40 Cold water service; fire sprinklers; cooling towers; showers
★ Legionella multiply to levels which cause Legionnaires disease.

43-65 Hot water storage.
★ Legionella stop multiplying and their survival span shortens. In time they die off. It is still not known how well legionella survive above 46 degrees.

65-100 Hot water radiators; steam humidifiers
★ Legionella killed off.

Checklist

Inspection: Suspect all water- and air-handling systems as potential sources of disease.

Information, training, instruction: Staff should be given adequate training and appropriate protective clothing. Anyone who has worked under suspect conditions and has unusual cough, fever or lung congestion should be tested for Legionnaires disease. Check sickness records for 'clusters' of respiratory disease or ill-defined 'viral conditions'.

Full plans, operation and maintenance instructions must be available for all building services. There should be a planned maintenance schedule with strict management supervision and record keeping.

Design: It is vital that no water handling system provides an environment in which *legionella* can flourish (see box). Water service systems should be as simple as possible, with all parts easy to reach, clean and maintain. There must be no stagnant water zones (dead legs) where dirt, sludge, rust or scale can accumulate.

Materials: Non-metallic parts like sealants, washers and jointings should be of a type known not to support bacterial growth (see reference

1). Construction materials should be non-porous, with a smooth surface for easy cleaning.

Humidifiers: Steam injection should replace water systems wherever possible. This will also control humidifier fever. Water consuming humidifiers - including portable units - should be cleaned regularly. Bleed off as for cooling towers, below.

Cooling towers:

Replacement: wet cooling towers should be replaced by air cooled systems as soon as possible. Meanwhile circulating water systems should have a constant bleed-off rate of 10 per cent of circulation to carry away impurities and minimise the build up of scale and sludge.

Design: drift eliminators are essential to limit the size of water droplets and stop them leaving the tower.

Location: well away from the air intakes for buildings, and downwind of them.

Cleaning: should happen at least twice a year, although forthcoming DHSS guidelines for hospital cooling towers recommend monthly cleaning.

Towers are a particularly hazardous source of infection after a long shut down. Standby systems should always be treated as though contaminated. They should be brought into regular use and cleaned when

treatment of the main system is in progress.

Hot and cold water supplies:

Mains water: normally free from any hazardous level of bacteria due to chlorination, it presents a potential hazard when it becomes tepid after standing for a long period. Cold water storage tanks should hold only a day's supply. Tanks should be in well-ventilated spaces, out of direct sunlight. Cold water piping should avoid hot zones, and where hot and cold water have to be mixed, this should be done as close to the point of delivery as possible.

Hot water: should be stored at a temperature of at least 60 degrees C. The temperature at taps and other draw-off points should be at least 46 degrees C.

Asbestos alert: insulation on boilers, calorifiers and pipework commonly contains asbestos.

Other equipment

Fire sprinklers: blamed for Legionnaires disease after contaminated water sprayed out during commissioning of a system. The initial water fill should be treated with chlorine.

Metal machining, glass engraving, etc: *Legionella* has been found in water-based coolants. Lathes, diamond wheels, and other rotating machines all generate aerosols.

Clean up

It is essential to get all sludge, scale etc out of any system or machinery. Workers must have respiratory protection. No water lances to be used. Treat with sodium hypochlorite to disinfect and maintain correct level of chlorination for the type of system. Levels are given in Reference 2.

Biocides - warning: chlorination using sodium hypochlorite is effective for disinfecting and maintaining hygiene. Use of more complex biocides should be avoided because of increased toxic risk to engineers and building occupants.

Testing: there is little point in routine testing of water for *legionella*; low levels will be found in most systems. But water, sludges and, perhaps, air should be sampled if in any doubt, and before and after any major clean-up.

Local environmental health officers or the HSE can advise on laboratories to do the sampling.

References:

1. *Water fittings and materials directory*. Water Research Centre. 1987.
2. *Minimising the risk of Legionnaires disease (TM13)*. Chartered Institution of Building Services Engineers (CIBSE). 1987.
3. *Legionnaires disease*. HSE Guidance Note EH48.

Toolroom workers dying in the dust

"I've got pains in my chest. I'm going back up the doctor's now because I'm really getting out of breath. My arms feel like lead sometimes. After ten minutes doing anything I'm really knackered. One way or another I'm on the way out. Not only have I got to come to terms with it, so has my family."

Len Green is 55. He has hard metal disease (HMD). The disease is caused by exposure to cobalt dust, a metal used in the production of carbide products at the small south London factory where Len has worked for the past thirty years. Len described conditions inside the factory. "It's like a shithouse – filthy, just filthy. They've got an extractor system and it'll pass a smoke test . . . but cobalt's not quite the same."

