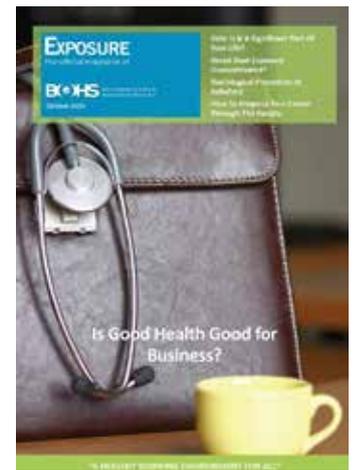
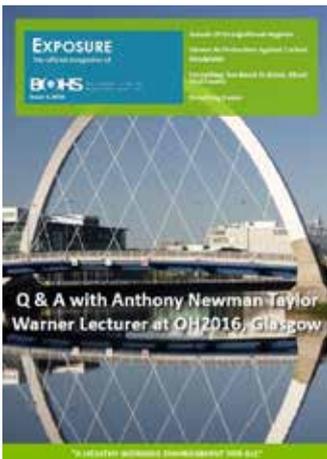
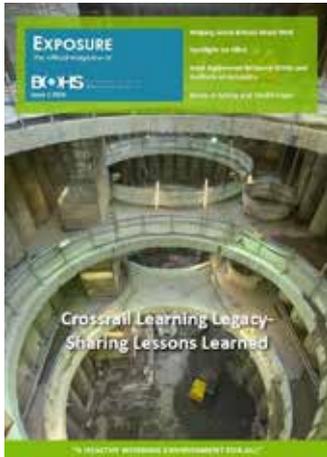


EXPOSURE

The official magazine of

BOHS The Chartered Society for
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**From the President
Tracey Boyle**



This last quarter has been a little quieter than my first six weeks, although there has still been plenty going on. And lots going on in the outside world as well. Brexit was the biggest news in the world in June. I was in Italy at the time (I had a postal vote) and went to bed on the 23rd June having assured our Italian hosts that the UK would still be in the EU in the morning. I woke up at 3am to find that Sunderland had voted Leave and woke again in the early morning to find that the UK had voted Leave. The Italians were mystified!

The Health and Safety at Work Act has stood the test of time; it didn't require any changes when we joined the EEC and it won't require any changes when we leave the EU.

With all the doom and gloom of economic forecasts, it was good to see so many positive messages from all the UK health and safety professional organisations, reassuring everyone that work to protect workers would go on as usual.

This made me think about the role that the EU has played over the years with regard to health and safety in the UK and

what effect, if any, Brexit would have on the future of health and safety in the UK.

Our Factory Inspectorate and legislation have been the envy of the world. Our first piece of health and safety legislation was as far back as 1802 when the Act for the preservation of the Health and Morals of Apprentices and other employed in Cotton and Other Mills, and Cotton and other Factories was passed. The first Factory Inspectors were appointed when the Factories Act 1833 was passed.

Through the relentless hard work of members of BOHS and allied professionals, the message about the burden of ill-health seems to be getting through.

Following the Robens report, the Health and Safety at Work Act 1974 was passed. This more or less coincided with the UK's entry into the European Economic Community (EEC) in 1973. At that time there was a directive in place regarding classification, packaging and labelling, but it was not until the 1986 Single European Act that there was an increase in health and safety directives coming from Europe. The Health and Safety Framework Directive required little change in UK legislation, as it mirrored much of what was already in the Health and Safety at Work Act 1974. Further directives have been enacted by UK legislation, which have included: the COSHH Regulation 1988; the Noise at Work Regulations 1989; the "six-pack" in 1993; various updated asbestos regulations; classification, labelling and packaging regulations; and many others.

In recent years there have been suspicions in Government circles that the UK has been "gold-plating" the requirements of the various EU directives, and that health and safety legislation has been placing a burden on UK industry. Reviews by Lord Davidson, Lord Young, Professor Lofstedt and Martin Temple found little or no evidence of gold-plating.

The Health and Safety at Work Act has stood the test of time; it didn't require any changes when we joined the EEC and it won't require any changes when we

leave the EU. Although there have been plenty of pieces of secondary legislation passed to enact EU directives, these, in the main, were amplifying and interpreting the requirements of the primary legislation for specific workplace hazards. These pieces of legislation and their accompanying Codes of Practice tell employers what it is they need to do to comply with the Health and Safety at Work Act, and to protect their workers' health.

For me, and all members of BOHS, I suspect the biggest burden on UK industry is the continuing toll of ill-health and deaths from occupational disease. Through the relentless hard work of members of BOHS and allied professionals, the message about the burden of ill-health seems to be getting through. There is a long way to go though, and BOHS is continuing to work with partners to show employers how to protect their workers' health.

We still need help from you, BOHS members, in order to continue to make improvements to worker health a reality.

BOHS has a new five-year strategy, which builds on the work of the last five years. Some of the current projects include:

- The development of a new Faculty for Asbestos Assessment and Management;
- The expansion of the Breathe Freely campaign to cover other important health risks in the construction industry;
- The expansion the Breathe Freely campaign to other industries;
- The production of new worker health guidance materials for organisations.

So, there's a lot happening, and it will happen whether we are within the EU or outside it. We still need help from you, BOHS members, in order to continue to make improvements to worker health a reality. So why not contact Head Office with the offer of a few hours here and there. It'll give you a warm fuzzy feeling inside and some CPD points as well!

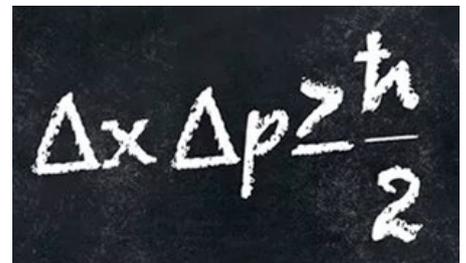


change4good
Steve Perkins



August is usually known in Westminster as the ‘silly season’, when political news is so scarce the media struggle to find content and so we end up with a news cycle full of bizarre and odd stories dragged up from the depths. As I write this in early July there is no shortage of political news. The question now is whether anyone can actually keep up with it all!

So Britain has voted to leave the European Union. Barring some constitutional legal spats we can expect the formal farewell to occur sometime in the autumn of 2018, following the two year countdown from the invocation of the now famous ‘Article 50’. This seismic shift has social, economic, political and constitutional implications.



Change and Uncertainty

It seems to me that the desire for certainty and control is one of the dominant traits of the modern world. Perhaps our scientific and technological progress has created the impression that we now have the means to achieve this dream. The events of recent days should remind us of how foolish a thought this is. Change and uncertainty are some of the few ‘certainties’ in life.

Political parties, businesses and organisations of all shapes and sizes have been falling over themselves to try to fill the void of uncertainty with predictions, premises and promises. I wonder how many will have proved accurate when we look back two years from now? People rarely look at the history of their prediction accuracy, whether in politics, business or even science.

Vision
A healthy working environment for everyone.

Mission
We aim to become the premier forum for information and expertise about protecting people from health hazards in the workplace.

Values

- Science based organisation
- Impartial and trustworthy
- Committed to improving health at work
- Committed to sharing information
- Guardian of competency

Goal
By 2020 we aim to become the partner of choice for worker health protection.

I won't pretend to offer any wisdom about what the future will hold at this point. Trying to do so would be rather like applying Heisenberg's Uncertainty Principle to politics; the more accurately we think we know the position of a given politician, the less accurately we know their trajectory!

What will not Change?

Maybe a more helpful way of considering the ongoing effects of the Brexit decision, in the context of BOHS, is to look at what will not change.

Occupational hygiene as a profession is well used to adapting and navigating change. By its very nature the workplace is an environment of continual change, and over the years the profession and practice of occupational hygiene has adapted to apply the principles of worker health protection to new environments, processes and hazards.

Remaining relevant, through flexibly adapting practice based on timeless principles, is the hallmark of the discipline. BOHS, as the Chartered scientific and professional body for the discipline in the UK, is no exception.

Our new 2016-2020 strategy provides a firm foundation from which we can meet the challenges of the future, whatever they may turn out to be. You can download our new strategy brochure from the website via this link:

www.bohs.org/wp-content/uploads/2016/05/BOHS-Strategy-2016-2020-web.pdf

As you'd expect, our Vision, Mission, Values and five year Goal all remain unaffected by Brexit. I want to drill down further into the underpinning approaches as to how we intend to achieve these things, whilst remaining true to our Values. This will reveal some key themes that won't change as we move forward in the new political, social and economic environment.

Raising Awareness

In business terms, the place of occupational hygiene in many sectors of industry could be deemed 'immature'. That doesn't mean the science and practice are not grown up, rather, that in the complex and competing world of business and organisational priorities, hygiene hasn't yet found its rightful place and developed its business rationale sufficiently.

In business terms the place of occupational hygiene in many sectors of industry could be deemed 'immature'

In fact, in some sectors we are still at 'first base', as our American cousins would say. That's why raising awareness of occupational hygiene is one of the fundamental pillars of our strategy.

We have pursued this with a laser-like focus through our Breathe Freely

campaign in the Construction Industry, and over the last year or so we have begun to see the fruits of this approach.

We always said that Construction would be the first sector we sought to make a difference in, and there would be others to follow. Whilst we will continue and expand our work in the Construction sector, we are now at the point of reviewing where we go next.

We have created a high quality range of freely available resources on our www.breathefreely.org.uk website and learnt much from this first foray into the arena of industry initiatives. As we look to leverage Breathe Freely into other sectors, we won't be starting from scratch, but rather building on this experience.

Commercial Opportunity

In order to continue to be able to provide freely available, high quality awareness materials, events and tools we need to continue taking commercial opportunities as well as seeking out appropriate sponsorship.

BOHS has never relied on government funding or private donations. We have retained our scientific independence through successfully commercialising our expertise in ways that ultimately benefit worker health and the profession. As a charity seeking to influence policy and practice, this is an approach that will certainly continue unchanged.

