

EXPOSURE

The official magazine of

BOHS The Chartered Society for
Worker Health Protection

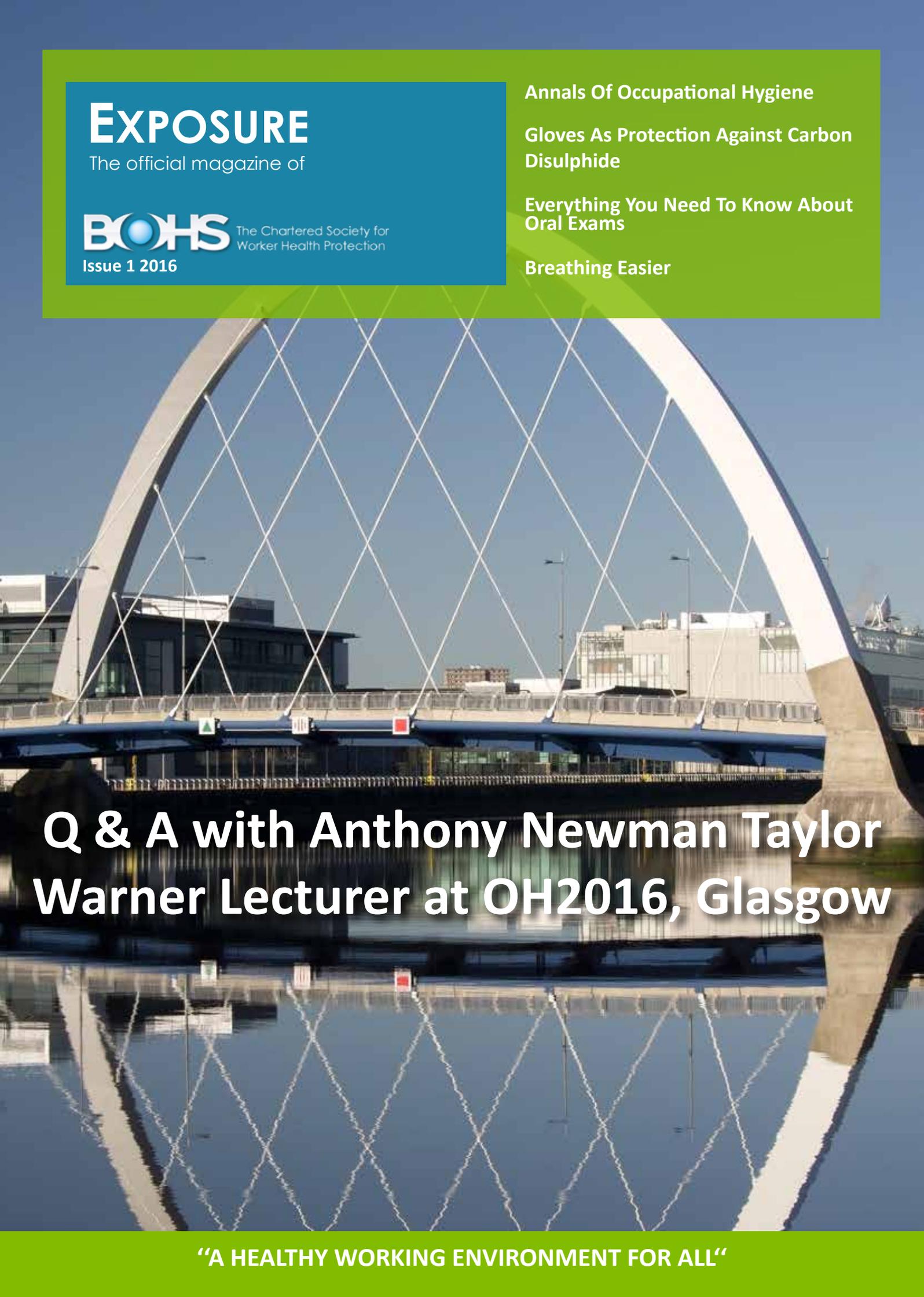
Issue 1 2016

Annals Of Occupational Hygiene

Gloves As Protection Against Carbon
Disulphide

Everything You Need To Know About
Oral Exams

Breathing Easier



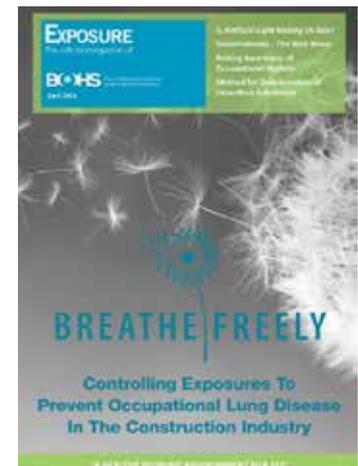
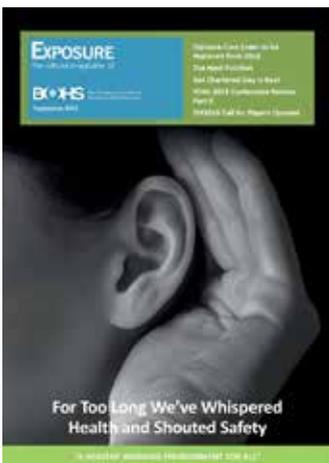
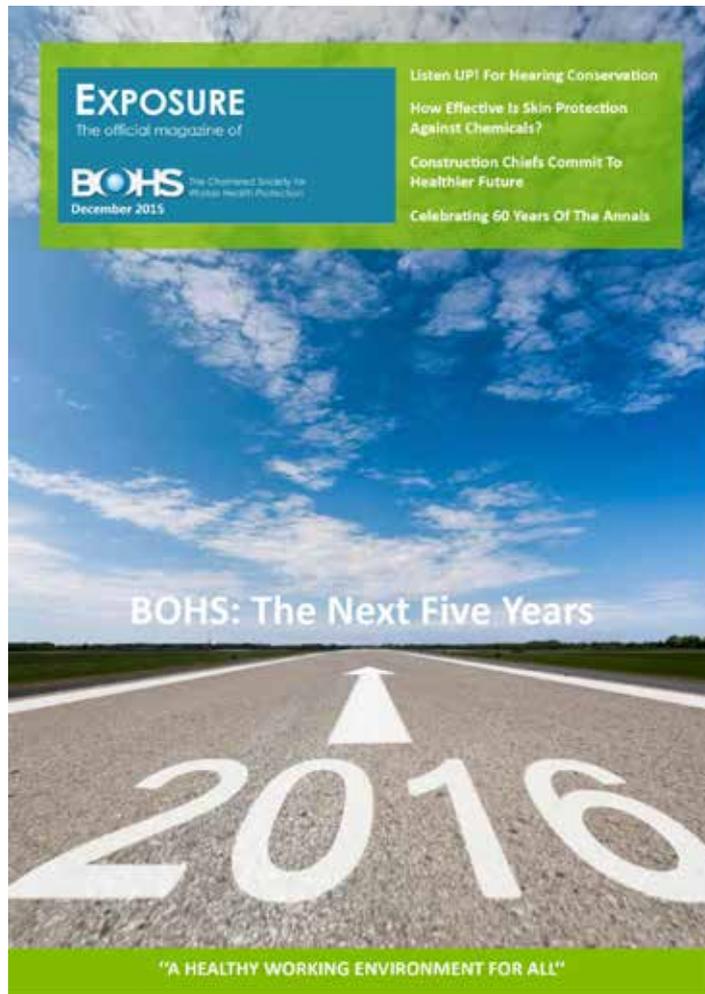
Q & A with Anthony Newman Taylor Warner Lecturer at OH2016, Glasgow

