

Birmingham Health, Safety



& Environment Association

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Newsletter ***September 2015***

Monthly Meeting – 14 September 2015

George Allcock opened the meeting with a warm welcome to all, including new members:

- **Richard Gale – Head of Support Services, Money Advice Trust**
- **Lee Heath - Health and Safety Consultant, R G Wilbrey (Consultants) Limited who work within the construction industry**
- **Carl Silcock - Neil Willies, Insurance Brokers Limited**
- **Steve Wheeler - Steve Wheeler & Company. An environmental health consultancy specialising in the construction industry**

and guest:/prospective member:

- **Michael Abbott of M A Claims Support Limited**

Extraordinary General Meeting

The revised Articles of Association were distributed to all BHSEA Members three weeks ago. The revision process, which began formally in January this year, culminated in the Articles being unanimously agreed at the June EGM.

Copies of the Articles were submitted to Companies' House and the Charity Commission. However, whilst the Charity Commission formally consented to the revised Articles, they were of the view that BHSEA should define the meaning of the words 'welfare' and 'wellbeing'.

The purpose of today's EGM would be to gain Members' agreement to the Resolution to accept the new definitions, which are based upon those used by HSE and other industry specialists.

The new definitions are:

‘Welfare’ means facilities and provisions that are necessary for the comfort, convenience and wellbeing of working people such as washing, toilet, rest and changing facilities and somewhere clean to eat and drink during breaks.

‘Wellbeing’ means a good or satisfactory condition of existence or state characterised by health, happiness and prosperity determined primarily by work and which can be influenced by workplace interventions.

George put forward the Resolution to accept the revised Articles with new definitions to the Members present.

The motion was carried.

Proposed: David Hughes

Seconded: David Price

All in Favour

The revised Articles, with new definitions, will now be registered with Companies’ House and the Charity Commission.

George thanked Chris Hopkins for setting up the sub-committee on this and also those Members who contributed to the outcome. The new Articles now provide a more flexible approach that is more relevant to the future of BHSEA.

Members’ Corner



Chris Hopkins
Barrister, No5 Chambers

New Sentencing Guidelines

Today’s short presentation would be discussing the criminal penalties arising from health and safety failures in the workplace.

Chris commented that currently a minor incident in the workplace would, generally speaking, result in a civil claim being made by the injured party.

More serious incidents may attract an HSE investigation, which might ultimately result in a criminal prosecution and lead to a prison sentence and criminal penalties.

Chris advised that there are “seismic changes” just around the corner and went on to outline how the Courts will be looking at health and safety in the future.

Sentencing at Present

In England and Wales the Magistrates’ Court deals with the less serious offences; mostly those occurring in small and medium sized enterprises.

Until now, Magistrates have been guided by a set of sentencing guidelines.

Each health and safety offence/breach carries a maximum fine of £20,000 and if an individual, such as a director, is found guilty they can receive a prison sentence of up to six months. In March of this year the Government decided that offences committed after 12 March 2015 will carry an unlimited fine.

In the Crown Court, where more serious offences are dealt with, guidelines allow for unlimited fines and up to 2 years imprisonment.

In 2010 the **Corporate Manslaughter Act** was introduced and a new set of guidelines were produced to cover health and safety offences that result in death.

The Corporate Manslaughter and Health and Safety Offences Causing Death Sentencing Guidelines (2010) state:

- Appropriate fine (Corporate Manslaughter) will seldom be less than £0.5m and may be measured in millions of pounds
- There have been about ten or eleven prosecutions for Corporate Manslaughter since 2010 and mostly involved small and medium sized enterprises. None of the fines, so far, has exceeded £500,000 and most have been in the region of £300,000 – largely due to the fact that the Crown Prosecution Service has chosen to ‘go after’ the smaller organisations. However, this is likely to change when larger organisations, such as the large rail companies, are being prosecuted.
- Appropriate fines (H&S) for offences that result in death will seldom be less than £100,000 and may be measured in hundreds of thousands of pounds more.
- Publicity Orders. This is where a ‘guilty’ company has to publish a notice in the local newspaper setting out what has occurred and what has been done to rectify failings.
- Remedial Orders. This is where a company has reached the Court, not having got their “house in order” – ie not having rectified their mistakes nor learned from them. This is likely to be reflected in the sentencing.