Building on our freely available campaign materials for the construction sector, we are now looking at what training and development opportunities we can provide to help the industry embed the awareness and understanding that Breathe Freely has helped provide. We are also piloting international versions of our highly respected UK asbestos qualifications in Australia and New Zealand. Thus making tried and tested UK expertise accessible overseas, and providing a potential new revenue stream for BOHS.

Partnership Working

As a small organisation with a huge vision we know that partnerships are fundamental to progress. We can't

achieve all that needs to be done alone and probably never will be able to. In this sense BOHS doesn't 'threaten' the position of any other organisation and no one else in the UK does what we do. That means we are ideally placed to be a catalyst for partnerships and alliances that advance the cause of worker health protection.

As a small organisation with a huge vision we know that partnerships are fundamental to progress

So, as we have done over many years, we will continue to pursue partnership working with other organisations where interests, values and opportunity overlap.

Our longstanding partnership working with the regulator, the Health and Safety Executive, continues to thrive and will be even more important in a post-Brexit world where many regulatory decisions will need to be taken nationally.

As we grow our conference activity we will seek to work with other organisations as we have done in recent years with the likes of IOHA, ILEVE and OSHI.

Working with partners lies at the heart of the Breathe Freely initiative in the construction sector. As well as the regulator, this has involved working more closely with those companies seeking to 'do the right thing'. As we plan initiatives into other sectors, you can expect this to continue and broaden to include both employer and employee organisations.

Across the Health and Safety sector we now regularly provide for other organisations: speakers for conferences; stands for expos; content for magazines and websites; and input and advice for programmes and initiatives. This adds value for our partners like UBM, IOSH, BSC and IIRSM, as well as increasing the channels through which our messages can be disseminated.

Adapting to Change

Over the last seven years our members tell us that BOHS has changed almost beyond recognition – in a good way! That

hasn't been 'change for changes sake', as the old criticism goes. Rather, it's been a necessary adaptation to catch up with where the environment we operate in had got to.

Maybe we still have some catching up to do? But, we also want to get ahead of the curve and not just adapt to keep up, but adapt to lead. That means we will continue to look strategically and critically at everything we do, as well as horizon scan and attempt to take account of new developments in all our plans.

So, in this issue of Exposure you'll discover how the Annals is adapting for the future in the world of exposure science research. These exciting developments come off the back of an intentional strategic review of the journal, which we launched as part of the wider Society strategic review.

As I reported in the last issue of Exposure we are also developing exciting plans for a new Faculty within BOHS, to provide a

professional home for those working in the field of Asbestos Assessment and Management.

Over the coming years there will be more new initiatives which broaden our umbrella and widen participation in the Society, as our strategy sets out.

"... we also want to get ahead of the curve and not just adapt to keep up, but adapt to lead."

Promoting the Profession

One area where we do need to 'change to catch up' is in our promotion of the profession and its benefits to industry. Historically BOHS has always been proud of our professional members and highlighted their skills and achievements. That certainly won't change. But the result of that focus has tended to be a lot

of internal activity; 'talking to ourselves', if you will.

Our new strategy sets out clear objectives for promoting Chartered status and our professional progression routes, as well as marketing the value of the profession to business.

Through the Breathe Freely initiative and our support to the Health in Construction Leadership Group work, we are beginning to see a change in the understanding of employers regarding the value of professional occupational hygiene. We are learning that BOHS can help to stimulate demand for hygiene services.

As this trend hopefully continues, the next challenge will be to work out how best BOHS can stimulate the supply of occupational hygienists. Our aim is to move from a traditionally passive approach to these issues to a proactive position. Leadership requires nothing less.



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Head Office Round-Up

BOHS at Safety and Health Expo 2016

By Caroline Smith

Leading health and safety event, **SHE2016**, took place once more at ExCel, London, from 21 – 23 June 2016 – again running alongside the IOSH conference.

For the past few years, BOHS has supported this major show by sponsoring the Occupational Health Theatre, by providing speakers for the programme of health and safety presentations during the three days. Some of the topics covered were:

- Progress and challenges in mitigating asbestos exposure
- Managing workplace health risks – know your strengths and weaknesses
- Working together to beat occupational cancer – spotlight on silica
- Managing exposure in a dynamic environment – the Crossrail project
- Tackling the burden of work-related ill-health - what sort of health?

The above is just a very small selection of the overall programme. The sessions were very well attended – with some being standing room only!



Very busy on the BOHS stand!

In addition to sponsoring the theatre, BOHS also had an exhibition stand. This approach for the event works well for us, as it provides dual channels to publicise our messages and increase awareness of BOHS and the importance of worker health protection.

For the past few years, BOHS has sponsored the Occupational Health Theatre. Sessions were very well-attended, with some being standing room only!

The BOHS stand was once more located very close to the theatre. This location worked really well, as many delegates visited the stand after attending the theatre. The stand was manned by members from BOHS head office, along with a number of volunteers, i.e. BOHS members. Stand ‘traffic’ levels were very high, and visitors showed interest in key areas:

What is BOHS and what do we do exactly?

We were able to offer a concise overview here, aided by our new ‘About Us’ mini brochure that we produced specifically for the event – based on feedback from last year’s SHE, where many people were asking just that. The brochure, ‘A healthy working environment for everyone’, aims to provide a snapshot guide to what BOHS does, and promotes the importance of treating ‘health’ more like ‘safety’, i.e. raising its profile so it gets the same, considerable exposure that safety does. It also features a useful infographic that conveniently shows how occupational hygiene (misunderstood by many people, especially at exhibitions!) overlaps with the better-known/understood areas of ‘occupational health’ and ‘wellbeing’. You can view the new brochure on our website: <http://www.bohs.org/wp-content/uploads/2016/06/About-BOHS-mini-brochure.pdf>



Standing room only for Steve Perkins’ theatre session!

Head Office Round-Up

We signed up lots of new BOHS members!

BOHS membership

Again, last year's experience taught us that many delegates wanted to join BOHS on the day! So, keen to take advantage of this, we made sure we were set up to maximise the opportunity. We promoted a special membership offer at the show, and also produced a new brochure that neatly summarised the benefits of becoming a BOHS member. This approach proved really successful, with the stand manning team pulling out all the stops and signing up almost 40 members. Subsequently, back at the office, the Membership team worked hard following this up, to ensure payments were taken from the members and membership packs were sent out. You can view the new brochure on our website:

<http://www.bohs.org/wp-content/uploads/2016/07/BOHS-Membership-flyer-6pp.pdf>

If you haven't helped out at a BOHS event before, why not consider giving it a go?

The support of our volunteers in manning the BOHS stand was greatly appreciated, and it's fair to say there was a really good 'vibe' on our stand during the event. All the volunteers said they really enjoyed the experience (we didn't twist their arms, honestly!), especially those who were manning the stand for the first time. So if you haven't helped out at an event before, why not consider giving it a go? If this appeals to you, then please email to register your interest with either caroline.smith@bohs.org or sharon.brunt@bohs.org

The Qualifications Team

By Paul Johnson

In my last article for Exposure, I introduced two new members of the team and predicted that we would be

filling the final vacancy within a few days. I am delighted to say that my prediction was accurate and we welcomed Natalie Horton to the team a few weeks ago.

Natalie is our new project manager with a key role in helping us to take advantage of the many exciting opportunities which lie before us. We already have a long list of qualification proposals to consider and there are no doubt plenty of other ideas to be unearthed. On top of that, our work to develop courses for specific industry sectors continues to gather pace.

In my usual cautious way, I temper my considerable optimism about the future with a hint of reality drawn from long experience. The qualification proposals will go through a proper evaluation process before any further work takes place. This is a notoriously tricky job, with best estimates suggesting that awarding bodies generally have a high number of false starts – around one third of qualifications failing to attract the forecast number of candidates. We hope to do much better than that!

One of my aims over the years has been to improve the way we present the undoubted excellent occupational hygiene content in our qualifications. We are confident that Natalie, with her experience of the publishing world, will accelerate us towards achieving this aim. We have already made a start by incorporating some of our syllabuses into qualification specifications which enable us to provide more detailed information, such as a profile of BOHS, the background to the qualifications and progression routes for candidates. Additionally, we have taken our first steps into providing learning and teaching materials, to add value to our qualifications and to improve the quality and consistency of delivery. Our new initiative, developing a course for the construction industry, will move this to the next level.

Of course, our new website provides a great platform for us to publish these sorts of materials and to reach the tar-

get audiences. We have been delighted by the feedback we have received on the revamped qualifications section of the website, especially as we are at the start of the journey, and see a number of ways which will make it even better.

Membership and Conferences Update

by Shani Jackson

Membership

The renewal and CPD chasing cycle is finally complete. Thanks to all members for all the submissions. We've extended both deadlines throughout the year to give all members the full opportunity to make submissions in the midst of our system updates (which resulted in a few teething problems early on). The new system will enable us to tighten up on deadlines in 2017, and also automatically levy the late submission charge for CPD. To make things easier and save time, any conferences or events that are booked through the membership portal are now automatically added to your CPD record.

Our attention will shift for the remainder of the year now that renewal and CPD administration is complete, so that we focus more on growing our membership base, which is a key part of the new strategic plan.

To make things easier and save time, any conferences or events that are booked through the membership portal are now automatically added your CPD record.

We have a number of ideas on how to do this: we plan to work with other associations to promote BOHS membership - we're working with the Learning & Training Committee to attract student membership from those who attend introductory lectures in occupational hygiene as part of their university course, and we're also planning to reinvigorate the 'member get member' scheme later in the year.

If anyone has any further suggestions, we would love to hear from you. Either contact me, or speak directly to one of the Membership Officers: Claire Creed or San Dosanjh.

Technology in Professional Qualifications

In the last issue, I talked a little about the intense focus over the last six months on updating the technology used within the Member Services team.

