

***Birmingham Health, Safety & Environment Association***

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Secretary: *Andrew Chappell C.Eng., MIET., Dip.E.E., CMIOSH, MCMI*

# *Newsletter*

*May 2011*

## ***Safe Maintenance Seminar BHSEA Welcomes delegates from HSE for Northern Ireland***



**L to R: Malcolm Downey, HM Principal Inspector, HSE for Northern Ireland; Ed Friend, BHSEA Chairman; Rosemary Fennell, HM Inspector, HSE for NI; Peter Galsworthy, Head of Operations, HSE West Midlands.**

## *Welcome* to Our New Members

We wish to extend a warm welcome to the following members, who have recently joined BHSEA: -

- Frank Neary, Director, Contracts Manager, C C Contracting Ltd.
- Nigel Strickland, E H & S Business Development, Brandon Hire Ltd.
- Jonathan Carr, Union Health & Safety Representative, Unite the Union
- Tim Mason, Safety, Health and Environment Manager, M.V.Kelly Ltd.
- June Harrison, Managing Director, Sherrington's Waste Management Ltd.
- Steve Gower, Safety Representative/Supervisor
- Andy McNair, Safety, Health and Environmental Manager, SPV Group Ltd.
- Andrew Shackleton, SHEQ Manager, JBMI Group Ltd.

## **Monthly Meeting 9<sup>th</sup> May 2011**

The Chairman, Ed Friend, welcomed the speaker, Tim Prestage, and guests before giving a brief report on the recent successful Safe Maintenance Seminar that had been attended by about 50 delegates, including a Principal Inspector and Inspector, from the HSE of Northern Ireland. He then asked for any members attending for the first time to introduce themselves. The following did so: -

- Andy Shackleton, JBMI Group Ltd.
- Mark Willis, Dunlop Aircraft Tyres
- Marie Sviergula, The University of Birmingham
- Andy McNair, SPV Group Ltd.
- Tim Mason, M.V.Kelly Ltd.

(Secretary's Note: Apologies for absence had been received from G.Mulholland, Bill Parker and Roger Caleb)

## **Presentation: Risk Assessment**

**Tim Prestage, Managing Director, Tim Prestage Ltd.**



Tim Prestage

**T**im started by describing the objective of his presentation was to demonstrate a user-friendly way for small businesses, with few resources, to identify their work activity hazards and devise suitable and sufficient control measures to eliminate or reduce the residual risks. He went on to say that 60% of organisations were SMEs and he had observed companies doing spray painting to roofwork and most of them were just not up to the task of carrying out risk assessment for themselves. He also added that use of consultants did not provide a good solution and recommended that employers should get involved as much as possible in the process themselves.

Tim added that it was important to appreciate the cost of ignoring risks to safety and ill-health and displayed this chart of HSE estimates, in order to motivate employers to take the subject seriously: -

	<b>Human cost</b>	<b>Lost output</b>	<b>Resource costs</b>	<b>Total</b>
<b>Fatality</b>	<b>£991,200</b>	<b>£520,700</b>	<b>£900</b>	<b>£1,500,000</b>
<b>Major injury</b>	<b>£18,400</b>	<b>£16,200</b>	<b>£5,800</b>	<b>£40,500</b>
<b>Other reportable injury (O3D)</b>	<b>£ 2,700</b>	<b>£2,600</b>	<b>£500</b>	<b>£5,800</b>
<b>Minor injury</b>	<b>£200</b>	<b>£100</b>	<b>£50</b>	<b>£350</b>
<b>Average case of ill health</b>	<b>£6,700</b>	<b>£2,700</b>	<b>£800</b>	<b>£10,100</b>

He said that something like 1 in 3 cases of ill-health consultations at GPs were work-related, so it was unwise to ignore this area of costs.

Tim then described an historic survey of Accidents in Factories from 1968, done by the Department of Employment. The sample was 621 accidents (0.5% of the total for that year), of which 308 were reasonably preventable. Interestingly, it was reported that there were 114 breaches of the law, so a minimal standard of compliance would have only prevented a small percentage of the sampled accidents. This infers that employers must not merely observe minimal compliance, they must always strive to achieve a higher standard by challenging what appeared to be “not reasonable precautions”