Increasing Fines

- Marks & Spencer (2011) - £1 million
- Total UK Limited (July 2015) - £1.4 million
- Hugo Boss UK Ltd (September 2015) - £1.2 million

Marks and Spencer had been carrying out overnight asbestos removal in one of their stores. However, trading continued during the following days, putting both staff and customers at risk of exposure.

Total UK. There had been a fatality after a major fire at an oil refinery in North Lincolnshire in June 2010.

Hugo Boss A very large mirror weighing 18 stone fell from the wall in one of their stores onto a little boy out shopping. The little boy died.

These figures are indicative of the levels of fines that Chris believes will become more common.

New Sentencing Guidelines

- The Sentencing Council published its consultation on introducing sentencing guidelines for all health and safety, corporate manslaughter and food safety and hygiene offences on 13 November 2014.
- Consultation ended 18 February 2015 – guidelines are likely to take effect in January 2016. However, they will apply to any offences committed from this point forward.
- The proposals for fines are far in excess of current levels and are tariff based.
- The proposals address custodial sentences for individuals and set the threshold at “neglect”. That is, not just where the company has put “profit before safety” but where their actions have demonstrated neglect. Last year there was an instance where a health and safety adviser – a Mr Golding - not only received a custodial sentence but actually went to prison, *(not everyone who receives a custodial sentence will actually go to prison)* after health and safety failings on a construction site.

Aims and overarching issues

- Consistency and clarity of guidance
- Punishment – penalty to reflect seriousness and financial circumstances of the offender
- Remove any economic gain derived from the offence. Not complying and just paying the fine will no longer be the cheaper option as opposed to putting the right things in place.
- Make directors and shareholders reform themselves. **Fines should be sufficiently substantial to have a real economic impact on the company which is being fined.**

The Proposed Approach

The Consultation document is available on line via the Sentencing Council website (www.sentencingcouncil.org.uk) under H & S Guidance 2010. The final document will come out in November of this year.

- Step One** **determine offence category:** firstly the level of harm – was it a fatal accident or a marginal breach of legislation **and** secondly, the level of culpability. Did the company put profit before safety? If so the fines could be considerable. Or the company may have been aware of the law but failed to implement their procedures correctly.
- Step Two** **starting point and category range:** what is the size of the company by reference to turnover? Companies are split into four categories:
- Micro company - £0-2m turnover
 - Small - £2-10m turnover
 - Medium - £10-15m turnover
 - Large - £50m plus turnover
- For very large companies such as Shell the turnover could be many times £50m. In such cases Judges can now step outside the guidelines and give the fine that they feel is appropriate.
- Step Three** **is the proposed fine proportionate to the means of the offender?** (The fine could be more or less than the tariff.)
- Step Four** **consider other factors** that might warrant adjustment – eg the impact on employees and service users. Is the level of the fine likely to result in the company needing to lay off workers? Third parties such as workers or customers should not lose out because of the failings of the company.

Plus Wider factors – including credit for a guilty plea which would spare the injured party the trauma of a trial.

What Might Some Fines Look Like

Small company (£2m - £10m turnover)

- *Very high culpability/Harm cat 1*
 - Starting point of the fine would be £450,000 – range £300,000 to £1.6m
- *High culpability/Harm cat 1*
 - Starting point £250,000 – range £170,000 to £1m
- *Medium culpability/Harm cat 1*
 - starting point £160,000 – range £100,000 - £600,000
- *Low culpability/Harm cat 1*
 - starting point £45,000 – range £25,000 - £130,000
 -

David Price asked whether any actual guidelines had been published yet indicating what the fines will be.

Chris referred back to the on-line Consultation Document. His expectation would be that when the final document is issued in November 2015 it will not look significantly different from the earlier Consultation Document.

Chris further commented that in July of last year a very similar set of guidelines were introduced for environmental crimes and they are actually being enforced by the Courts now. One company, Thames Water, was fined in accordance with the environmental guidelines. They went to the Court of Appeal to argue their fine was too high. However the Court of Appeal was of the view that for the size of their organisation they were very lucky to be fined only £250,000.

George thanked Chris for an excellent and frightening presentation!

Chris's slides are available on the BHSEA website (www.bhsea.org.uk).