“A HEALTHY WORKING ENVIRONMENT FOR ALL”

EXPOSURE

The official magazine of

BOHS The Chartered Society for
Worker Health Protection



Why not advertise in Exposure?

The bi-monthly flagship publication goes out to BOHS members in 61 different countries. Advertising in this magazine is a cost-effective way to communicate with a wide but specialist audience. Ideal if you are looking to launch new products, sell your services, increase your brand awareness or recruit.

Advertising rates start from just £150 + VAT

For more information or to book a space, please contact Claire Creed +44 (0) 1332 250719
or email exposure@bohs.org

www.bohs.org

Exposure is the official magazine of BOHS.

BOHS Office

5/6 Melbourne Business Court Millennium Way
Pride Park Derby DE24 8LZ
Tel: + 44 (0) 1332 298101 **Fax:** + 44 (0) 1332 298099
Email: admin@bohs.org **Web:** www.bohs.org

The views expressed in this issue are not necessarily those of BOHS Council.

Dear Readers

Welcome to the first issue of Exposure for 2016.

It's been a busy time at BOHS HQ, and in this issue, our CEO Steve Perkins provides an update on recent changes and presents the new staffing structure. The President's column touches on the new HSE Strategy, in particular the inclusion of a theme around tackling ill health, which is music to our ears!

On page 18 is an insightful interview with Professor Sir Anthony Newman Taylor who is the Warner Lecturer at OH2016 in Glasgow – whetting our appetites before he delivers his talk in April! On page 14 is an article from Chris Packham about gloves as protection against carbon disulphide,

In Society news, we hear from Chief Examiner Ian Kellie, telling all you need to know about Oral Exams, and there is a wealth of information about OH2016, including the Professional Development Courses you can sign up for. The Annual Review of the Annals makes for a very interesting read on page 12. We hope you enjoy this issue of Exposure.

We will see you again soon.

*Sharon Brunt,
Claire Creed,
Roz Phillips
and Caroline Smith*

Cover Story

18

**Q & A with Anthony Newman Taylor,
Warner Lecturer at OH2016**



Contents

Regulars

- 3 **From the President**
- 6 **Change4Good**
- 8 **Marketing Measures**
- 10 **Letter to the Editor**
- 25 **HSE News**

Features

- 11 **Professional Development Courses 25 April 2016**
- 12 **Annual Report—Annals of Occupational Hygiene**
- 14 **Gloves as protection against carbon disulphide**
- 18 **Q & A with Anthony Newman Taylor**
- 21 **Everything you need to know about Oral Exams**
- 22 **Researched Essay Topics**
- 24 **Breathing Easier—Protect Against Construction Dust**
- 29 **New Sue Davies Prize for best-performing OHTA ICertOH student**
- 30 **Hazards of Silica Dusts in Construction and Demolition**

**Copy deadline for contributions for the
next issue of Exposure:
22nd April 2016**

**Please send contributions to
exposure@bohs.org**

From the President Adrian Hirst



As you read this New Year's resolutions may be a dim and distant memory, or perhaps you're managing to stick to yours. Whilst "stakeholder engagement" is not a new resolution for HSE they are certainly pursuing it with renewed vigour in 2016. Various BOHS members including myself were asked to a series of events to give input on the implementation of their new strategy, see: <http://www.hse.gov.uk/strategy/>. At a personal level I'm particularly interested in the first two of their key themes, which are:

- Acting together – Promoting broader ownership of health and safety in Great Britain
- Tackling ill health – Highlighting and tackling the costs of work-related ill health

Acting together

The concept of acting together is quite revolutionary for the field of health and safety. HSE no longer has the resources available to be the lone standard carrier and leader for H&S. This means that Industry has to go beyond the legislative requirement to manage health and safety in their workplaces and to engage with it professionally at a national level. At the consultation meetings there have been lots of nodding heads with people willing to work together, but also lots of head scratching about how this can be achieved. I won't dwell on the logistical issues, the politics and difficulties of a regulator divesting some of its activities to the organisations it regulates. Instead I'll try and assume the issues are all overcome and what it might mean to us.

As a society and as individuals we need to embrace this as an opportunity. We've just entered our second five year plan and the concept of working together ties in well with each of the five themes in our own strategy.

"the fact that tackling ill health is the number two of the six themes is great news and worth celebrating"

I use the word 'opportunity', but given the wider implications of HSE's strategy it would appear that having some kind of personal ownership in health and safety is likely to become a de facto 'duty'. Whilst there are no indications that legislation will be introduced, the proposed acting together takes us beyond the duties given in the H&SAW Act and the MH&SW regulations.

Perhaps I'm over-reacting and this new strategy isn't about taking Robens' concept of self-regulation to the next level. However, if I think it is, then so will other people. It is therefore time we all asked ourselves a couple of questions.