In the last few months, there have been some further developments with the

www.bohs-hub.org website, which is the site we're now using for all those members who are completing one of the professional qualifications, enabling them to electronically submit their PLPs, PEPs, and book their written and oral examinations. Firstly, we've rebranded the site to match our new website, and ensured that it is mobile- and tablet-friendly. Secondly, we've done some work with the server to speed up the processing time, following some feedback from users who told us that moving between the pages was very slow!

Any members working on these professional qualifications will be supported by Thelma Thompson. The self-service style site is designed to be more convenient than the old paper approach, and we understand that also having someone on the end of a phone is important.

We would welcome any feedback from members currently completing a qualification about the site or their overall experience. Please send an email to Thelma or I to let us know what you think

New Researched Essay Question Topics

Ian Kellie, Chief Examiner



At its May meeting, Faculty Board selected the following topics for the next set of Researched Essay questions, to be available from 1 July 2016.

Review critically the approaches to assessing exposures to nanoparticles

Discuss critically the options available to reduce noise levels from industrial ventilation systems

Review the evidence for certain types of man-made mineral fibres being classified as potential carcinogens

Candidates for the Diploma of Professional Competence in Occupational Hygiene should choose one of these question topics once they have had a positive assessment of their Professional Experience Portfolio.

For more information on completion and submission of the Researched Essay, see the Qualification Guide available from the bohs-hub.org website.

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The Chartered Society for Worker Health Protection

New Directions for the Annals of Occupational Hygiene



Dr. Noah Seixas, Editor of *The Annals Of Occupational Hygiene*

The Annals of Occupational Hygiene – now publishing its 60th volume – means a lot to many people. It is a highly valued source of rigorous scientific investigation in the various facets of occupational hygiene. It is also a highly valued ‘product’ of the BOHS, providing a foundation for the evidence-based practice we all strive to achieve. Despite the journal’s solid reputation built over its many years of publication, both the field of occupational hygiene and the Annals is at somewhat of a crossroads.

Both the field of occupational hygiene and the Annals is at somewhat of a crossroads.

The world of work, and the hazards present in the lives of workers, have been substantially transformed over the past several decades. The organization of work has become highly ‘fissured’ with fewer people in long-term full-time jobs. Exposures, and, at least recorded occupational injury and illness, are steadily decreasing. Globalization has transformed both where work is done and

who is doing it. More and more workers carry work home with them, and take the stresses of daily life into the workplace, thus making the clear delineation of work versus non-work environments increasingly meaningless. In concert with these profound changes in the world of work and risk, the publication of scientific research has become more competitive. In order to stay on the

To stay on the leading edge of the science of preventing work-related injury and illness, the Annals must also evolve

leading edge of the science of preventing work-related injury and illness, the Annals must also evolve. The Editor in Chief has spent the last year exploring options for changing the Annals, through extensive interviews and analysis of published papers. As a result of this analysis, the Editorial Board recommended changing the name of the journal to:

The Annals Of Work Exposures and Health

This name was chosen to retain the

identity of the journal which is associated with “The Annals”, while signaling an interest in all exposures occurring at work and their links to health. It is recognized that changing the name alone will not accomplish our goals, but we believe it will help signal to occupational hygiene scientists that we are seeking a broader definition of ‘exposure’ and the impact that working conditions can have on the health of workers.

This name change has been accepted and will take effect from the first issue of 2017.

If you have any reactions or input on this proposal, please share it with the editor, Dr. Noah Seixas, at AOHed@uw.edu.

Further perspectives on the evolution of The Annals.

John Cherrie, Editorial Board Member



Change is never easy, but without change our institutions can become outdated and cease to have real influence.

Occupational hygiene has a history of embracing new tools and strategies, and a proud tradition of driving forward new ways to help protect the health of workers around the world. BOHS has updated and expanded its core values to become The Chartered Society for Worker Health Protection. It’s now time for the society journal to look to the future and ensure that it continues to be relevant to modern workplace problems.

The Annals Editorial Board, under the leadership of Noah Seixas, has consulted widely and come to the conclusion that the focus of the journal needs to change to ensure that it continues to influence the science base of occupational hygiene practice. We have identified that the essence of occupational hygiene is the relationship between work exposures and health. Changing the journal name to Annals of Work Exposures and Health and re-defining our scope, are part of the process of modernising the Annals. Of course the new name on its own will not ensure success, and over the coming year you will see a number of commentaries on a range of new topics. I'm sure it will be a great opportunity to learn about workplace exposure science from a trusted source.

I joined BOHS in 1980 and published my first paper in The Annals of Occupational Hygiene in 1984. Over the years I have published sixty-nine papers and letters in the journal. The Annals has been a valued source of information and a channel for me to communicate important research findings with colleagues and occupational hygiene practitioners around the globe. While it will not be easy to get used to calling it Annals of Work Exposure and Health, it will always be "The Annals", I am looking forward to this new chapter of our journal.

Trevor Ogden, former Editor and current Editorial Board Member



The late Stan Silk explained "occupational hygiene" in Croner's Handbook of Occupational Hygiene as follows:

"Hygiene is generally defined as the maintenance of health and the prevention of disease. Occupational hygiene therefore applies this definition to the place of employment." Perfect sense, and perhaps early in the 20th century, when public hygiene had made such advances in combatting the disease through preventive measures, even the public might have understood it. But we all know that today "hygiene" conveys a

We have identified that the essence of occupational hygiene is the relationship between work exposures and health.

much more limited sense, and makes people think of cleanliness rather than combatting disease. And a lot of the people contributing to the sciences to which occupational hygiene applies, may not even have thought of their work as relevant to combatting disease. I was one of them. I first came across The Annals in about 1968 when I was working in Australia with a cloud physics unit. We were trying to capture cloud particles by impacting them on glass slides, and I read the 1967 May and Clifford paper on impaction. I wondered how a journal with a useful paper like this came to have such a peculiar name. Later I got involved in occupational hygiene and understood, but that experience gives me sympathy with people in related fields who cannot relate to the journal name.

For the Annals, the authors are our customers, because getting good papers is the key requirement

In the late 1990s the Editorial Board recognised this problem and unanimously agreed to change the journal title. In those days the Board was almost entirely British, so we consulted the International Advisory Board before going to BOHS Council. To our surprise, the International Board split 50-50, because even researchers recognised the importance of occupational hygiene as a discipline, and saw the journal title as helping recognition of that discipline.

So the proposal never went to BOHS Council. But the problem does not go away, and last year's survey of potential authors was a clincher I think. For The Annals, the authors are our customers, because getting good papers is the key requirement – if we get those, then getting readers will largely look after itself. The potential authors saw the title as a puzzle, and perhaps an obstacle, and the new title should look after this. The strapline still refers to causation and control of work-related ill-health, and I hope that this inbuilt explanation of what the subject is all about will strengthen rather than weaken appreciation of what occupational hygiene is and why it is important.

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Continuous Ground Gas Monitoring

By Dr. Steven Goodman, and adapted from GasClam: Continuous Ground-Gas Monitoring Becomes a Reality, from Dr. Peter Morris

The following is an advertorial from Shawcity.

In the initial phases of construction site development a ground gas risk assessment is usually required. This normally involves spot monitoring visits lasting 12 months or more if methane is found at over 5% by volume.

The objective is to determine the true ground gas regime and how that will likely change in the future. Currently, this is most commonly achieved by periodic static measurements of ground gas concentration. However, this approach is inherently flawed with the inability to accurately measure ground-gas concentration and ground-gas fluxes. Neither are measured directly and both are likely to be temporally variable.

With time series data, flux measurement can improve and temporal variability quantified and accounted for. Regulators recognise the need for more representative data but until recently cost has been a barrier. However, technology such as the Gasclam in-borehole continuous ground gas monitor now allows for



such data to be collected and in a significantly shorter period of time.

It is also common to consider the risk of organics contamination in ground gas in the form of volatile organic compounds (VOCs) and Photo Ionisation Detectors (PIDs) are often used to identify the presence of such compounds by spot sampling ground gas.

Onsite VOC analysis to laboratory standards can now be achieved through the use of portable micro gas chromatograph systems, such as the Frog-4000 from Defiant Technologies. This allows for field VOC analysis

for both qualification and quantification of organic vapours present, with separation and detection in under five minutes.

Using this technology we have significantly increased understanding of the true potential contamination of soils and ground waters with organics.

To read this article in full, go to www.shawcity.co.uk. This topic will be covered in greater detail at the Shawcity Environmental Organic Gas Analysis – Soil & Water Seminar on 14th September 2016, details below.

Shawcity Open Seminars for 2016

Technical demonstrations, legislation updates and Q&A sessions with leading industry experts...

14th September 2016
Environmental Organic Gas Analysis - Soil & Water
 with Ion Science & independent guest speakers

8th November 2016
Noise and Vibration
 with 3M & independent guest speakers

- Knowledge-sharing, discussion and networking
- Your opportunity to question the experts

Book your BOHS member discounted delegate place now for just £25 - Quote 'BOHS10'

www.shawcity.co.uk 01793 780905 marketing@shawcity.co.uk
 Venue: Wrag Barn Golf & Country Club, Wiltshire SN6 7QQ

Delegate feedback from our previous 2016 events:

"What a fantastic and informative day! I am really looking forward to the next one!" Sam Bowden, Oceans ESU

"A very interesting and informative day" Stuart Thomas, Tata Steel

"The practical demonstrations and the opportunity to get hands-on with various pieces of monitoring equipment was invaluable"

Richard Martin, Dunton Environmental



The Premier Conference for Occupational Hygiene in the UK

Harrogate International Centre
24 - 27 April 2017

OH
2017

Welcome to OH2017

Occupational Hygiene 2017 is the leading international conference in the field of worker health protection in the UK, focussing on occupational hygiene and the prevention of occupational ill-health and disease.

Following on from the success of OH2016 which brought together a global audience of over 350 delegates, BOHS will once again be delivering an exciting programme which combines inspiring and thought-leading plenary sessions with scientific and technical sessions as well as a range of interactive workshops and case studies.