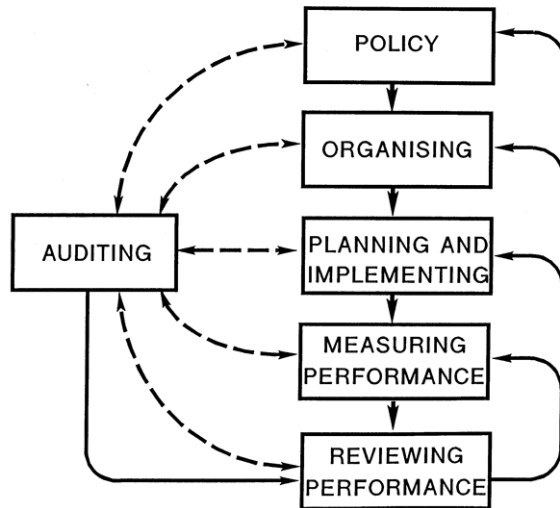
The development of Health and Safety at Work Act, shortly after this time attempted to do this and the very first legislation under this Act were the First Aid Regulations of 1981. The first structure approach to risk management, however, did not appear until 1992 when the “Six-pack” Regulations emanating from EU Directives introduced explicit obligations to carry out risk assessment. These were also incorporated into the guidance in HSG65, Successful Health and Safety Management, which launched the well-known “POPIMAR” diagram, below.

The task of risk assessment is obviously focussed on the “Planning and Implementing” stage, but all the others also have an influence on this crucial control. This is why it is important to make it as simple as possible and why the HSE developed the guidance in their “5 Steps to Risk Assessment”

The trouble is, he added, that employers find that hazards are most difficult to identify and define themselves and that, if they attempt to purchase expertise from a lot of publishers, they merely end up with an expensive manual of glossy, irrelevant Risk

Assessments that stay on the office shelf!

## THE MANAGEMENT OF HEALTH & SAFETY



To prove the point, Tim said that he has about 60 clients, employing less than 50 employees, of whom 40% do not have adequate Risk Assessments. He went on to say that the HSE templates are technically good but were not interactive enough to be ‘customised’ by the user to suit their specific needs. This demanded that the user was able to comprehend and write a fairly competent standard of English and that poses a problem where it is not their first language. The HSE method is therefore labour intensive

as well as too complex, he said. As an example, Tim cited an HSE “Example risk assessment for a warehouse”, which was 1800 words, on six pages!

The solution, Tim suggested, was a ‘Generic Risk Assessment’, that employers can edit and make specific for their situation. This could be provided, he went on, by a simple, structured checklist, where Employers can tick, or circle, the relevant factors and identify the hazards easily to select suitable and sufficient control measures. The audience had been provided with a suite of blank risk assessment proformas, with Level 1 assessments leading to Level 2 assessments, comprising the foundations of an Integrated Risk Management System (These are published on the BHSEA website). These comprised: -

- Level 1 Risk Assessment Form.
- Level 2 Hazardous Substances Risks.
- Level 2 Workplace Risks.
- Level 2 Display Screen Equip Risks.
- Level 2 Work Equipment Risks.
- Level 2 Fire Risks.
- Level 2 Manual Handling Risks.
- Level 2 Environmental Risks.
- Level 2 Other Risks (one offs)

Tim guided the audience through the completion and use of these forms and then examined the identification of hazards, which is not as easy as it sounds, he suggested! For instance: -

- Not all hazards are obvious
- Some only occur during maintenance or emergencies
- Some are not detected by our five senses, and
- Some are new and not previously thought of as hazardous

As an example, Tim displayed the photograph, below, and asked, “where is the hazard”? Apparently, this is a perfect working area, as befits a high tech., precision machine working area, in a food factory. The answer lay in something that was ‘sensed’ in this area, and many others, throughout the factory. The truth was only revealed when a noise frequency analysis detected a 31.5 Hz, low frequency sound,



emanating from the centrifugal fan in the foreground. Tim went on to show photographs of bell foundry workers who failed to wear protective boots, when casting molten metal, and a steam lance used for pipe cleaning that dropped chemicals on workers below! Both of these were examples, he said, of what could be missed in initial risk assessments and where the application needed to be monitored, or where their proximity to 'other workers' had to be considered.



Where is the Hazard? It's invisible – but you can hear it!

Factors like this could be identified by consulting operators who would be aware of 'less obvious' factors like this and whose involvement would ultimately secure an improved commitment to the successful operation of the risk assessments.

Tim followed this up with a hazard-spotting case study in a warehouse, just to liven up the audience a little bit! The warehouse employed 14 workers, on a 50-hour working week and received some visitors to the premises. The first stage of the exercise was to conduct a Level 1 risk assessment, by observing a cartoon view of the warehouse. Then Tim displayed a completed Level 2 risk assessment for the Workplace to demonstrate the progression from hazards to risks.