- Does my organization play a part in the ownership of health and safety in Great Britain?
- Do I personally play a part in the ownership of health and safety in Great Britain?

I think reflecting on these questions and what we could change is a useful exercise and certainly worth a CPD point if nothing else. I'm not going to suggest answers, but when you do answer the questions yourselves I would urge you to consider the Society. There are lots of opportunities for individuals and organizations to help BOHS with its work. BOHS has undoubtedly played a part in influencing HSE's strategy and will continue to do so. Many of you and your organizations may be able to help us continue to do that in the future. By working with the Society you will also be able to help yourselves.

Tackling ill health

The fact that tackling ill health is the number two of the six themes is great news and worth celebrating. It is fantastic to see health being given such a high

priority after being overlooked for so long. Though I fear there is no time for celebrating. Now we have everyone's' attention, we need to be able to deliver. We need to ensure that health is dealt with by controlling the health risks that work and workplaces present. Health and wellbeing are important but we need to make sure that the 'Health' in 'Health and Safety' doesn't just deal with the effects of health on work. To do this we will need to be even more proactive than we have been.

Most people working in occupational hygiene have at some time felt side-lined and silently wished that they had been able to influence things better. As the old saying goes, be careful what you wish for, as it is about to come true.

In the future there will be more people interested in implementing solutions for health risks. It is up to us as individuals to be able to meet that challenge. To communicate, influence and lead people so that the right solutions are employed. If we don't then there will be lots of other less able people willing to implement less effective solutions.



**Stay informed about
BOHS news as it
happens:**



**follow us on Twitter
@BOHSworld**



**Join the LinkedIn
group with over
2700 members**



ASBESTOS STILL KILLS

THERE'S A NEED FOR QUALIFIED PROFESSIONALS
TO MINIMISE THE RISK

DON'T COMPROMISE

Learn to recognise, evaluate and control the risk with BOHS qualifications and training.

Chartered Society

The Charter recognises BOHS' unique and pre-eminent role as the leading authority in occupational disease prevention. Its asbestos qualifications can lead to the Certificate of Competence.

Industry standard

The BOHS P400 series of qualifications in asbestos are industry-leading, recognised by the HSE and UKAS, and protected by trademark to BOHS.

Credibility with employers

BOHS qualifications are widely recognised as the gold standard, and give professionals the competitive edge.

International leadership in asbestos

BOHS has been providing national and international leadership on protection against asbestos since the 1960s. Over 45,000 BOHS asbestos qualifications have been undertaken.

Faculty of
Occupational
Hygiene



**WE'RE SETTING
THE STANDARDS**



For more information and access to a full list of courses visit
www.breathefreely.org.uk/asbestos-still-kills.html



BREATHE FREELY

change4good Steve Perkins



Re-Shaping for Future-Shaping

In December's issue Adrian Hirst set out our new 2016-2020 strategy for the first time. You'll probably have noticed two things, which I'd like to highlight.

- It is evolution not revolution this time. This 5 year strategy builds on the progress of the last strategy.
- It is demanding and stretching. We're not 'resting on our laurels', but aiming to push forward in new and exciting ways with our vision and mission.

There will be further communication on the new strategy both online and face to face as we go forward so keep a look out in your region and your inbox.

I'm focussing this column on the ways that Head Office is re-shaping to meet the challenge of the new strategy and help BOHS shape the future of worker health protection.

Staff Changes

During the latter part of 2015 we had a number of staff changes. This has meant role changes for some, saying goodbye to others and the arrival of some new faces.

Some of the changes occurred as part of a reorganisation of our Qualifications function and some as people took the next step in their careers. It was a time of significant and challenging change for all of us. We've come through it now and we wish the following people all the very best for their future after BOHS and thank them for their contribution; Sandi Atkinson, Mel Chapman, Charlotte Collis, Zara Mahmoud, Alison Moss and Sarah Pyle.

Structure for Growth

I know that organisational structures aren't necessarily the most interesting things in the

world unless you're an 'organisational geek' like me of course! But they are important to the people who work in them and I think it's important for members to be able to put faces to names at Head Office. So I hope you'll indulge me while I unpack the diagrams and photos opposite.

The first thing to note for those of you who have been around BOHS for a while is that we've grown. As BOHS has expanded its activities, businesses, income, influence and membership, so Head Office has grown to deliver and support all of this. When I joined BOHS in 2009 there were nine of us. Now BOHS has twenty one employed roles and numerous contractors. Longstanding current Council members will tell you that leading BOHS now is very different from running it ten years ago.

An SME of SMEs

In business terms BOHS is technically an SME (small to medium enterprise). However, we are also an SME made up of multiple SMEs when you consider the 'businesses' we are in. At present we comprise five different 'SME businesses':

1. Qualifications
2. Membership
3. Conferences
4. Research Publishing
5. Campaigns, Influencing & Guidance

Plus the associated support functions of Finance, Operations, IT, Communications and Marketing.

Each of our 'SMEs' produces different products and services and operates in different markets with different drivers and even in different nations. So for a small organisation we are not short on complexity! The positive side to this is that we can offer a fully rounded service to our members, customers and stakeholders and from a business risk perspective our diversity can be an advantage.

New Organisation

The challenge this complexity presents is how best to structure our teams and staff to align with our businesses and strategic objectives, whilst at the same time achieving simplicity, flexibility and resilience as far as possible in our organisation. There's no perfect answer and as we grow one thing's for sure; the current answer will need to keep adapting.

With our new strategy we envisage creating a sixth 'SME business' at some point over the next five years to tackle the challenge of "creating new worker health protection and training and education materials" to quote our objectives. This will be a major undertaking and require new investment.

First Line Managers

So to the graphics on the opposite page which summarise how our new organisation is shaping up. I have four managers reporting to me. Paul heads up our Qualifications business, which accounts for ~50% of our income. Shani Jackson is a new interim appointment heading up the new Member Services function which includes both the Membership teams and the new dedicated Conferences team. It is also likely that in due course this will include an education and training team. Sharon Brunt continues as our Communications and Marketing Manager and we are in the process of appointing a new Office Manager to look after the Operations and Finance functions.