The conference will bring together researchers, practitioners, regulators and other experts from around the world to discuss the very latest in issues that affect health at work.

The location for this conference is in the heart of Harrogate.

Submit your abstract online at www.oh-2017.com

For further information visit www.oh-2017.com or email conferences@bohs.org

See overleaf for more details.

BOHS

The Chartered Society for
Worker Health Protection



OH 2017



The Premier
Conference for
Occupational
Hygiene
in the UK

Harrogate
International
Centre
24 – 27 April 2017

SPEAKER CONCESSIONS*

BOHS will continue its unique offer to speakers for one free day's attendance at the conference. If one or more of your submissions are successful, you will be entitled to the following:

Free attendance on the day
you are presenting**

OR

If you wish to attend the full conference we have a discounted rate specifically for speakers, bookable from October via the website.

EARN EXTRA CPD POINTS

Remember, all presenters are entitled to an extra two CPD points, in addition to those gained from attending the conference as a delegate.

We welcome papers on any aspect of occupational hygiene, worker health protection and occupational/environmental health.

We wish to build on the success of previous conferences by giving you the content you have asked for. Practical workshops and case studies are always popular so we would strongly encourage you to consider this when submitting your paper.

We are especially keen to see papers covering topics in the following areas:

Occupational hygiene/health good practice

Practical workplace experiences
Methods to assess and control risk

Physical agents

Risk management strategies

Human factors and behavioural science

Controls

Exposure science

Future workplace hazards and emerging risks

Chemical safety

Regulation & product stewardship
Emergency/Incident management

Ergonomics and MSDs

Legal compliance and best practice

(Regulations, ACOPs and standards.)

EMF case studies

Types of submissions

The organisers require abstracts for all technical papers, practical case studies, posters, themed sessions and workshops.

Platform Technical Presentations

(usually 15 or 20 minutes plus limited time for questions)
Professional practice or scientific research based presentations.

Practical Experiences in the Workplace/Case Studies

(usually 10 minutes plus limited time for questions)
Intended to be short, informal talks illustrating real world problems and how they were solved.

Scientific Posters

Posters are especially suited to reporting small studies, preliminary findings or projects with large data sets that are difficult to display in oral presentations. Posters must be on display for the duration of the conference.

Workshops

(Usually 75-90 minutes)
Designed to be interactive with a good degree of audience participation, workshops provide an ideal opportunity to discuss emerging hygiene issues and/or develop participants' skills. Those willing to initiate and facilitate a workshop are encouraged to submit an outline proposal via the abstracts submission process using the Workshop Submission Form.

IGNITE

(5 minutes)
Not for the faint hearted; IGNITE gives presenters the opportunity to deliver a 5 minute session on any suitable topic with a slide deck of 20 slides that auto advance every 15 seconds. The results are memorable. Invitations to submit an IGNITE presentation will follow shortly.

Submit your abstract online at www.oh-2017.com

For further information visit www.oh-2017.com or email conferences@bohs.org

* Does not apply to IGNITE presenters. ** Maximum of one day free for those presenting on one or more days at conference.

Playing to Our Strengths to Meet Future Challenges

At the IOSH Edinburgh Branch Annual General Meeting, BOHS President, Tracey Boyle and IOSH President, Karen McDonnell shared a platform to look at the challenges the health and safety sector faces in the coming years. Following short presentations from both presidents, which outlined current and future BOHS and IOSH initiatives that will address some of the challenges we face, the session was opened up to questions from the floor. Topics discussed fell into two main themes:

- 1) developing partnerships to pool resources and expertise;
- 2) the importance of practicing health and safety professionals in achieving and maintaining sufficient competency in our varied and dynamic industry.

Questions included: an enquiry as to whether BOHS has anything planned to try to improve the standard of reporting amongst asbestos surveyors; a request for formal guidance from BOHS on conducting noise exposure surveys; and problems



BOHS President, Tracey Boyle, Helen Pearson and IOSH President, Karen McDonnell

with poor awareness of health and safety competency levels in the business community, allowing unscrupulous individuals and organisations to gilt-edge lower level qualifications and carry out work for which they are poorly qualified.

The meeting concluded with discussions on the expanding voids left by a diminished regulator and the challenge this poses to the health and safety sector. Organisations have an opportunity to step up and to fill these voids, with

professional bodies being the first line of support offering guidance documents and online tools; and also by enabling companies to understand the different qualifications that exist in our sector and to effectively evaluate the competency of prospective specialist health and safety personnel.

The joint BOHS and IOSH meeting was then brought to a close by Chair Helen Pearson.

Time to Start Thinking About CPD

Thank you to all Faculty members who completed their CPD application for 2015. We are pleased to report that all members who were selected for audit and submitted their records have had their evidence successfully approved. We would like to thank all Faculty members for their support for the CPD process.

An exciting development is we can now automatically populate your CPD with points when we have confirmation you have attended a BOHS event. This will help save you time when completing your record and will be the proof you have attended a meeting when selected for audit.

If you haven't already then now is a good time to start thinking about your next application. We know it can be hard to find the time to keep your records up to date, we are all busy people. Sometimes

If you attend a BOHS event, Head Office can now automatically populate your CPD record with the details of the meeting you have attended and the points you can claim.

CPD gets put to the bottom of the list, but if you start now, you may find it does not take you as long as your thought and it can be of great help to **you**, with your professional development, as it gives you the time to reflect on your personal plans and needs.

A few simple steps that can help:

- Make space in your diary. Put aside at least 30-45 minutes.

- Log on to the CPD section of your member account.
- Update your record with your latest activities and developments
- Reflect on the details you have just added and plan your CPD activities for the next three months.
- Add another date in your diary for three months' time to repeat the process. It is probably a good idea to repeat this process at least three/ four times a year.

Don't forget you can access the CPD guidance and form through your member account at <https://portal.bohs.org>

If you need any further help please contact Claire Creed at cpd@bohs.org or by telephone on 01332 250719.

Report from our 3M Young Hygienist Award winner

By Helen Pearson

In the beginning ...

The start to my New Year was a little stressful – returning to work on Monday 4th January to a bulging post-Christmas inbox and a stack of revision to do for 2nd year MSc exams which I was sitting the following Monday morning. Rather too busy to pay much attention to an email from Claire Creed reminding members that the closing date for entries for the BOHS 3M Young Hygienist Award was at midnight on Friday 8th January.

'Ping!' Claire's email was quickly followed by one from Adrian Hirst (my mentor and university tutor), asking if I had applied. My response was that I was far too busy revising for my exams to get something together in the few days left before the closing date. After several further emails from Adrian, I realised I would never hear the last of it if I did not submit something. A few phone calls later and I had picked the brains of the past 3M winners and other creative types in my address book (thanks to them for their help), and I set about throwing some ideas together.

I have never seen myself as particularly creative, not being able to draw or paint, but I wanted a novel theme that would run through the presentation to give it a consistent look and feel. In fact, my drawing skills pretty much end at stickmen. So, 'Badly Drawn Stickman' was born and it is through him that I decided I could tell graduates about being an occupational hygienist.

In order to be eligible for the competition, the finished presentation had to be uploaded to 'Slideshare' and tweeted to BOHS and 3M. A SlideShare account was hastily set-up and adjustments to my rather dormant Twitter account were made. Right. All ready, but perhaps I had better make a start on the presentation. A couple of days focusing on revision by day and the presentation in the evening and I was done. I found a neat piece of software designed for doing stickman animations and I used this to speed up the stickman



Helen receiving her award from Alan McArthur of 3M and BOHS President Tracey Boyle

drawing. I never said I was fast at drawing stickmen! A frantic sprint finish, a quick review from the mother-in-law – the only one likely still to be up and in at 11pm on a Friday evening – and I submitted in time. When I saw the other submissions, I thought "well, mine is good, but they are better". I picked out things from each of them that I wish I had included in my own submission. Now the waiting began ...

Winning!

As some of you may know I am a bit competitive and, although I thought I only had an outside chance of winning, I was holding out for a win, however unrealistic I thought this was. A few weeks later, a text appeared on my phone that just read "Hope your passport is up to date". I had only gone and won an all-expenses paid trip to the prestigious AIHce taking place in Baltimore, USA.

It was foggy, drizzly and chilly – had I really left Scotland?

The trip ...

After all the organising of travel, publicity material for 3M and BOHS and so on, finally the day came to leave for conference. After a seven hour flight, I landed in the US for the first time ever. I travelled from New York to Baltimore

on the Amtrak - a great way to see some more of the country - arriving late on Saturday evening. I have to say my first impressions were a little disappointing. It was foggy, drizzly and chilly – had I really left Scotland? Where was all the lovely sun I had read about and been promised? I grabbed some food from the pub across the road and then went to bed.



I had volunteered to help fold T-shirts for the fun run on the Sunday morning as I thought it would be a great way to meet new people, and it was. I met some of the other student members (I am a student member of AIHA), and Thursa, from AIHA, with whom I had been corresponding from the UK. I had the rest of the day to myself, so headed out for a run to check out the route of the 5K fun run and explore the lovely Baltimore Harbour. In the evening I had been invited to attend the 3M reception. Here, along with the 3M scholarship winners, we were acknowledged for our successes and had our photographs taken. It was a very lovely evening.

The American conference is very different to ours – it starts much earlier!

Monday

AIHce is very different to the BOHS Conference. For one thing, everything seems to start much earlier! My first engagement on Monday morning was a 06:30 welcome breakfast for conference first timers. Our first keynote was Adam Steltzner from NASA, who gave an interesting talk about how he and his team had created the craft for landing on Mars.

Following the keynote, the audience scattered, heading for a multitude of streamed sessions. I attended sessions on: lessons learned in the oil and gas Industry; age-related occupational health and safety issues; and GE’s EHS journey.

The American conference programme is more difficult to navigate than other conferences I have attended, with the parallel sessions starting and finishing at different times and with no fixed breaks.