George then introduced the main speaker for the day:



Duncan McIntyre
'Fire Protection Engineer (Sprinklers)
AXA Insurance'

(Duncan's experience with sprinklers has spanned some 36 years)

So What Really is a Sprinkler System?'

A sprinkler system is defined as an array of pipework to distribute water to the location of a fire.

Brief History

1874 – An American Henry Parmelee developed the first commercial system.

1882 – The first UK system was installed at John Stones & Co, Astley Bridge, Bolton.

1888 – 1st Edition FOC (Fire Offences Committee) Rules published by insurers

1888 – 1969 Original FOC rules are regularly updated up to 28th Edition

1969 – FOC Rules are completely re-written and issued as 29th Edition

1990 – BS5306 part 2 developed from 29th Edition

2003 – BS5306 part 2 is superseded by the European Standard EN12845

Common Myths

- It is not true that all the sprinklers will operate when the system is activated. They will only be activated in the area of the fire.
- They do not result in more water damage as they only use 5% of the water used by firefighters' hoses.
- There is only a 16 million to one chance of accidental activation.
- Cost benefit analysis has proven that sprinklers are not expensive when set against the potential for loss – of life, property, or employment. Not to mention the 155,000 tonnes of CO² released as a result of major fires.

Some Famous Incidents

Windsor Castle

On 20 November 1992 a fire broke out in Windsor Castle as a result of a spotlight being placed too close to a curtain.

Surveying the damage, a Senior Minister was heard to remark “thank goodness the building was not sprinklered” - referring to the misconception that there would have been considerable water damage to all the treasures within the building had a sprinkler system been installed and activated.

Nine principal rooms and over 100 other rooms over an area of 9,000 square metres were damaged or destroyed by the fire. This was approximately one fifth of the Castle’s area.



Firefighters used one million gallons of water to extinguish the fire. £6 million of national treasures were lost forever and the restoration cost £36 million.

Firefighters agree that a single fire sprinkler head (60 litres/minute over 12 square metres) could have controlled the fire at the start. Although no doubt there would have been uproar about water damage.

A sprinkler system was not installed when the building was restored!

Woolworths - Manchester

This fire occurred on 8 May 1979. It was caused by a damaged electrical cable which was concealed by furniture stacked in front of it.

The furniture was constructed of polyurethane foam which once alight, produced large amounts of dense smoke which obscured the exit signs, affected people’s vision and caused breathing difficulties.

500 customers and staff were in the store when the fire broke out. 10 people died and 26 people were rescued.

The fire prompted a number of actions by the Home Office. The laws on fire precautions, building design and safety certification, and the regulations governing furniture design were updated.

The local Manchester Act from then on required all buildings over 2,000 square metres to be sprinkler protected. This approach was taken up by a number of other cities as well. Throughout the 1980’s a lot of shopping centres were protected by sprinkler systems.

George Allcock asked whether it was still the case today that any building, anywhere, for any purpose over that size would be protected by a sprinkler system but Duncan advised that it was not.

Summerland – Isle of Man

On 2 August 1973 a fire was started by three children smoking in a disused kiosk. The burning kiosk collapsed against the bitumen coated panelling and spread up to the acrylic roof and rained molten plastic onto the public below.