Qualifications Function

We have created a new Qualifications Administration team responsible for the delivery of all our qualifications. This consists of a new Qualifications Manager Rose Holden, plus two Customer Services Officers – Shaster Arif and Faisal Zeab who is also new to BOHS. Alongside these roles we have our Chief Examiner Ian Kellie, our Quality and Systems Officer Dave Proctor, and a new role of Qualifications Development Officer which is out for recruitment at present. In addition Roz Phillips now reports to Paul as International Services Manager with her responsibilities for OHTA, the Annals and IOHA. We are also recruiting an assistant for Roz.

Member Services Function

Shani Jackson leads this function as our interim Head for the next year. Shani brings significant experience in change management, membership subscription business and HR. Reporting to her is the new dedicated conferences team managed by Marie Townshend with Rachel Sipson. In addition our membership staff of Claire Creed, Julie Allseybrook and Thelma Thompson report to Shani. Thelma has moved to part-time and is focussing on helping members with their professional progression through the Faculty.

Communications and Marketing

With the success of Breathe Freely Sharon's team is growing with Marketing Exec Caroline Smith in post and recruitment for an undergraduate intern in process.

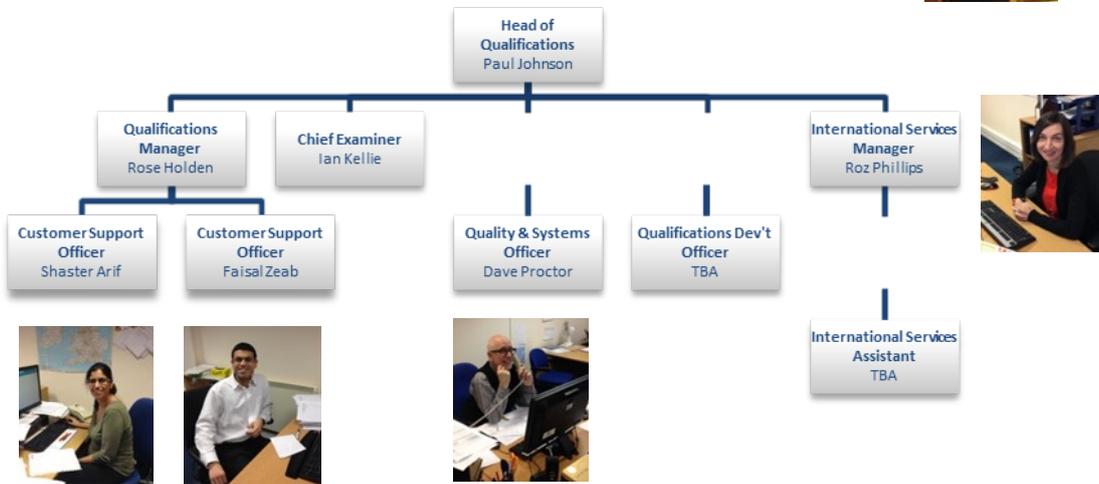
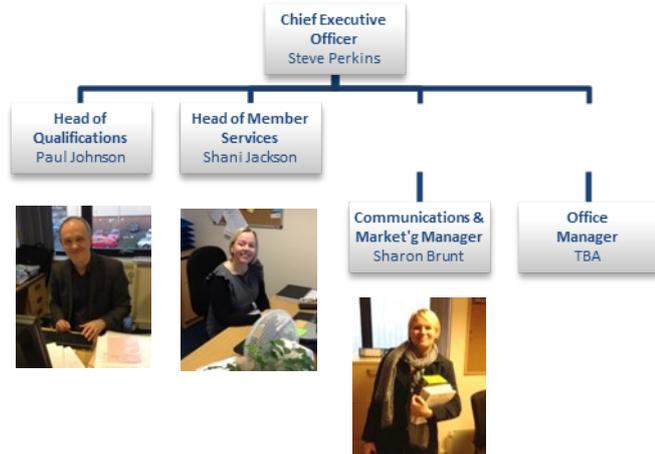
Operations and Finance

Last but by no means least we have a dedicated support team with a new Office Manager covering operations and Sarb our Finance Officer who works with John Ball our Accountant.

So that's our new structure. It's worth pointing out for the cost-conscious amongst you that not everyone is full-time. In fact over half of our staff work part-time. Over

the years we have found this flexibility to be a win-win for both BOHS and our people. Whether full-time or part-time, all the staff at Head Office are dedicated to serving BOHS, its members and its vision. I'm personally very proud of our team and what we've achieved so far in partnership with our passionate volunteers. I'm looking forward to what we can achieve together in the next five years towards ensuring a healthy working environment for everyone

BOHS Head Office Team



Marketing Measures

Sharon Brunt



Construction Health Summit for CEO's

BOHS was proud to be involved in a Construction CEO Breakfast Summit which took place on 21 January. The event secured the commitment of over 150 leaders to eradicating the thousands of cases of ill health and disease caused each year as a result of exposure to health hazards during construction work.

The event was organised and led by the Health in Construction Leadership Group, of which BOHS is a founding member. Chaired by Clive Johnson of Land Securities, this group is working across all areas of the industry to deliver the health vision. I personally was on the organising committee for this summit along with colleagues from Balfour Beatty, Crossrail, Land Securities, Skanska, Mace and others. Steve Perkins attended on the day as CEO of BOHS and we had a couple of BOHS members, Chris Beach and Chris Keen, who came along to help man the small BOHS stand which we were lucky to have – giving them the opportunity to talk to delegates about BOHS, occupational hygiene and our Breathe Freely campaign.

At the invitation-only event, the prestigious line-up of speakers each delivered the message that the industry needs to join together to tackle the huge burden of occupational disease, as they did previously with safety fatalities. Opening the event, Simon Clark told the audience his personal story as an



ex-electrician who has mesothelioma, having been un-knowingly exposed to asbestos during his early career as an apprentice. Simon has been a keen supporter of Breathe Freely; if you haven't already, you can hear his story on www.breathefreely.org.uk.

Simon Clark opens the event



MP Justin Tomlinson, Minister for Disabled People with responsibility for Health and Safety, assured the audience that the Government is committed to dealing with work related ill health.