Tim concluded by saying that the identification of risks should be done by relying on the best information available and it was a definite advantage if they were also trusted by Insurers! The most obvious were the HSE and CITB, which had been established the longest in UK. Increasingly, Trade Association guidance is found to be good and Tim commented that the following were excellent quality sources: -

- Occupational Safety and Health Administration (OSHA) - USA and Worksafe (Australia)
- Occupational Safety and Health, New Zealand.
- Canada's National Centre for Occupational Health and Safety (CCOHS) HSG129, Health and Safety in Engineering Workshops

The Chairman thanked Tim for his very comprehensive presentation of a very suitable risk assessment system for most SMEs and the members joined him with a vote of thanks.

# Members' Corner

## Major Fire Risk Assessment Programme

*Mark Hoare, Health and Safety Manager, University of Birmingham*

The University of Birmingham became concerned about their compliance with the Regulatory Reform (Fire Safety) Order 2005, Mark said, following recent fluctuations in levels of the Fire Safety Advisers (FSAs). Given the immensity of catching up with fire risk assessments for some 200 buildings over a huge campus, it was logical that the University decided to fund the exercise by outside contractors. Mark went on to describe the scope of this task in terms of locations and activities to be covered – all within three months!



Mark Hoare, H&S Manager, University of Birmingham

Mark said that this aerial photograph of the main campus only gave part of the story because there were also remote sites, with premises ranging from 2011 to the 16<sup>th</sup> Century, including 12 Grade 2 Listed Buildings or above!



Just part of the huge campus!

The management of a programme of this size also posed a considerable management challenge, Mark added, partly because of the following problems with using contractors: -

- Suitability of the firms – several were tried
- Contractors were not familiar with Universities
- The size/complexity of the University Estate/buildings/access

restrictions.

- Consultants use self-employed sub-Contractors
- No co-ordination between contractors – they work in isolation.

- Presentation of reports/information is inconsistent
- All start from 'zero' for each building
  - Management report each time
  - Examination of test/examination records each time
- 'Back-Covering' reports – Every detail covered, yet no risk assessment!

Mark cautioned that it was important to remember that the Consultants were working for YOU and that you set the Agenda! Part of the problem was that it was common to come across 'Unhelpful Reports' to the effect that: -

- All staff should have fire safety training
- Fire Alarms need extending
- Turn locks should be replaced by pushbars
- Check Emergency Lighting levels
- Remove waste from outside Room XXX

The solution, Mark said, was: -

- Selected a consultant firm on recommendation
- Appointed a manager to be in overall charge of the contractors to: -
  - moderate their reports
  - induct the contractors
  - agree risk levels with FSAs
  - agree what should be in the risk assessment
  - agree the style of presentation of the information
  - carry out *one management RA* for the University
  - be the point of liaison for the University FSAs.

This major project was completed on time and within the budget, Mark commented, and the significant outcomes were: -

- FSAs divide their work between Estates and the Departments
- Estates divide work into 'Maintenance' and 'Projects'
- Estates import all information into an in-house monitoring package called 'Fire Risk Estates Department' (**FRED**), including West Midlands Fire Service inspections.
- Nothing 'imminently dangerous' appeared in the FRA because any remedial work was actioned immediately.
- Facility Co-ordinators in the Faculties arrange for their work to be done
- Estates Projects programme work into their refurbishment plans
- Maintenance Officers set out programmes of work and discuss with building users.
- Estates/FSAs hold 6-weekly progress meetings
- College/Administration H&S Committees monitor their progress
- A summary of monitoring is reported to the University Health and Safety Committee

Mark concluded by saying that FR Reviews were done on a priority system e.g. sleeping areas and that they changed only for significant refurbishments or change of use.

Another outcome was a challenge to reduce the number of false alarms, with the Fire Service questioning any Automatic Fire Detection activation, unless involving sleeping accommodation at night. The University would be asked to 'confirm' the fire before any response, although they would respond to any call point activations.