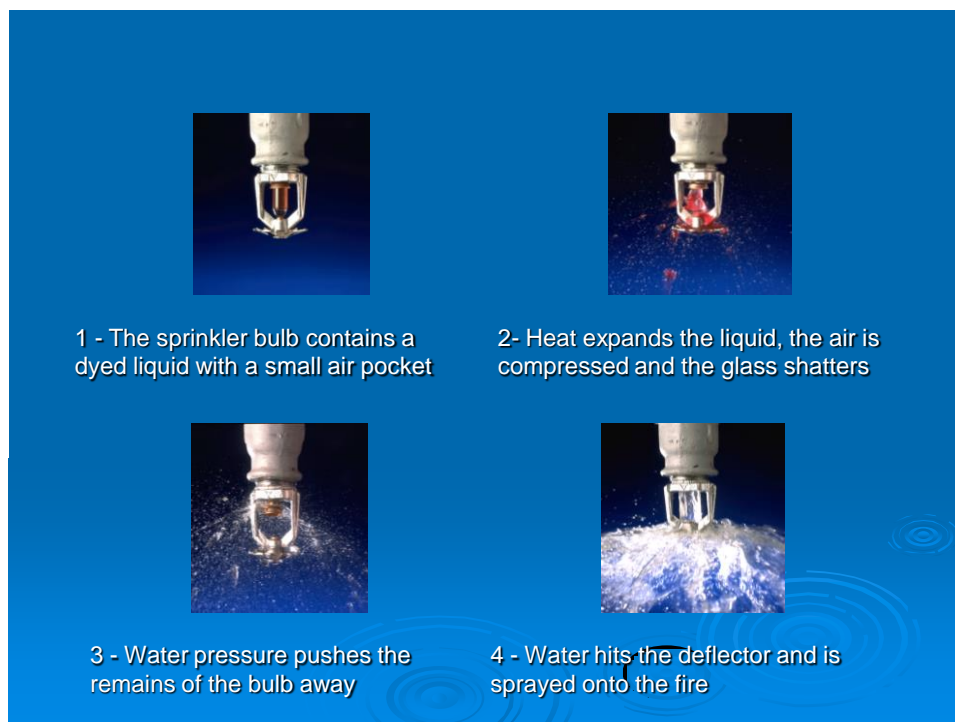


It was mainly a 1960's concrete design incorporating many "state of the art" architectural features such as acrylic "glass" in part of the roof, acrylic sheet linings and bitumen coated asbestos panelling, on some external elevations.

50 people lost their lives that day. Following the fire, changes to building regulations were introduced to improve fire safety.

Now all public buildings on the Isle of Man are sprinkler protected.

How do Sprinklers Work?



What do Sprinklers do?

Sprinklers are the only system which will automatically:

- Detect a fire
- Sound an alarm
- Call the fire brigade
- Fight the fire

Sprinklers do not necessarily extinguish a fire, they are designed to control the fire by wetting the surrounding area.

Standards

- FOC and LPC rules – Property protection (insurers standards)
- BS5306 part 2 – Property & Life Safety
- BSEN12845 – Property & Life Safety
- BS9251 – Residential & Domestic Sprinklers – Life Safety

NB Fire Offences Committee (FOC). Now changed to the Loss Prevention Council (LPC).

UK Legislation

- Wales – New and converted domestic and residential properties, excluding hotels, prisons and hospitals will require sprinklers from 1 Jan 2016. **Lee Dargue** asked why the exclusions were in place. Duncan explained that in the case of prisons it could give rise to prisoners setting the system off vexatiously, the NHS had their own reasons and for hotels it remained a commercial decision but most do have sprinkler systems in place.
- Scotland – Since 2005 sprinklers are required in new Shopping Centres, Residential care Buildings, High Rise Domestic Buildings and Sheltered Housing Complexes (and since 2010 Schools).
- England - Building Regulations and Approved Document B (this has replaced all local “Acts” except London) apply, these cross refer to various other standards and regulations and lean heavily towards Fire Engineered Solutions which inevitably means cost is the main criteria.
- Sprinklers can be included as a compensatory fire safety feature in the design of dwelling houses, but for flats in buildings over 30m high, sprinklers are mandatory but not in common areas.
- In England and Wales sprinklers are required in commercial and business premises over 20,000 square metres. In Scotland the figure is 14,000 square metres. This compares poorly with most of Europe where the figure is 2,000 square metres.
- The Regulations allow trade-offs in terms of fire precautions when life saving sprinkler systems are installed such as reductions in fire ratings for the building and also modifications to escape travel distances, number of fire escapes etc. Further trade-offs could be developed as part of a fire engineered solution for a building.

What does every system need?

Every system requires an adequate and reliable supply of water, with sufficient flow and enough pressure to push the water through the sprinkler heads.

There are two options regarding water sources:

Town's Water Supply

This is the cheapest option as it is connected to the town's main water system. However, it is not under the control of the insured which gives rise to a potential for problems:

- Reduction in mains pressure
- Leaving stop valves on the main partially closed
- Town's main improvements!

Unfortunately, problems may only become apparent when there is a fire.

Pumped water supplies

This is the most reliable water supply as it is within the control of the end user. However, it does require regular maintenance and a stored water source such as a water tank.