Justin Tomlinson MP, Minister for Disabled People with responsibility for



Health and Safety

Sir Malcolm Grant, Chair of NHS England outlined how the risk pooling of an entire nation's population has produced a unique global health system in the UK with well over a million employees and budgets in the billions. He made a plea that we get "dead serious about prevention" so that the NHS isn't just a

national "patch and repair service". Andrew Wolstenholme, CEO Crossrail and Andy Mitchell, CEO Tideway made the case for transformational leadership in construction to imagine a future where the health statistics have changed, where young people want to join construction and older workers don't have to retire early.

Andy Mitchell, CBE, CEO of Tideway, holding his signed pledge card, showing his commitment to eliminating



occupational ill health and disease in Tideway and the construction industry

And by the end, the audience could have been under no illusion about the crucial role of occupational hygiene in tackling the disease burden, as the discipline for controlling and eliminating health risks in the workplace. This was an area touched upon numerous times throughout the session.

The event closed with a unanimous commitment from everyone to build a healthier future in the industry and deal with occupational disease. There will be a follow-up event on 21st April which will see the tactical action plan come together to provide industry with the knowledge and means with which to work towards levelling the playing field between health and safety. We will keep you informed as plans for this event are developed.

Breathe Freely initiative

Following its successful launch in April 2015, Breathe Freely has attracted tremendous levels of support from employers, trade unions and other influential people and organisations within the construction sector and elsewhere.

An activity-packed calendar of activities in 2015 included Breathe Freely roadshows around the country for construction managers and site supervisors, designed to offer practical advice on managing

health and equipping attendees to make improvements on their sites. We launched the Health in Industry (HI) Management Standard, setting out best practice criteria for worker health protection along with a wide range of free guidance materials published on the Breathe Freely website, including best practice case studies, fact sheets and a *Good Business Case* outlining the evidence that not only is good occupational hygiene the right thing to do but it makes excellent business sense too.

2016 promises to be another busy year for Breathe Freely with:

- more free guidance materials due to be released soon, in the form of a construction manager’s toolkit of practical resources to help identify and assess the risks to health on site and to communicate these to their workers
- a new series of roadshows (dates to be announced soon)
- a one day Breathe Freely conference on 27 April in Glasgow
- a new Breathe Freely Facebook page to facilitate the sharing of best practice.

Once again, I would like to just thank all those many BOHS members who have been involved in Breathe Freely and



enabled us to make the progress we have made. We are always looking for more members to get involved, so if you are interested, please do get in touch with me on sharon.brunton@bohs.org.

Exhibitions and other activity

We are supporting/attending a number of other exhibitions this year – see Caroline’s summary. Many of you will be involved in this one way or another, either as speakers or helping with the stands. Thanks in advance to all those who make it possible for us to do so

much, we couldn’t do all of this without you!

As Caroline explained in the last issue, we are also busy getting ready to move the website to a new platform which we used as an opportunity to redesign the site and update the content. This should go live at the Annual Conference. We look forward to hearing your views on the new-look website!

Caroline Smith



received Breathe Freely roadshows that toured the UK last year, we seem to have received more requests than ever to attend and support events, and supply BOHS speakers. The first quarter of the year has already kicked off with a packed schedule:

BOHS LEV Event: 4 February, Coventry

This was a further new initiative from BOHS – the first LEV event the Society has organised - and is being run in partnership with the Institute of Local Exhaust Ventilation Engineers

(ILEVE) and SAFed (The Safety Assessment Federation).

The purpose of the event “LEV - Extracting the Best Practices” was to deliver insight and debate into the topics affiliated with LEV control and its role in the reduction of industrial disease. Bringing together experts from engineering, occupational hygiene and the regulator, delegates will be brought up to date with industry developments, legal requirements and good practice on LEV



It’s another busy year for BOHS activity, with all indications showing it will be even busier than 2015 - happily, we are becoming ‘victims’ of our own success! After the very well-

and in doing so, encouraged stronger relationships between engineers and occupational hygienists.

BOHS' intention for this best practice day was to help address important issues such as: misperceptions and overconfidence in the use and effectiveness of LEV; the potential limitations of training. Research has shown that although the basics of LEV use and operation are known, issues still remain.

Listen UP! Conference: 2 March, Manchester

Another month, another first! BOHS will exhibit at "Listen UP!" - the first European Hearing Conservation Conference. The conference will bring together international specialists in the field of hearing conservation, to propose a fresh approach to the escalating problem of noise-induced hearing loss. A number of high profile speakers, including the HSE's Chief Scientific Advisor, will deliver keynote talks, and there will be presentations from expert speakers – including the Deputy Chief Scientific Officer for NHS England. Organised by HSL (the HSE's Health and Safety Laboratory) the event aims to offer anyone actively involved or interested in hearing conservation, a unique opportunity to obtain the very latest information, solutions and good practice to help tackle hearing loss. Furthermore, delegates will also benefit from being at the start of this drive for change, to help shape the future of a proposed European

Hearing Conservation Association.

Health & Wellbeing @Work: 8 – 9 March, NEC (Birmingham)

BOHS will exhibit at the Health & Wellbeing @Work exhibition, and also provide a number of speakers for the conference programme. A well-established event in the calendar - now in its 10th year - the event focuses on improving the health and wellbeing of work-aged people, and is therefore well-aligned with BOHS' strategy.

The conference and exhibition will showcase new ideas and resources to ensure employees are: engaged and motivated; healthy; return to work quickly following absence; and stay in work. Profiling national developments, service innovations, examples of best practice and the latest research, it provides an excellent learning platform.

The extensive conference programme covers multiple topics, and includes presentations on: 'Future Trends in Worker Health Protection'; 'Asbestos – Removal versus Retention'; 'Air Monitoring – Its Role in Protecting Worker Health' - to name but a very small number.

Other Events

BOHS will also once more support the 'Health and Safety Event' at the NEC, Birmingham, which runs from 22 – 24 March.

Other events taking place, for which BOHS has been asked to provide speakers, are:

'Health In Construction' - USHA Seminar: 2nd March, London.

The Universities' Safety and Health Association (USHA) promotes safety and health in higher education, ensuring the wellbeing of university staff, students and visitors.