# **Monthly Meeting 14<sup>th</sup> March 2011**

## **Presentation: HSE On-line Tool for Respiratory Protective Equipment (RPE) Selection**

**Bob Rajan, HM Principal Inspector.**

**D**ue to the unavoidable absence of the Construction Chairman, Gerry Mulholland, the Secretary, Andy Chappell introduced the speaker, Bob Rajan, whom he had known for many years. Andy continued by saying that Bob was an Occupational Health specialist with the HSE and had been heavily involved in the DERM project on skincare, with the Safety Groups UK. Andy added that today's presentation was linked to another initiative on RPE selection, launched by the British Safety Industry Federation (BSIF) last year and that their campaign packs were on the free leaflet table.



**Bob Rajan**  
**HM Principal Inspector**

Bob started his presentation by commenting on a past HSE Health priority on addressing skincare, which the SGUK DERM project targeted. Now, he said, the priority was moving to include the use of Respiratory Protective Equipment (RPE) that, again, was being strongly backed by SGUK and BSIF. He added that something like £300M of RPE was being used annually and it was estimated that something like 50% of this was being wasted. This meant that companies, given average net profits, must increase their gross turnover by three times the wastage figure to maintain profitability! That should give companies a very strong motivation, he continued, to prevent wastage by: -

- Correct selection of RPE
- Proper maintenance of RPE, and
- Correct use by trained operatives.

This led to the BSIF Initiative, “Clean Air – Take Care” and the HSE drive for Face-fit Testing to overcome the crude approach to wearing RPE. Just like protective clothing, RPE must fit correctly if the desired level of protection was to be achieved. Failure to do this, Bob warned, had cost 15 lives in one year, because of the use of incorrect RPE in confined spaces! He reinforced this message with a medical DVD presentation, which included a worker's reflection on his failure to use RPE.

Bob then opened the RPE Selector Programme, which had the crucial warning in the first line to “Choose the correct RPE for your task, as a last line for respiratory protection”. A timely reminder about the hierarchy of risk control that is the basis for best practice in risk management! The tool is formatted in seven pages, to guide the user through the seven stages of the process. Page 1 outlines the information used by the tool about: -



- the work area
- the substance to be protected from
- the task and worker who is to be protected

It also includes a caution NOT to use the tool for Emergency escape or rescue, radioactive or biological agents, or underwater work! More guidance on the selection, use, maintenance and storage is given on Page 2, together with additional reminders about the risk control process and when RPE is likely to be needed.

Moving on to Page 3, the user is prompted to say whether the work is in a confined space, or lacking oxygen, if there is a risk of sudden release of substance and if it might be flammable? There is also a very helpful number of weblinks on this page to other sites where the user might seek profession advice, such as BOHS, IOSH, BSIF, IIRSM and SGUK. At this stage, the tool will probably advise the user to select Breathing Apparatus, if the work is in a confined space, before advising to continue using the selector.

Page 4 then gives advice on how to use safety data sheets and even distinguishes between the correct method under CHIP or CLP Regulations so that the transition through the changeover can be completed. It also gives guidance on how to treat “Process Generated” substances that, of course, do not have safety data sheets and includes a special approach for mercury! The progression to the Pages 5a, 5b, 5c or Page 6, has a distinct link at the bottom of Page 4.

For the sake of demonstration, Bob chose to proceed to Page 5c for a process-generated substance from welding of stainless steel. This entailed selecting the correct task to tick and also deciding whether large (measured in tonnes or m<sup>3</sup>), or medium (kilogrammes or litres) were evolved. This allowed progression to Page 6, which required information on: -

- whether precise communications were needed for safety reasons      Yes/No
- if the energy needed for the task is Heavy/Medium/Light              Tick which
- if the time wearing RPE before a break is >1 hour/<1 hour              Tick which

Page 7 is a printout of the input data and a pictorial recommendation of suitable RPE, with additional distinction between a good face fit for the wearer and ‘Other’ wearers. Bob concluded by saying that this tool was designed to give employers a much better return on their investments as well as giving workers a much higher level of health protection!

Several members asked to clarify several points and Bob was able to show that the answers appeared on the various pages of the selector tool, which showed that it had been carefully designed, even to accommodation of imminent new legislation! As there were no more questions, the Secretary closed the meeting and asked the members to join him in thanking Bob for his excellent presentation in the normal manner.

# *Members' Corner*

## *Scaffolding – Getting it Right!*

*Brian Dunckley, BHSEA Construction Section Committee*

In recent years, a new BS12811 has been introduced for the erection of scaffolding that has seen new guidance document **TG20:08 Scaffolding Guidance**, published by the **National Access and Scaffolding Confederation (NASC)**. Brian Dunckley produced a presentation about these changes for the Work at Height WWT SHADs throughout 2010 and this Members Corner presentation is a brief version of the original.