On Monday evening I was invited to attend the international reception with other delegates from all over the world. The food and drink laid on reflected this international theme – lovely, though I couldn’t seem to find the haggis.

Tuesday

Another early start. Fun runners met at 06:10 outside the conference centre for a quick 5k around the harbour (the sun had returned) and back for coffee and Danish pastries in the Expo Hall. The AIHF fun run is a lot more competitive than the recently established BOHS equivalent, with runner numbers and water stations – the full caboodle. Now in its 30th year, the American Industrial Hygiene Foundation Fun Run is a timed ‘race’, which participants seem to take pretty seriously. It was my first ever timed race and my time was not too shabby. Back to the conference centre and a full day of sessions including one on advances in the construction industry, and, of course, I had to go to IGNITE. On Tuesday evening there was another reception – the AIHce Power Hour. Towards the end of this it seemed like a conga line was starting, but

surely it was a bit early for such hijinks. I soon learn this is a call to WIFFLE ball – something of a conference tradition. Someone walks around the drinks reception holding a baseball bat and collects up players like the Pied Piper. People tag on and follow the bat out to a nearby patch of grass. My understanding is that WIFFLE ball is a variation of baseball but it uses a perforated, light-weight plastic ball. BOHS’s Alex Wilson put his Yorkshireman’s cricket skills to excellent use, despite jibes about how he might prefer to hold the bat in cricket fashion.

Wednesday

Guess what, another early start. I had been invited to the Mark of Excellence Awards Breakfast, where individuals who have made significant contributions to the industrial hygiene and occupational and environmental health and safety professions are recognised and presentations made. I was very pleased to be called to the stage by AIHA President Dan Anna who congratulated me on my 3M Award win.

I even plucked up the courage to ask a question or two.

Following the breakfast, it was back to the sessions: welding fume health hazards, exposure assessment and control and an excellent and entertaining mock trial: a criminal trial of a Certified Industrial Hygienist. This was followed by the President’s reception, where a very impressive spread was provided, as was another opportunity to rub shoulders with the great and the good of the international occupational hygiene world.



Helen with AIHA President Dan Ana



Thursday

I managed a lie in on Thursday as we didn’t start until 8am. A session on fatigue – “I’ll Sleep When I’m Dead” – seemed an appropriate start to the day, followed by a session on indoor air quality assessments. There was a wide variety of case studies included in the session Intriguing Unknown and Known IH hazards – I even plucked up the courage to ask a question or two.

Well that was the end of my AIHce. An escape up to Federal Hill Park for a breath of fresh air and a quick go on the outdoor xylophone was a great finish to the day and my trip to Baltimore.

Thank you

I would like to thank 3M and BOHS for making this amazing trip possible. I have learnt new things, met new people and made new friends. If you are thinking about entering next year’s competition – stop thinking and go for it! You have to be in it to win it and you never know – you just might.

If you have not seen the presentation yet, just search for ‘Badly Drawn Stickman’s Guide to Why Should I Become an Occupational Hygienist’ on SlideShare.

HSE News

June marks the middle of the year, and HSE has continued to bring many cases to court attention.

Gas-related incidents have been prominent, with an engineer sentenced for putting tenants at risk. In North Devon, a gas engineer undertook a false gas safety inspection, and in Walsall, a suspended prison sentence was issued involving an unregistered gas fitter. In this month's column we also include details of a company that was fined for releasing natural gas and crude oil, alongside coverage concerning two firms which were fined following a refurbishment that disturbed asbestos.

Man fined for exposing public to asbestos

Darlington Magistrate Court heard how Peter Wade from Durham had been fined for exposing members of the public to asbestos during a refurbishment of a residential property on South Parade, County Durham. Whilst working on the loft space of the garage, the garage ceiling collapsed and Wade proceeded to break up the pieces and distribute them into waste bags. Only afterwards did Wade realise it contained asbestos. A full investigation into this incident took place on 14th March and concluded that Wade had failed to secure an asbestos survey prior to undertaking the project. Peter Nigel Wade (trading as P.N. Wade Building and Civil Engineering contractor), of Winston Road, Staindrop, County Durham, pleaded guilty to breaching Regulation 5(1) of the Control of Asbestos Regulations 2012, and was fined £267 and ordered to pay costs of £1,765.

Gas engineer prosecuted for unsafe asbestos removal at tenant's home

Brian Hockin was removing potentially dangerous asbestos material during a gas boiler replacement at a residential property in Wrafton when he disturbed asbestos insulation. The tenants raised their concerns with Hockin, but he continued to remove the material and stored it at his yard. The tenants

contacted HSE which prosecuted Hockin for putting himself and others at risk from asbestos fibres. During the hearing at Barnstaple's Magistrates' court, it was stated that Hockin used no safety measures to prevent the spread of asbestos; he used no protective clothing or breathing equipment. Brian Hockin, of Bickington, near Barnstaple, pleaded guilty of breaching Section 3(2) of the Health and Safety at Work etc. Act 1974, and was fined £450 and ordered to pay £921.40 in costs.

... an investigation ... found that the employees involved were inadequately trained.

Landlord sentenced for gas safety failings

London-based landlord, Duran Akbulut, was given an eight week suspended sentence for gas safety failings. Westminster Magistrates' Court heard how Duran Akbulut had failed to have a gas boiler checked for safety by a suitably qualified engineer to obtain the necessary safety certificate from the Gas Safe Register. The tenant made a complaint to the Health and Safety Executive (HSE). Duran Akbulut, of Kingshill Avenue, Kenton, London, pleaded guilty to breaching Regulation 36(3) of the Gas Safety (Installation and Use) Regulations 1998 and was given an eight week prison sentence, suspended for 12 months, was ordered to pay an £80 victim surcharge and contribute £300 in costs to HSE.

... McKimm repeatedly pretended to be a legitimate Gas Safe engineer and falsely signed official records in the name of a legitimate gas engineer.

Worker fined for unsafe gas work

David Kenyon, a self-employed worker from Glossop, has been fined for unsafe gas work. North Derbyshire Magistrates' Court heard how Kenyon removed a gas oven at a property in King Cup Close,

Glossop. This resulted in a gas leak due to the lack of proper gas-tight capping. An investigation by the Health and Safety Executive (HSE) into the incident which occurred on 12 May 2015 found that Kenyon was not Gas Safe registered. Kenyon pleaded guilty to breaching Section 3(2) of the Health and Safety at Work etc. Act 1974, and Regulation 3(3) of the Gas Safety (Installation and Use) Regulations 1998, and was fined £480 and ordered to pay costs of £1,656.

Man jailed for illegal gas work

A Darlington man has been jailed for carrying out illegal gas work on three occasions. Teesside Magistrates' Court heard Neil Simon McKimm (trading as Macs Plumbing Services) carried out gas work including servicing boilers. McKimm used the alias of a legitimate gas engineer to deceive his customers. An investigation by the Health and Safety Executive (HSE) found that McKimm repeatedly pretended to be a legitimate Gas Safe engineer and falsely signed official records in the name of a legitimate gas engineer. McKimm (trading as Macs Plumbing Services and alias as Robert Welsh), of West Moorland Street, Darlington, was found guilty of breaching Section 3(2) of the Health and Safety at Work etc. Act 1974; Regulations 3(3) and 3(7) of the Gas Safety (Installation and Use) Regulations 1998, and was sentenced to prison for 18 months.

Company fined for release of natural gas and crude oil

Humbly Grove Energy Limited was fined for releasing natural gases and crude oil. Winchester Crown Court heard how on 26 February 2014 an incident occurred during a maintenance operation involving the release of approximately 145 kg of natural gas into the atmosphere, together with some crude oil onto the concrete-lined kerbed process area, resulting in the formation of a flammable gas cloud. While the two employees directly undertaking the work were unharmed, they were exposed to a risk of fire and explosion. An investigation by the Health and Safety Executive (HSE) into the incident found

HSE News

that the employees involved were inadequately trained. Humbly Grove Energy Limited, of Humbly Grove Oilfield, Alton, Hampshire, pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc. Act 1974, and was fined £80,000 and ordered to pay costs of £14,000.

Engineer undertook false gas safety checks

Peter Sturdwick undertook gas work despite resigning with the Gas Safety Register (GSR), and produced false documentation on two occasions. Strudwick, 58, appeared at Barnstaple Magistrates' Court after undertaking servicing of commercial catering gas appliances at a mobile catering van in February 2015, despite his membership with GSR lapsing some seven months prior. Later, in May 2015, Strudwick undertook gas safety inspections on the same commercial catering gas equipment. A few days later the operator of the catering van noticed Strudwick had used another name and became suspicious. She arranged for another gas engineer to check the catering equipment. Subsequently, Peter Strudwick's activities were investigated by the Health and Safety Executive (HSE), which prosecuted him. Peter Strudwick, of Bridge Plats Way, Bideford, pleaded guilty to two charges of breaching Regulation 3(3) of the Gas Safety (Installation and Use) Regulations 1998 and was found guilty of one charge of breaching Section 33(1)(l) of the Health and Safety at Work etc. Act 1974, and was fined a total of £1,500 and ordered to pay £2,000 in costs.

He knew he should be registered with Gas Safe and he exposed customers to a risk of serious injury or death.

Suspended prison sentence for unregistered gas worker

Christopher Dignam, trading at Blue Flame Plumbing and Heating Services, has never been on the Gas Safe Register (GSR) and processed to fit central heating boilers at two houses in Greater

Manchester. One of the boilers was found by the Gas Safety inspector to be 'at risk', meaning that it could constitute danger to life or property. Speaking after the hearing, HSE inspector Caroline Shorrocks said: "Dignam showed a reckless and flagrant disregard for health and safety requirements. He knew he should be registered with Gas Safe and he exposed customers to a risk of serious injury or death." Dignam, of Kenyon Lane, Middleton, Manchester, pleaded guilty to two breaches of Regulations 3(3), and for breaching 3(7) and 26(1) of the Gas Safety (Installation and Use) Regulations 1998. He was sentenced to 12 months' custody, suspended for two years. He was ordered to pay £460 and £400 compensation to the two homeowners and £3,000 costs.