Mike Slater, Immediate Past President of BOHS, spoke about 'Breathe Freely' campaign: the seminar theme was 'Health in Construction', and presentations focused on the Olympic Park Project; compliance management systems; occupational health risk management in construction.

'Health Leadership in the Chemical Industry': 15th March, Manchester

The Chemical Industry's annual conference aims to explore occupational health management, and wellbeing and occupational hygiene issues, through presentations delivered by expert external speakers and CIA members.

Tracey Boyle, BOHS President Elect, is scheduled to speak at this conference.

Mail

On reading through the December edition of "Exposure" I found myself getting depressed. "Affa depressed" to quote "Scotland The What" I will explain.

On page 6 we have "Asbestos Still Kills" and a full page advert on page 21. We are invited to the "Listen Up" conference on pages 10 and 11. On page 33 we see the Health and Safety at Work statistics for 2015. Coupled with that, pages 32 and 33 detail some of the incidents and prosecutions undertaken by the HSE.

If we go back to the 1960's we had legislation and guidance to tackle the health effects of Asbestos and Noise (Asbestos Regulations 1969 and a booklet on Noise published by the Department of Employment). We have had nearly 20 years since COSHH. We have had regulations on health and safety in construction, entry into confined spaces, working with hazardous substances and quite a few well publicised cases involving gas appliances and carbon monoxide fatalities.

All of this and we still see 1.2 million suffering ill-health, 2,638 cases of mesothelioma and some 27.3 million days lost to work related ill-health. I am sure that these numbers do not differ greatly to those that I first saw in 1970 when I joined the profes-

sion. What have we achieved in all these years? We certainly have more legislation covering on asbestos and noise. COSHH is now no more - we have REACH but we still have people exposed to lead and paint stripper (see page 22). We plough ahead with more in-depth approaches to health and work.

Despite all this effort we still see injuries, ill health and lost working days costing us £14.3 billion. Not much wonder I am depressed. How many prosecutions in 2015? Lots one would think to equate with the reported statistics. Well only 728. Enforcement notices - well only some 12,430. Does not seem a lot when we see 611,000 injuries and 142 fatalities at work. If you want to see me happy again then let's see a bit more enforcement and less of the legislative upgrades. Let's deal with what we have out there before we start on the Rolls Royce! Cannot afford it- for £14.3 billion savings I am sure that we can!

Regards

David Hutcheson

Send us your views

Please send letters to the Editorial Team at Head Office (address on page 14) or by email to exposure@bohs.org

Professional Development Courses 25 April 2016

Professional Development Courses (PDCs) are a great way to develop valuable skills and earn the CPD points needed for your certification and professional memberships. OH2016 offers 5 PDCs on the Monday prior to the conference. These valuable courses will aid your development in a vast range of topic areas.

Cost : £200+VAT Booking : Please go to <http://www.oh-2016.com/professional-development/>

“The Worst Plant” – A Virtual Occupational Health, Hygiene & Safety Audit

Corey Briggs, Ramboll Environ

Join Ramboll Environ’s team of multi-certified, highly experienced, and field savvy senior consultants for an energetic, highly collaborative, audience participation -focused, virtual occupational health, hygiene and safety training experience. Thousands of companies worldwide use internal, external, or a combination of technical and management resources to conduct regulatory compliance audits, inspections, and assessments. As we all know, these results serve as one of a company’s many H&S performance metrics. Our senior consultants guide participants through a virtual tour of “the worst plant in the world”, using digital renderings of real-world health and safety risk and regulatory compliance issues. The overall goals of the session are to educate participants about hazard and risk assessment techniques and various compliance audit and assessment scenarios. It covers a wide-range of workplace occupational health, hygiene and safety topics, relevant guidelines, standards and regulations. This highly interactive 8-hour seminar covers the primary H&S topics encountered in today’s businesses“from air contaminants to respiratory protection to welding”. The course includes discussion of relevant guidelines, standards, directions, as well as other pertinent communication, training, legal, regulatory, and safety topics.

Asbestos and Other Fibrous Materials: Exposure and Risk Assessment

Andrey Korchevskiy, Chemistry & Industrial Hygiene, Inc.

In the 21st century, asbestos remains a serious occupational and environmental hazard. Although production is now banned in Europe, a key challenge for many countries is the safe management and removal of asbestos-containing materials that remain present in many older buildings. Asbestos is also still being produced in certain countries and can often appear as a contaminant in mining, road construction, and other activities. Currently, many facilities may also face hazards and elevated risks for workers related to fibrous minerals, not fitting into the definition of asbestos, but similar in characteristics and potential health effects (like Libby amphibole or fibrous zeolites). Increasing information is also available concerning differences in health effects for exposure to various fibrous materials and specific fiber types. Understanding the how to assess and reconstruct exposure to asbestos and other elongated mineral particles, apply different risk assessment models, and evaluate and characterize risks is therefore a key skill for industrial hygienists. This PDC is designed to educate IH professionals on state -of- the- art approaches to exposure assessment and risk modelling for mineral fibers of different types, with special emphasis on practical applications. The most recent epidemiology information will be discussed to provide an enhanced understanding of risk assessment principles and limitations along with the demonstrated potential for comparison with practical observations. Exposure assessment and reconstruction will be illustrated by various examples. Excel spreadsheets will be provided for advanced risk calculations. Special attention will be paid to the models used for asbestos exposure response analysis.

Diploma of Professional Competence in Occupational Hygiene, One Day Taster

Mike Slater, Diamond Environmental Ltd

For those currently working towards or considering applying for the Diploma.

Hearing Conservation

Clare Forshaw, HSL

Hearing damage from noise at work is still a major issue, with over a million workers in the UK exposed to levels known to cause damage. Noise is often seen as a complex topic and can become the poor relation in comparison to other health and safety priorities. However, there are often very simple interventions that can achieve a huge impact on reducing harmful exposures with an understanding of the principles of noise exposure, control and assessment options.