**Brian Dunckley**

Brian introduced his presentation by contrasting TG20:08, the guidance to good design practice, with NASC SG4:10, Preventing falls in Scaffolding and Falsework, which is the matching method of safe working for erection of all scaffolding. Brian went on to say that it was crucial that these standards should be met by Competent Scaffolding Erectors and Competent Scaffolding Inspectors, trained to NASC requirements. Equally, users or specifiers of scaffolding work need to be aware of the new standards and this presentation was aimed at the non-professionals so that they could be more aware of non-compliant structures.

The essential level of knowledge was to identify the difference between “Basic Scaffolds” and “Design Scaffolds” and to know what questions to ask to ensure compliance. This difference is illustrated in the following photographs

Complies with the Wind factor ‘S’ from TG20 and is tied correctly



**1 Working Lift but 3 lifts actually boarded**



**Multiple boarded lifts and working lifts**

This *could* also be classified as a “Basic Scaffold” IF

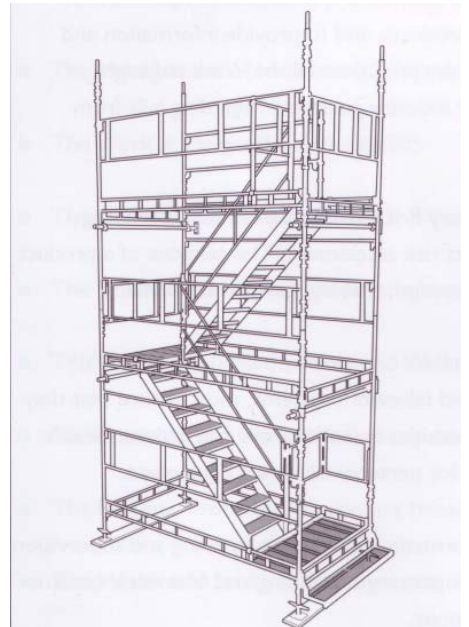
only *1 Lift* was designated as a working lift!

Where a scaffold cannot be tied correctly, it then becomes a “Design” Scaffold.

Brian went on to describe some more key recognition features of a Basic Scaffold: -

- Must have façade bracing to full height – 1 for every 6 bays
- Must have ledger bracing to full height – at every other pair of standards
- Plan bracing is required to scaffolds 8 metres high, or above, if façade bracing is not continuous over 2, or more, bays
- All platforms must have adequate toe boards that must be high enough for the work being done.
- All scaffolds must be correctly tied in. Putlog tubes are NOT an approved tie.
- The preferred method of access is by staircase.

Brian emphasised that all scaffolds outside this specification are “Design” scaffolds, which must be designed by a specialist and proof of this must be provided to the user on site. All scaffolds must be erected by competent scaffolders holding a current Construction Industry Scaffolders Record Scheme (CISRS) Card and must be erected safely to one of the methods prescribed in SG4:10, for creating a “**SAFE ZONE**”, which should be the most suitable method for the scaffolding application planned.



**System Staircase Assembly**

for the scaffolding application planned.

*The HSE will no longer accept the unprotected traversing element of the “tunnelling” principle featured in previous versions of the guide.*

The finally, it is important to: -

- Ensure that scaffolds are inspected regularly and are fit for use at all times
- Ensure that any ties removed for temporary access are replaced and bracing is complete.
- Ensure that working platforms are complete.

## ***Date of the next Meeting***

**2.00 pm on Monday 13<sup>th</sup> June  
at the Birmingham Medical Institute**

### ***The Safe Use of Gas at Work***

***Nigel Williams, Rainsford & Lynes***

*As yet another recent gas explosion in Yorkshire has emphasised the inadequate knowledge, by small companies in particular, about gas safety, this topic is very timely.*

*The Williams family (no relation to the speaker) have owned this company for over 100 years, producing the famous Bullfinch gas appliances for the construction industry. This promises to be a most interesting talk on gas safety, based on their Gas Safety Precautions published on the Internet to demonstrate their interest in portable equipment. Their expertise has been developed at first hand in their research facilities, manufacturing operations and long history for over a century.*

*To add a somewhat lighter tone to a serious subject, Nigel should be able to give us a preview of their unique Beacons, which will be lit next year as part of the National Festivities, on church towers and the top of hills throughout the country!*

### ***Members' Corner***

**David Hughes, Fork Lift Truck Awareness for non-operators**

***Don't forget the buffet lunch at 1.15 pm!***