It failed to provide an asbestos survey to enable its contractor ... to quote and plan appropriately for the work to be undertaken.

Food firm fined after asbestos failing

Mizkan Euro Ltd or D H Welton & Co Ltd has been fined after asbestos was disturbed during building work. An investigation by the Health and Safety Executive found Mizkan Euro Ltd was undertaking a project to remove tanks from a factory, which required the demolition of an external wall. It failed to provide an asbestos survey to enable its contractor, DH Welton, to quote and plan appropriately for the work to be undertaken. When the wall was demolished, asbestos insulation board at the top of the wall was unknowingly broken up. A skip of demolition debris was found to contain asbestos insulation which had been identified by an asbestos contractor who had been called to site. Mizkan Euro Ltd, of Chiswick Park, Chiswick High Road, Chiswick, London, pleaded guilty to breaching sections 2(1) and 3(1) of the Health and Safety at Work etc. Act after failing to plan and manage the work carried out under its control without ensuring that risks to health and safety are prevented. It was

fined £60,000 for each charge (£120k) and ordered to pay costs of £13,589. D H Welton & Co Ltd, of Corn Street, Failsworth, Manchester, admitted breaching Section 2(1) and 3(1) of the Health and Safety at Work etc. Act and Regulation 5(1)(a) Control of Asbestos Regulations 2012, after failing to carry out a suitable and sufficient assessment as to whether asbestos was present or liable to be present during the removal of a wall. It was fined £15,000 for each charge (£45k), plus costs of £4,529.

Charitable trust and contractor fined for asbestos safety failings

The Williamson Trust, which was responsible for running a school academy where Mark Tucker was contracted to refurbish a building block, has been fined for asbestos safety failings. Chatham Magistrates' Court heard that in July 2012, knowing the trust had an asbestos register identifying where asbestos was located within the school, work was carried out by Mark Tucker to refurbish a building block without consulting the register. However, the trust had failed to complete a refurbishment and demolition survey, and had failed to ensure that the contractors had the asbestos information they needed to carry out the work safely. The Williamson Trust, of Maidstone Road, Rochester, Kent, pleaded guilty to Section 3(1) of the Health and Safety at Work etc. Act 1974, and was fined £18,000 and ordered to pay costs of £17,000. Mark Tucker, of Maidstone Road, Chatham, Kent, pleaded guilty to Regulation 13(2) of the Construction (Design and Management) Regulations 2007, and was fined £9,000 and ordered to pay costs of £8,000.



HSE News

Tackling occupational respiratory disease: HSE led stakeholder workshop - planning the way forward

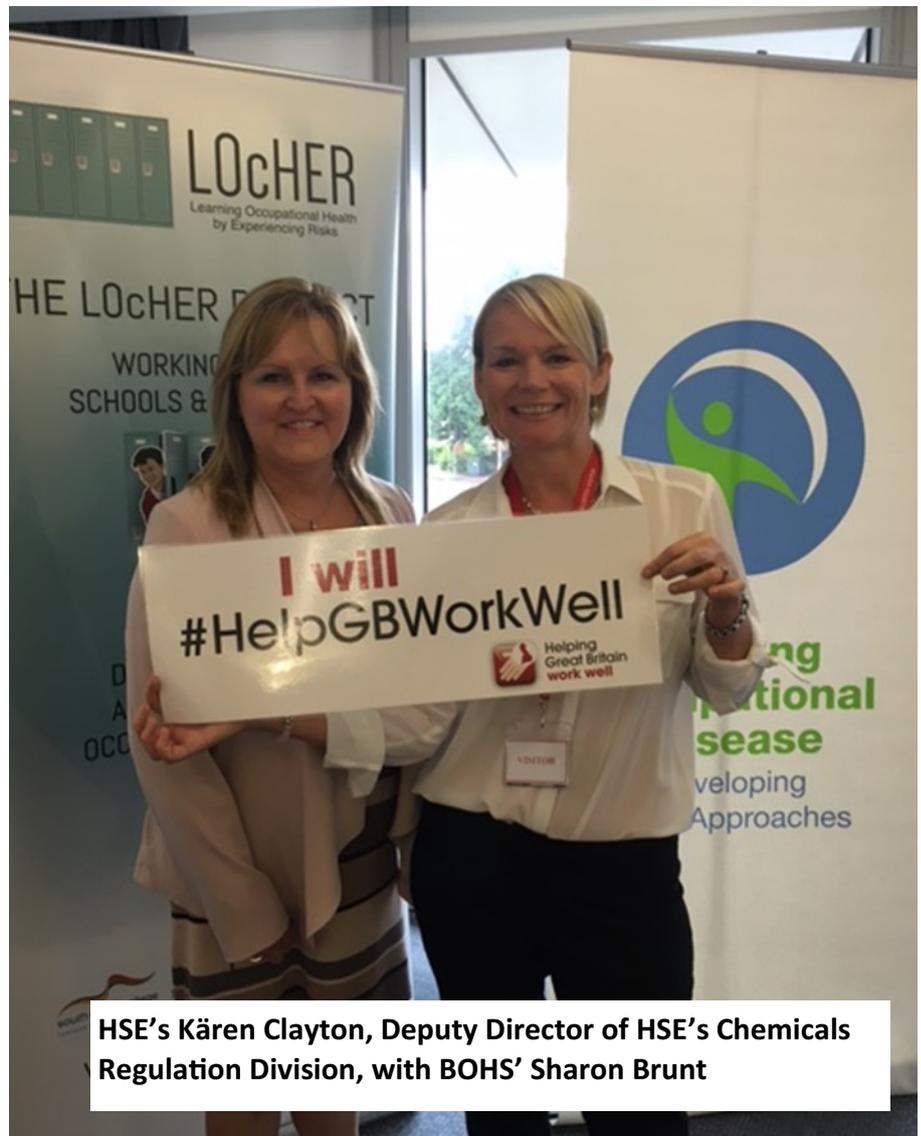
The new '#Helping GB Work Well' strategy released this year by the Health and Safety Executive (HSE) includes 'Tackling ill health' as one of 6 strategic themes, and within this, there is a strong focus on driving collective action to support the substantial behaviour change and awareness programmes that are required.

Within the broad area of occupational ill health, occupational respiratory disease is a priority – it is estimated there are 12,000 work-related deaths per year due to cancers from past exposures to harmful substances and mixtures and there are many new cases of other debilitating conditions such as COPD and occupational asthma.

The LOcHER project ... is aimed at students undertaking vocational training courses, to engage them in understanding the risks they are likely to face in their chosen occupation ...

Over recent months and years, several organisations within the health and safety arena have been implementing a variety of different initiatives and campaigns aimed at tackling the issue of occupational respiratory disease. Recognising this, and with a view to encouraging further collaboration and joint working, to maximise the impact of this activity, the HSE recently hosted a workshop at its offices in Bootle, to which representatives from these organisations were invited.

Organisations in attendance on the day were: Unite; the British Occupational Hygiene Society (BOHS); the Institution of Occupational Safety and Health (IOSH); Safety Groups UK (SGUK); British Safety Industry Federation (BSIF);



HSE's Kären Clayton, Deputy Director of HSE's Chemicals Regulation Division, with BOHS' Sharon Brunt

3M; Unite; European Lung Foundation (ELF) and Healthy Liverpool Programme (an NHS initiative). Representatives from the Welding Fume Team (WFT); Construction Dust Partnership (CDP) and Quarries Partnership Team (QPT) were also present. Also in attendance was HSE's Chief Medical Officer, an expert in occupational respiratory disease. Representatives from each organisation gave a brief overview of their activities and plans in the area of occupational respiratory disease, which made it apparent that there are many different angles and approaches to tackling this issue.

The LOcHER project (Learning Occupational Health by Experiencing Risks), for example, which SGUK are

Other campaigns, for example BOHS' Breathe Freely campaign, are aimed more at the employer ... to ensure they are protecting their employees.

driving, is aimed at students undertaking vocational training courses, to engage them in understanding the risks they are likely to face in their chosen occupation through a 'learning by doing' approach. Other campaigns, for example BOHS' Breathe Freely campaign, are aimed more at the employer – to ensure they are aware of the risks and most importantly, what to do about them to ensure they are protecting their employees. And some talk directly to

HSE News

workers – for example the Unite campaigns aim to make sure workers know when they may be at risk, and what to do if they have concerns - empowering them to ask questions where necessary. There are some cross-industry initiatives

It was refreshing to see that a significant amount of collaboration is already taking place ...

as well as some which are sector-specific – focusing on the issues related to particular industries such as construction, quarrying and the manufacturing sector. And some of the actions focus on specific hazardous substances, such as silica dust or welding fume.

It was refreshing to see that a significant amount of collaboration is already taking place, with many of those in the room already supporting each other's initiatives and campaigns and working closely together – and there was agreement that building on this collaboration would maximise the impact of all of this good work.

Discussions about what this collaboration could look like threw up a number of suggestions and ideas.

There was definite agreement in the room that all of the messages and advice being communicated to industry should be consistent, as well as being clear and simple to understand – to avoid risk of causing confusion or 'campaign overload'.

It was also suggested that an additional area of collective focus could be in the area of research and development – to invest in deepening our understanding of the issues, and to measure the impact of different solutions and interventions taking place – a difficult and complex issue when considering compounding factors and the long latency nature of many occupational lung diseases.

There was a really positive atmosphere during the workshop, which was great to see

It was also felt that resources such as case studies and business case examples could be developed jointly – to help drive home the message for Small and Medium Size enterprises (SMEs) and also businesses in general who perhaps still need convincing that investing in 'health' is the right thing to do from a moral, financial and reputational perspective.

The group acknowledged a need to stay current and forward-thinking - so for new generations, thinking about the best ways to engage, and making sure we are linking up with the wider work and health agendas.