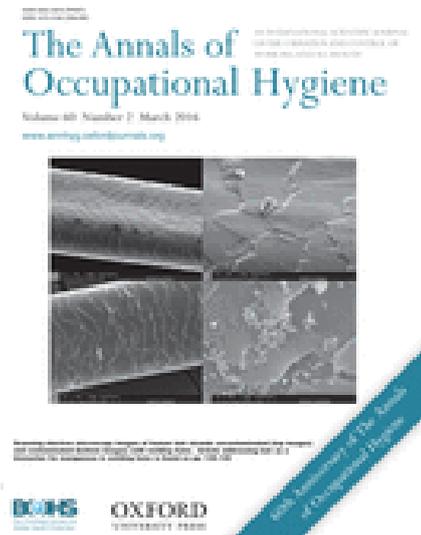
Practical Applications in Exposure Assessment and Control Banding using Bayesian Statistical Tool

Perry Logan, 3M

Understanding and controlling exposure is at the heart of practice for any occupational hygienist. The use of Bayesian tools now provide exciting opportunities for improving the accuracy of exposure judgments and verifying control technologies. These tools build efficiency and transparency of our exposure judgments made by occupational hygienists on a daily basis. Freely available Bayesian tools can be used to verify our professional judgments and the controls that should be implemented. The language and framework of these relatively new approaches holds promise for expressing the output of exposure assessments in a manner that is much more easily understood and communicated than the output from more traditional statistical analysis. Best of all, the Bayesian decision analysis approach formalizes traditional exposure assessment processes already used by occupational hygienists today. These tools are perfectly suited to be incorporated into any exposure control banding process and provide a framework for validating control category selections. This PDC will provide an overview of the Bayesian framework for decision analysis and give practical experience for implementing freely available tools through discussion and workshops.

(*Computers are required for participants to use free software distributed during course.)

Annual Report—Annals of Occupational Hygiene: Volume 59 Summary



The Annals of Occupational Hygiene's core mission is to disseminate leading edge research which forms the scientific basis for the practice of occupational hygiene. By doing so, the Annals supports BOHS's objectives of understanding and controlling risks to health arising from activities at work, and the development of effective standards and strategies for protecting the health of workers. In addition, the journal serves as an important venue in which issues of science and practice are discussed among the

"Volume 59, published 2015, continued presenting advances in the science underlying the practice of occupational hygiene"

occupational hygiene community worldwide. Volume 59 of the Annals of Occupational Hygiene, published during the year 2015, continued presenting advances in the science underlying the practice of occupational hygiene. As a flagship product of the BOHS, the Annals helps to demonstrate one of the core values of the profession – the practice of prevention based on sound scientific evidence.

Activity and Product

Submissions in 2015 continued the strong

performance with articles submitted from all over the world. We received a total of 275 submissions, down slightly from 278 in 2014, including 226 original research articles. Among the 251 papers for which final publication decisions were made in 2015, 90 were accepted, giving us a rejection rate of 64.1%. This relatively high rejection rate helps assure the highest quality papers appear in the journal and is thus good for readers and the journal.

In 2015 we published 85 research papers, seven short communications, two review articles, and an additional two commentaries, four editorials and two letters to the Editor. In producing this body of work, the editorial team coordinated the collection of 506 peer reviews from 295 individuals. The effort behind this review process involves untold hours of high level scientific work, and demonstrates the enormous commitment made by our many contributors.

The commentaries, in particular may be of interest to some readers. In Issue 2, Sue Hewitt and colleagues from the UK Health and Safety Laboratory summarized a large body of research on the effectiveness of anti-vibration gloves on the reduction of segmental vibration exposures (Hewitt, et al, 2015). In addition to noting the numerous factors needed to consider the effectiveness of AV gloves, they conclude "...AV gloves do not have much apparent value, especially for reducing finger-transmitted vibration exposure." Again, they confirm the wisdom of choosing engineering controls over personal protective devices.

Sean Semple from the University of Aberdeen wrote a compelling commentary on the relationship between work, smoking and health (Semple, 2015). While we are well aware of the effects of cigarette smoking on health, few have

considered the degree to which the simple fact of employment can strongly influence the likelihood of smoking, and thus decrease the risk and severity of smoking-related ill health. Dr. Semple presents important evidence about the health benefits of work, and how the occupational hygienist can help support those positive impacts. I hope BOHS members will take the time to look at these papers, as well as the original research which can be found at <http://annhyg.oxfordjournals.org/content/by/year/2015>.

"The effort behind this review process involves untold hours of high level scientific work, and demonstrates the enormous commitment made by our many contributors."

We have classified all of our published work (primary research and review papers only) in broad categories of types of papers, and their focal area. The results of this content analysis for Volume 59 are shown in Figure 1. As might be expected, we are very strong in exposure assessment (42%), measurement (sampling and analysis methods) (22%), exposure controls (7%), plus personal protective equipment (15%), and the basic sciences underlying occupational hygiene (5%). Aerosols make up 41% of the agents addressed, with 19% addressing chemicals, 13% physical agents and 6% bioaerosols.

The Annals is circulated to all BOHS members, other individual subscribers, to institutions and libraries, and to consortia of institutions, but like most of the publishing world, is read largely through internet connections and downloads. In addition to the 1867 members of BOHS receiving the hard copy journal, 2880 institutions were able to access it either via a direct institutional

subscription or through academic consortia agreements. In 2015, 1217 not-for-profit institutions in 35 developing countries obtained free online access. The average number of full-text downloads per month was 25,849. Clearly the demand for our work worldwide is very strong.

Staff and Management

Volume 59 was the third year under the leadership of Chief Editor, Noah Seixas, from the University of Washington, USA. Dr. Seixas had active support and engagement of 15 editorial board members, seven of whom are based in the UK, thus continuing a strong tradition of British perspective. The Editorial team has been supported by Ms. Sarah Pyle, our Editorial Administrator who is based in the BOHS office in Derby. We will be saying goodbye and thanks to Sarah in the coming weeks as she moves on to other endeavors, and we will welcome back Ms. Roz Phillips who will assume the position of editorial manager.