In fact, even in minute quantities cobalt dust can cause serious chest diseases, namely asthma, fibrosing alveolitis and chronic obstructive airways disease (COAD). It also causes dermatitis and is a powerful heart muscle poison leading to a condition called cardiomyopathy. Not all sufferers make it to retirement age. But no one ever told Len.

"First I heard about hard metal disease was on the telly. Experts have known since 1940. I know someone hasn't been doing their job. I reckon it's a bloody imposition that this information hasn't been readily available," he said. "Most people don't know what they've got is a killer."

The Health and Safety Executive (HSE) has produced no guidance to alert workers to the

risks of hard metal disease although, 40 years on, they state they "will be giving the industry a heightened level of attention in 1988/89". They hope this "will produce a significantly helpful increase in knowledge of patterns of risk".

This is too little too late for Len. He is distressed that the HSE still doesn't see the disease that has ruined his health as a major problem.

"Cases of hard metal disease are pretty few and far between. It's not as prevalent as you think," Mr Dodds, an engineering inspector at the HSE's Luton office, informed the Hazards Centre. And the HSE's Toxic Substances Division maintains that there "have been relatively few diagnosed cases in the industry in the UK and there is some suspicion that those which have occurred are a result of very poor conditions in the fairly distant past".

Len has his own ideas about the apparent rarity of cases of hard metal disease. "It took them donkey's years before they admitted asbestos was bad," he said. "What they're afraid they've got is another asbestos on their hands, so they're very reluctant to admit anything. And with the medical profession not being aware of it, GPs just treat



Len contacted the Hazards Centre when he realised that his work manufacturing tungsten carbide tools put him at risk from hard metal disease. But many other workers who just use hard metal tools – drills, grinders, cutting tools etc – are at risk. Any dusty process in steel-making or engineering could expose workers to risk. Jim Johnston (pictured here) is too sick to work and believes that he and some of his workmates have been exposed to cobalt dust. Jim is a wire drawer.

the symptoms."

Len doesn't have to look too far into his past to see the very poor conditions the HSE consider a problem of yesterday's workplaces. He also recalls several visits of factory inspectors resulting in no visible improvements. "The boss would say that it would cost £30-40,000 to improve things, so they just went away. Otherwise the place wouldn't be in such a state."

Worried that his health may deteriorate further Len is giving

up his job. "I've had pains in my chest and been rushed to hospital. They found cobalt in excess in my blood," he explained. "Once it's got hold of you you're on the downward slope – I'm getting out of it. I don't mind working for the firm but I'm buggered if I'm dying for them."

● Additional information: *Hazards Bulletin* No 20, Sept. 1988. "Hard Grind: cobalt, tungsten carbide and hard metal disease". (A3 broadsheet)

Asbestos agency axed

Asbestos is a major area of concern for people who live and work in London, but the only organisation that they can turn to for information and advice may soon close. Subject to an appeal, London Asbestos Action Campaign (LAAC) has had its funding withdrawn.

Over the last three years, LAAC has helped tenants, community and parents' groups throughout London to identify asbestos, set up action groups and participate in discussions about safe methods of removal or encapsulation.

In many cases LAAC's work in support of local groups has led to revised council asbestos policies, better working practices and, in some instances, the deletion of contractors from

local authority approved lists.

Londoners face a constant struggle to achieve decent standards of asbestos treatment and removal, more so when cuts are causing wholesale reductions in local authority programmes. Taken together, the two mean that the need for LAAC's work – and its workload! – is greater than ever.

LAAC wants help with its appeal, especially if you are one of the thousands of people who have benefited from its work. Send letters of support immediately to LAAC, 308 Grays Inn Road, London WC1X 8DS. If you live in a London borough, ask your local authority to support LAAC's appeal for funding to the London Boroughs Grants Committee.

● We welcome affiliations from individuals and groups committed to the fight against hazards at work and in the community. Affiliation shows support for the centre, brings a year's supply of this newsletter and news of other publications and activities. Rates range from £1.00 to £30.00.

● The London Group of the Hazards '88 Campaign can be contacted via the Hazards Centre.



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Hazards
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C A M P A I G N

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HAZARDS
CONFERENCE**

(closing date 27 August)

This conference is an important opportunity for hazards campaigners from trade unions and community groups to get together, and a key event in the Hazards '88 Campaign. More than 30 aspects of workplace and environmental hazards will be covered in the workshops.

10 – 11 SEPTEMBER 1988
SUNDERLAND

Write to: Hazards '88 Conference, TUSIU, 'Southend', Fernwood Road, Jesmond, Newcastle NE2 1TJ.