All in all, the day was extremely positive and the appetite for collaboration and joining-up to maximise the impact on reducing occupational respiratory disease among workers in the future was, clear to see.

Kären Clayton, Deputy Director of HSE's Chemicals Regulation Division said: "There was a really positive atmosphere during the workshop, which was great to see. It provided an excellent opportunity for those organisations who are active in tackling occupational respiratory disease to share their successes and experiences, and it was clear there is genuine enthusiasm and an appetite for further joint working. I look forward to working together with the group to build on the positive discussions and maximise the impact of both ongoing and future work to help GB work well."

The HSE aims to continue to facilitate this collaboration and keep up the momentum.

You or Someone You Know Could be Eligible for a £1000 Prize!

If your work or studies involve actively making a contribution to the reduction of ill-health at work, or you know of someone who's making a contribution, then why not apply for a fantastic award – which includes a £1,000 prize, and much more.

Nominations are now open for the prestigious 2016 BOHS' Peter Isaac Award 'Working For A Healthier Workplace'. Each year, the winner receives a fantastic prize, comprising:

- £1,000 (to use for attendance at any 2017 health and safety conference)

- Complimentary attendance for one day of the BOHS Annual Conference and the Conference Dinner (to be held in Harrogate, UK)
- A trophy and certificate

Application criteria include - but are not exclusive to - the following:

- Promotion of proactive good occupational hygiene/health practice
- Sharing of successful campaigns, results and recommendations to help others
- Evidence of providing appropriate

occupational hygiene/health support or guidance to a wider audience, partners or outside organisations

- Working programmes to rehabilitate people who have suffered ill-health or disability at work

So if you're a BOHS or POOSH member, why not apply now, or nominate someone? Full application details, including timings/deadlines, eligibility, judging criteria etcetera are available at: <http://www.bohs.org/about-us/bohs-awards/the-peter-isaac-award-working-for-a-healthier-workplace/>

Ergonomics and Human Factors: It's not just about occupational injury

Over one million self-reported musculoskeletal injuries were reported last year by the UK Health and Safety Executive (HSE, 2014-2015), with manual handling, the use of display screen equipment (DSE), and repetitive manual tasks in manufacturing and other applications contributing to these striking statistics. Psychological health statistics reflect similarly large numbers, with nearly half a million reported new cases of work-related stress, depression and anxiety each year.

The recurring level of occupational injury across the UK is not the only statistic directly related to poor human factors and ergonomics. Humans across different industries and applications consistently contribute to 80% of accidents.

These figures are staggeringly high, but they present occupational hygienists and health and safety professionals with a golden opportunity to reduce the number of accidents and occupational injuries, through addressing human factors and ergonomics.

This article presents a high level overview of ergonomics (human factors) and reflects on the history of the scientific discipline. The 'top ten' human factors issues identified by the UK regulator are highlighted, with a focus on human failure and how the author addresses this subject. The article aims to demonstrate that the topic has a broad relevance to the working context.

What is Ergonomics/Human Factors?

The Chartered Society of Ergonomics and Human Factors (CIEHF) describes ergonomics (and human factors) as a scientific discipline concerned with understanding the interactions of humans with the wider elements of a working system. This is achieved by the application of the human sciences and methods, to design and optimise human wellbeing and overall system performance.

The terms 'ergonomics' and 'human factors' can be used interchangeably, but typically 'ergonomics' is used for interactions with the environment, equipment, workstations and controls;

whilst 'human factors' is applied to the wider aspects affecting a system of work, including procedures, safety culture and staffing, to name a few.

Ergonomics (human factors) applies anatomy, physiology, anthropometry, psychology, engineering and biomechanics to ensure that the strengths and abilities of people are complemented, whilst minimising the effects of their limitations, to improve both the health and safety, as well as the performance of people at work.



The History of Ergonomics and Human Factors

The evolution of ergonomics and human factors as a discipline is relatively young, arising in the early 20th century with the application of manufacturing behavioural studies and the first time-and-motion studies. High injury rates of pilots during the second world war were attributed to the poor design of aircraft cockpits, and this empowered scientists to apply their ergonomics and human factors knowledge within military applications to reduce design-related injuries and deaths. The defence sector later took the lead from the 1980s onwards in relation to integrating human factors within design/engineering programmes. Usability engineering was initiated in the 1970s to facilitate intuitive use for consumers. Apple™ was notably one of the early adopters of this process, with well-known success. The 1980s also presented a focus on human safety analysis within the nuclear industry and during the aftermath of the Piper Alpha disaster in 1989. Chernobyl and Piper Alpha instigated the greater focus on safety culture. The

increased use of computers in the workplace in the 1980s, and increasing widespread use (workplace and home) in the 1990s and 2000s resulted in an increase of physical injuries, typically upper limb disorders and back pain. This led to an increase in the need to ergonomically assess DSE workstations and reduce, if not eliminate, manual handling in the workplace.

Particular applications have also become more embedded, such as control room design, which is a more complex and safety critical application of some of the principles related to DSE. In this case, the functionality of the control room becomes paramount to ensure that control room operators and other users are sufficiently supported for managing normal operations, upset/abnormal states and emergencies. ISO International Standards and analysis techniques are used to improve the working environment, the usability and efficiency of the control room and reduce the risk of musculoskeletal injuries associated with computer use. However, the key focus is on operational safety and efficient performance.

These developments across industry demonstrate a level of maturity within the discipline. There are now comprehensive processes for applying human factors for different applications and in different industries, supported by a significant body of evidence and knowledge about human capabilities, limitations and behaviours.

The Regulatory Approach

In the UK, the HSE has developed several legislative guidance documents and Approved Codes of Practice which mention ergonomics, if not being entirely centred on it.

Within the high hazard industries, the HSE has also developed the 'human factors top ten' (see Table 1), which does not cover all issues, but it outlines the key factors which are consistently related to major accidents. The comprehensive and accessible guidance is not limited to the high hazard industries and can be used effectively to resolve issues within other applications (www.hse.gov.uk).

Table 1 HSE - Key Human Factors Topics

Top Ten Human Factors Topics Related to High Hazard Industries	
Managing human failure: <ul style="list-style-type: none"> Human factors in risk assessment Incident investigation 	Safety-critical communications: <ul style="list-style-type: none"> Shift handover Permit to work (PTW)
Staffing: <ul style="list-style-type: none"> Staffing levels Workload Supervision Contractors 	Human factors in design: <ul style="list-style-type: none"> Control rooms Human computer interfaces Alarm management Lighting, thermal comfort, noise and vibration
Maintenance, inspection and testing: <ul style="list-style-type: none"> Maintenance error Intelligent customers 	Fatigue and shift work: <ul style="list-style-type: none"> Behavioural safety Learning organisations
Procedures	Organisational culture
Organisational change	Training and competence

A Focus on Human Failure

Over the last two decades, managing human failure within organisations has been one of the main growth areas. This area poses exciting challenges in all industries, with rewarding outcomes.

Given that there is, consistently, a human contribution to 80% of accidents, managing human failure is fundamental. This includes learning from past accidents through investigation and reducing the potential of accidents in the future using predictive analysis. Human failure includes both errors and violations (or non-compliances). Errors are defined as unsafe behaviours that are unintentional, whilst violations are intentional unsafe behaviours, both of which may increase the likelihood of an accident.

Proactive Management of Human Failure

Proactive management of human failure makes use of techniques such as Safety Critical Task Analysis (SCTA) and Human Reliability Analysis (HRA), which take a thorough assessment of human errors related to tasks undertaken by personnel.

The first step typically is identifying the safety critical tasks within an organisation, based on their relationship to a major accident. The tasks are filtered using diagnostics and prioritised with subject matter experts (SMEs) for analysis. The high priority tasks are then analysed and broken down into their

‘step by step’ components. They are represented in the form of a task analysis (tabular format) ready for identifying sources of human error; the likely consequences if the error Occurred; and barriers already in place to recover or stop the error. Factors that make errors more likely are described as Performing Shaping Factors (PSFs). These include over 70 factors, which are categorised as shown with examples in Table 2. PSFs affecting the task and contributing to human errors are identified. Recommendations are then derived to reduce the potential for the errors occurring or mitigating their effects.

Table 2 Performance Shaping Factors

PSF	Example
Task	Are there time existing pressures, causing personnel to rush the task?
Communications	Is the quality of information communicated poor and easily misinterpreted?
Procedures and documentation	How accurate is the procedure?
Environment	Are there any health hazards that could affect the safe undertaking of the task?
Training and experience	Is there training available to safely execute the task?
Human-machine interaction	Is Personal Protective Equipment (PPE) required for the task? Does it affect the safe execution of the task?
Personal	How confident are personnel at undertaking the task? How complacent are personnel when undertaking the task?
Social and team	Is there adequate staffing allocated to safely undertake the task?



W506
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 W: www.keilcentre.co.uk

HRA is a highly effective process and highlights sources of error, leading to human failure. PSFs may be related to the other key issues identified by the HSE, such as; poor procedures that mislead staff; do not represent the task; or are too complex and confusing. Staffing may be an issue if there are not enough personnel allocated to execute the task safely. The safety culture within an organisation, or that of contractors operating within the organisation may impact on the safe execution of the task, leading to human errors and accidents. The scope for errors is wide, varied and ultimately reflective of the organisation in terms of the industry and the context of day to day operations.

HRA is one example implemented to address the issue of managing human failure, and with the correct and thorough application, the process can be used to reduce the potential for human error and accidents.

Human Factors in Incident Investigation

Different techniques are used for human factors in incident investigation, but they are equally systematic and comprehensive for understanding both what the human failure was and why it happened. Too often, investigations end at the point of identifying that there was a human failure. This is typically the starting point for human factors professionals and there is much to be gained from a deeper level of understanding.