Neil Boon raised the question of the potential for legionella if the water is standing and not regularly flushed out. Duncan stated there was certainly potential for it but there had been no cases to date.

Liz Prophett asked whether the water was stored at a particular temperature and Duncan advised that the water was stored outside so the temperature would vary. Because it is a water tank it has to have an opening to the atmosphere.

So What does a Sprinkler system cost?

- Conventional Sprinklers - £10 / m²
- In Rack Sprinklers - £25 / m / level
- ESFR Sprinklers - £14 / m²
- Water Supply (2 pumps, 1 tank) £150k+
- Insurance discounts of up to 60% of the fire rate can help to offset some of the cost in the long term.

In Summary

Sprinklers may be expensive but putting a value on a successful activation is virtually impossible. There are more complaints about water damage than fire damage.

Presentation Questions

Kevin Ryder asked whether the distribution pipes were dry or wet. Duncan explained they could be either. If the sprinkler system is prone to frost damage in an unheated building then the pipes would be dry and the water would be held back at that valve automatically. There would be a slower response time with a dry system. In a heated building the pipes would always be wet.

Liz Prophet referred to a recent television programme about the collapse of the Twin Towers. A chemist in the UK and a leading scientist in America have come up with a theory as to why the Towers collapsed as quickly as they did. They need to do further research but they have reached a conclusion that the aluminium planes were a major factor. When the aeroplanes went into the Towers, the resulting fire set off the sprinklers but then the water reacted with the aluminium and caused a massive explosion. The burning aluminium liquid meant that the fire quickly travelled to other floors/areas.

Lee Dargue commented that whilst it is easy to test fire alarms, it was not so easy to ascertain whether a sprinkler system is in good working condition.

Duncan explained that it is possible to test the operation of the valve.

Steve Parton asked about the alternative water mist system. Duncan explained that this was a new industry which had sprung up over the last few years. It was a system which was developed by Greater Manchester Fire Brigade following a fire at Manchester Airport, principally to fight fires within an aircraft. The system introduces a lance into the aircraft to fire water mist which immediately turns to steam, takes the energy out of the fire and quenches it. The manufacturers believe that this could be a system to replace sprinklers. However, as it operates by turning water to steam, in some applications the fire may well have taken hold by the time the spray mist is activated.

Another Member commented that in an area with people still alive the steam could displace the oxygen, which could cause further problems.

George asked the audience whether any Members had any experience of a fire within their business and if so, how they had controlled it.

Three had experienced a fire and none of those businesses were sprinkler protected. One had used a fire extinguisher before the fire could take hold. Another had used CO₂.

Duncan asked the question: "What is the difference between a small fire and a large fire?" Startlingly, the answer is "a matter of a few minutes".

David Hughes has observed that in warehouses the high-level racking and shelf contents can sometimes obstruct the sprinkler system, which needs to have a certain amount of clearance – usually half a metre - in order to operate effectively. In his view a simple and effective method would be to install a height bar to indicate maximum stacking height. Operatives need to be trained to understand how these systems work.

Another Member asked how would a sprinkler system deal with a relatively low temperature but high smoke generation situation. Duncan explained that it is possible to adjust the temperature settings.

Kevin Ryder raised an insurance related question with regard to a building with an existing sprinkler system where a change of occupant led to a subsequent change of layout. This would require a fire risk assessment to be carried out following the change but asked what would be required under legislation or insurance requirements with regard to the design information of the sprinkler system in order to carry out the fire risk assessment.

Duncan referred Kevin to the legislation under standard BSEN12845 and to “go back to first principles”. Most of the time the insurance company would only be interested in whether there was or was not a sprinkler system in place.

Steve Parton asked Duncan to state the most common issues which occur in fire risk surveys.

Duncan’s comments were:

- Stacking stock too close to the sprinkler system
- Inadequate frost protection – turning off the heating system to save money with the consequence of frozen pipes and subsequent pipe leaks
- Poor maintenance programme – every 2-3 years instead of every week
- Human element – stacker trucks knocking things down, etc.

David Hughes made a comment relating to building alterations where pipes were installed through partitions but the holes made were not sealed, leading to an escape of smoke and fire.

Members’ Questions

Dr Anu Spratley’s question to Members related to the subject of **Legionella protection practices for vacant parts of multi-occupied buildings and small empty warehouses.**

Anu’s company, Cathedral Hygiene, had recently acquired a new office building with multiple-occupancy and a vacant suite. Currently there were three businesses in the building.

They have arranged for legionella testing for the occupied areas. The question is what to do with the vacant unit. HSE guidance suggests weekly testing of water systems.

Anu asked the Members present for their views and opinions regarding this issue and whether they had any similar experience regarding these types of premises.

Anu stated that some other areas were not used but have water within them.

A number of views were expressed. The consensus view was to flush the taps in all vacant areas or seldom used locations for at least five minutes every week.

Lee Dargue also referred Dr Spratley to the guidance contained in the ACOP L8: Legionnaires' Disease - The Control of Legionella Bacteria in Water Systems. ISBN No. 0-7176-1772-6.

Michael Abbott commented that it would also be necessary for Cathedral Hygiene to advise their insurance company of this changing risk.

Dr Spratley thanked the Members for their helpful advice.

George is keen to encourage similar exchanges of information and questions by way of a regular feature at the monthly meeting. Some questions may be more urgent than others but if any Member should require health and safety advice from other Members then, in the first instance, drop Liz Prohett an e-mail (secretary@bhsea.org.uk) to request that the subject be raised at the next monthly meeting.

Presentations will be posted on BHSEA website www.bhsea.org.uk

Other News, Announcements, Events

Back to Basics SHAD

Neil Boon reminded Members of the forthcoming "Back to Basics" SHAD at the Wolverhampton Science Park on Tuesday, 22 September.

The session would include an overview of construction safety and would also cover the effects of the new CDM regulations on both commercial and domestic clients.

There would also be speakers on various subjects such as Temporary Works, PASMA and the correct wearing of safety harnesses.

Skin Training Course

Liz has been informed by Chris Packham who is a dermatological engineer with our Member Enviroderm Services, about a forthcoming training course they are delivering on the subject of "Skin in the Working Environment - a practical one-day course that will enable you to create an effective skin management system" The course is on 3 November and there are still some places available at £295 per person (contact the secretary@bhsea.org.uk for further details).

SOHSA Conference – 13 October 2015

The 2015 Annual SOHSA Conference, themed "The Silent H", is quickly approaching. Due to be held on Tuesday, 13 October 2015, at Tapton Hall, Sheffield, the conference will focus on Occupational Health.

This is an ideal opportunity to hear from an incredible line-up of expert guest speakers, meet with like-minded health and safety professionals and learn more about a range of occupational health topics.

To book, simply visit the [conference website](#) and return a booking form or e-mail conference@sohsa.org.uk.

Subjects for 2016 Programme

There will be an AGM in January, followed by the annual presentation from the HSE, which will provide an update on HSE's recent campaigns and an understanding of their future plans/activities.

In the morning there will be a meeting to elect Council members. There are currently a number of vacancies for people to serve on the Council. Should anyone wish to put themselves forward for this very rewarding role, please let George or Liz know of your interest. If participation is likely to be of mutual benefit you will then be put forward for election. The role is suitable for someone who has regularly attended meetings over a long period of time and has ideas and experience which would enable them to play an active part in the proceedings and in the running of BHSEA.

George concluded the meeting by thanking Chris for his brief but very interesting presentation, Duncan for his enlightening and stimulating presentation and Anu for her question, which would hopefully lead to many more similarly useful discussions.

Special Notice

Members may recall that the Birmingham Medical Institute will not be available to BHSEA **after** the 12 October monthly meeting.

The last two meetings of 2015 will be:

- Monday 9 November
- Monday 14 December

Both meetings will be held at the Birmingham Chamber of Commerce, which is on Harborne Road, opposite the BMI front entrance.

Parking is available and accessible from Highfield Road.

We have also provisionally booked this venue for the 2016 monthly meetings. This will be confirmed in a later Newsletter.

Date of Next Meeting

2.00 pm Monday, 12 October 2015

at the Birmingham Medical Institute

Main Presentation

Construction Meeting:

'Management of Health in Construction'

Lucy McDonnell, Construction Health Risk Management Unit,
HSE

Members' Corner

'Safe Tea Break'

Jennifer Raymond, 3M Personal Safety Division

Don't forget the buffet lunch at 1.15 pm