Conclusion

Ergonomics and human factors have evolved over the years, from recognising and reducing the specific design errors affecting second world war pilots, through to developing comprehensive frameworks to understand and predict human failure. Considering the HSE work-related injury statistics reported for 2014/15, and that 80% of accidents have been attributed to human failure in some way, there are important opportunities for occupational hygienists and health and safety professionals to improve the human element in their industries. Understanding and incorporating ergonomics and human factors is complementary to existing professional skills. It enables definition of the

Box 1 – Case Study

A programme of HRA was undertaken by the author for a European oil and gas company. During this work, it was revealed that there was a mismatch in the measurements between a storage vessel containing potentially flammable waste and the road tanker contracted to remove the contents of the vessel. The storage vessel measured its capacity in percentages, while the road tanker measured its capacity in litres. There was a clear potential for error in this case, with the potential to miscalculate the volume of contents and the available capacity leading to overfilling the tanker. This had a potential consequence for spilling the flammable waste and an explosion if there was an ignition source present.

The PSFs relevant to this task included: a poor procedure with missing task steps, low frequency of the task and a lack of training and inexperience in executing the task.

Recommendations to the organisation in this case included: rewriting the procedure to reduce errors identified in the HEA process, signage to alert personnel to the different capacity measurements and measurement conversion charts to facilitate calculations. As this was an infrequent task, multiple personnel were assigned to complete the task, incorporating a ‘double check’ of calculations. It also provided the opportunity for training and experience for new personnel. Overall, this was an important, albeit small, error to capture, and cost-effective solutions were implemented to reduce the likelihood of a major accident.



required improvements to reduce the statistics printed by the HSE in the future.

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Meet the Member- David Flower



Current job title and organisation for which you work?

Occupational Hygienist at IOM Consulting Limited

What 'A' levels and first degree did you take?

Rather than staying in full time education, I got a job with day release to college to study sciences. The mixture of academic learning combined with the work experience is a route to a career that I would not put anyone off taking. I followed up the sciences with a HND in Ceramic Technology.

What was the first job you got when you finished your full-time education?

Laboratory Technician at a specialised ceramics firm that made products for filtration and aerospace.

When and why did you become interested in occupational hygiene?

I only became aware of occupational hygiene when I started work at IOM, until then I had never heard of it. I transferred from the asbestos division at IOM to the Occupational Hygiene division because it presented better opportunities to use previous knowledge and industrial experiences gained and it also presented a fresh challenge. It also offered great variety which appealed to me.

Whilst carrying out traditional hygiene work, the hygiene division is also involved in testing critical ventilation in healthcare premises.

This includes areas such as operating theatres, clean rooms and isolation facilities. No two facilities tend to be the same and each pose different problems to overcome. This work also includes traditional occupational hygiene such as LEV testing in many areas such as

mortuaries and laboratories and personal sampling for anaesthetic gas sampling areas where gases are used for anaesthetisation.

What further qualifications do you hold?

Certificate of Competence in Asbestos; Certificate of Competence in Occupational Hygiene; NEBSOH General Certificate, Specialised Ventilation in Healthcare Premises; BTEC Level 4 Ventilation and Level 3 swimming award.

How long have you been a member of BOHS (or any of its predecessors)?

Four years

How has BOHS, or BOHS membership (including its predecessors) helped you in your career?

The chance to attend regional meetings and forums as well as conference provides valuable information. We always share any information gained with colleagues. This information provides essential information to enable me to carry out my job and training.

How did you get your current job?

I was employed as an asbestos surveyor at IOM when the Stafford office opened in 2002 when a hygiene position became available in 2007 I transferred divisions.

Describe a typical day in your job.

There is no typical day in the role of an occupational hygienist at IOM, every day is different whether it is a client's site carrying out training in occupational hygiene or ventilation; hygiene work, testing ventilation, microbiological sampling in an operating theatre or writing proposals or reports in the office.

What has been the most satisfying accomplishment of your career to date?

It has to be the writing of a ventilation competency course; this includes the fundamental principles of ventilation in healthcare premises, its maintenance and management. The course has recently received endorsement from the BOHS. Delegates have reported that with better knowledge they have improved the quality of the ventilation in their healthcare premises. You never know if you or one of your loved ones will be going under the knife; so if you can make a difference it's very satisfying.

What has been the worst experience of your career to date?

Witnessing the health effects of mesothelioma first hand, to a dear family member has been by far the toughest and worst.

What is your 'pet subject' in occupational hygiene?

It has to be ventilation controls, following the writing of the competency course.

What do you enjoy doing when you're not working?

Time with the family and friends, nothing nicer than a gathering with something nice to eat and drink.

Football or rugby (and which team)?

I love all sports, although cricket is my first sport

Cat or dog?

Cat, they are less needy.

Chocolate or cheese?

Cheese, especially with good glass of wine or port.

Favourite film?

Not really got one, prefer to be watching sport or being in the garden, although time spent watching a movie with my son is great.

Favourite book?

Wisden, the cricketing bible, although I have not managed to feature in it.

Where did you last go on holiday?

France, great countryside, nice people, culture, climate and of course the food and wine.

What was the last music album you bought?

Paul Heaton and Jacqui Abbot; Wisdom, Laughter and Lines.

Interested in appearing in 'Meet the Member'?

We are always looking for members to feature in this regular column.

If you would like to be the next person please contact
Claire Creed at
exposure@bohs.org
for more details.

ECCCI Exposure and Control Containment II

12 & 13 October 2016**Crowne Plaza, Liverpool City Centre, UK**

The British Occupational Hygiene Society and the Occupational Hygiene Society of Ireland are collaborating to organise a two day conference on Exposure Control and Containment in October 2016, following the success of their first joint event in 2014.

The focus of the conference is in the specification, design, installation, testing, maintenance and operation of engineering control measures to minimise health risks in the workplace. It is aimed at people involved in these aspects of exposure control and will appeal to delegates from various industry sectors small and large including electronics, engineering, construction, pharma, fine chemicals, oil and gas, education and other sectors.

Successful control of exposure relies on effective partnerships between a range of disciplines. Correct specification and design alone will not guarantee adequate exposure control - performance is also impacted by factors such as acceptance by the end-user, the adequacy of maintenance arrangements, and human factors. This conference is an opportunity for individuals from different disciplines to come together and build mutual understanding on the various facets of this complex and interesting topic.

As in 2014 a small trade exhibition will run alongside the conference and we would like to hear from companies who would be interested in sponsoring and/or exhibiting at this joint event.

Can you afford not to attend?

For more information or if you would like to design your own sponsorship package, please contact the BOHS Team on **+44 (0)1332 250713** or **conferences@bohs.org**

Conference Rates

Member Rate - £250 + VAT | Non Member Rate - £300 + VAT

- Visit www.bohs.org to book your place

Exhibitor Packages

Stand Package - £500

- 3m x 2m exhibition space
- One delegate place
- Access to all conference sessions for your delegate
- Morning coffee, afternoon tea and lunch each day
- Company profile (150 words) and logo within the conference programme
- Pre and post conference delegate lists
- Invaluable networking opportunities
- Pre event email to all delegates including a link to your company website

Sponsorship Opportunities

Increase your conference presence to your target audience with one or more of the following:-

Delegate Bags (to be supplied by sponsor) - £300

- Design and print your own delegate bags for us to hand out to all delegates.
- Includes an insert into the bag promoting your company
- Link from the conference website to your own

Insert in Delegate Pack - From £250

- Sponsors can provide for example: A5 flyer, company brochure, memory stick, pen, product sample etc.

All prices are subject to UK VAT at 20%.

From receipt of payment for any of these options your company will be included in all pre and post conference publicity.

Cancellations received in writing before Friday 2 September 2016 will be entitled to a refund after deduction of an administrative fee. No refunds will be issued on cancellations received after this date.



Occupational and Environmental Exposure of the Skin to Chemicals 19 to 21 September 2016 Manchester Conference Centre & Hotel, UK

The first Occupational and Environmental Exposure of Skin to Chemicals (OEESC) Conference took place in Washington in 2002. Since then it has occurred every 2-3 years and has become the premier platform for exchange of new scientific discoveries and practical ideas from all corners of the globe. The exchange of information from the multidisciplinary participants has enabled steps forward in prevention of ill health due to skin exposure. The next OEESC conference will take place 19-21 September 2016 at Manchester Conference Centre.

The next conference will again bring together a wide range of disciplines and knowledge recognising the reality that it is an individual's skin 24 hours a day and not simply whilst they are at work. Through increased communication between occupational and non-occupational fields, with the great levels of expertise that both these have attained, we can develop ways in which overall awareness of skin exposure issues can be increased and ultimately long term improvements in the reduction of damage to health due to skin exposure.

Full Conference Rates 19 to 21 September 2016

Delegate Type	Full Conference	Early Bird*	Day Rate	<p>Cancellations received after 30 June 2016 are NOT entitled to a refund but substitutions will be accepted up to 9 September 2016.</p> <p>Early Bird* Early Bird rates available until 15 July 2016.</p> <p>All rates are subject to UK VAT at the appropriate rate, currently 20%.</p>
Delegate	£500.00	£415.00	£215.00	
Speaker	£345.00	£345.00	£155.00	
Student/Dev. Country	£260.00	£260.00	£105.00	
Dinner	£37.50			

Exhibitor Packages

Stand Package **£1000**

- 2m x 2m exhibition space
- One delegate place
- Access to all conference sessions for your delegate
- Morning coffee, afternoon tea and lunch each day
- Company profile (150 words) and logo within the conference programme
- Link from the conference website to your own
- Pre and post conference delegate lists
- Invaluable networking opportunities

Sponsorship Opportunities

Increase your conference presence to your target audience with one or more of the following.

Welcome Drinks Reception **£1000**

Lanyards (to be supplied by sponsor) **£750**
& Badges

Delegate Bags **£1000**

USBs **£1000**

Insert in Delegate Bags **£500**

All prices are subject to UK VAT at 20%

For more information or if you would like to design your own sponsorship package, please contact the BOHS Team on **+44 (0)1332 250713** or **conferences@bohs.org**

Book your place now at www.oeesc2016.org