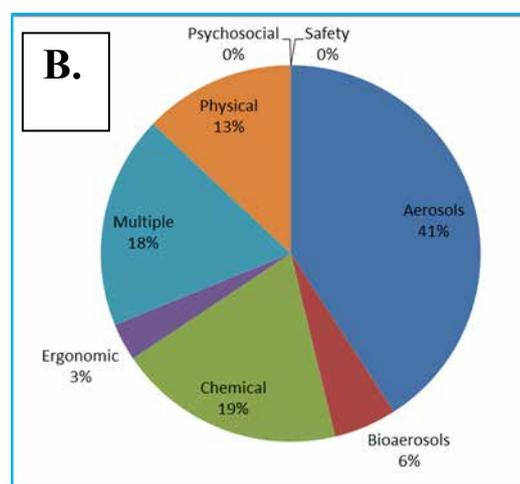
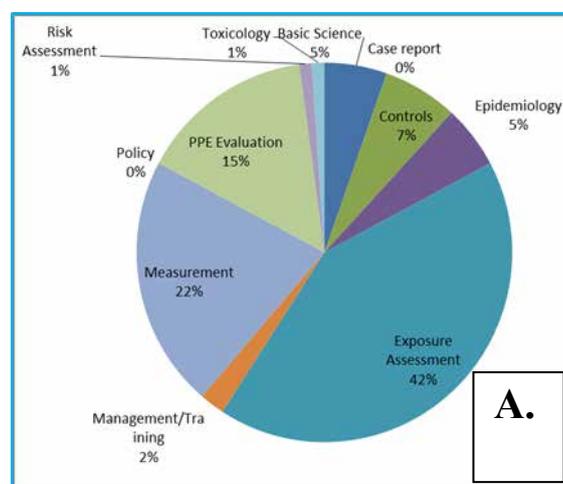
We have been somewhat short-handed since the retirement, mid-year, of Former Chief Editor Trevor Ogden, David Bartley and Nick Vaughan. We are enormously grateful for the years of dedication all three have provided and will miss the wealth of their collective experience. Dr. Renee Anthony from the University of Iowa joined the Board in July 2015 bringing a great combination of expertise in aerosols and computational fluid dynamics, on top of extensive professional experience in occupational hygiene. While still somewhat over-worked, the current editorial board is managing to keep up with the submissions coming in almost daily to the journal.

The Annals is published by Oxford University Press, which provides a range of services in support of the journal including peer review system software, typesetting and copy-editing, printing and distribution, and website maintenance and marketing. The editor responsible for the Annals is Paul Kidd, who is supported by senior production editor (Alice James), and marketing (Sian Powell) staff.

Changes afoot?

Over the past year the editorial board

Figure 1. Volume 59 Content Analysis for Original Science and Review Papers: A. Type of Study, B. Primary Exposure



has entered into discussions about how to keep the Annals on the forefront of worker health and protection, as the world of work rapidly changes. In addition to new technologies and approaches to health and environmental research, the ways in which workers and employers organize production and services are undergoing major transformations. Toward maintaining and growing the relevance and impact of the Annals, we have been interviewing a series of thought leaders on new directions for the Annals. The good news from the initial round of interviews is that the Annals is widely perceived as the premiere journal for the science of occupational hygiene. Still under consideration are suggestions that the Annals is very narrow in its focus and could benefit from encompassing the evaluation and control of 'exposures' other than our traditional chemical,

physical and biological agents, and thus expand our appeal to researchers in a broader range of work-related health impacts.

If you have any thoughts you'd like to share on these or other issues related to the direction of *your* journal, please send them to me, Noah Seixas, at AOHed@uw.edu, I look forward to talking with you in Glasgow.

References:

Hewitt S, Dong RG, Welcome DE, McDowell TW. Anti-vibration gloves? An Occup Hyg 2015, 59(2), 127-141.

Semple S. Employment, Smoking and Health The role of the hygienist. Annals of Occupational Hygiene 59(5): 529-533.

Gloves as Protection Against Carbon Disulphide



Gloves as protection against carbon Disulphide

In the last edition of Exposure magazine, John Cherrie mentioned a paper on dermal uptake of carbon disulphide [1] where the authors describe how they found an increase in dermal uptake when gloves were being worn. In the paper the subject of glove permeation is not mentioned. For those unfamiliar with the way in which gloves work when intended as protection against chemical

hazards, permeation is where the chemical is absorbed into the surface of the glove and migrates through, emerging as a vapour on the inside of the glove. It does not change the appearance or feel of the glove and is undetectable by the wearer. Manufacturers selling gloves for protection against chemical hazards should indicate how long the permeation breakthrough time was found to be when tested according to EN374-3. Note that this test is only indicative and in many situations will not indicate the actual performance of the glove under the particular workplace conditions.

The paper states that the gloves being worn were natural rubber latex and nitrile. Consulting one manufacturer's glove performance data (KCL, Fulda, Germany) it becomes clear that these gloves are not the correct choice for this chemical. Indeed, the only glove that provides more than splash protection is one manufactured from Viton™. Other glove manufacturers' product performance data is in agreement.

Permeation breakthrough for carbon disulphide for both nitrile and natural rubber latex according to EN374-3 is less than 10 minutes as a nominal value which will probably be reduced further due to other factors.

It has been shown that wearing internally contaminated gloves can lead to higher systemic absorption than was gained from the equivalent skin contamination when not wearing gloves [2]. This would explain the increased uptake that the authors found. Thus the finding in the study that skin uptake was increased due to the wearing of gloves is not surprising.

This illustrates the importance of understanding and being able to evaluate glove performance to ensure that the correct gloves are being used and used within their real performance limits in a particular workplace situation. In a study where small activated carbon pads were used to detect actual permeation breakthrough time, a nitrile glove with a nominal permeation breakthrough when used to protect against xylene was given as 36 minutes. The study showed in one task no permeation breakthrough for 2 hours, but in another task permeation

Contacts

President:

Adrian Hirst Email: president@bohs.org

Chief Executive:

Steve Perkins
Email: steve.perkins@bohs.org

Registrar of the Faculty:

Martin Stear Email: registrar@bohs.org

Communications & Marketing Manager:

Sharon Brunt Email: sharon.brunt@bohs.org

Head of Qualifications

Paul Johnson Email: paul.johnson@bohs.org

Head of Membership Services

Shani Jackson Email: shani.jackson@bohs.org

Conferences Manager:

Marie Townshend Email:
marie.townshend@bohs.org

BOHS Regional Organisers

East Midlands & Yorkshire

Kate Jones/Tina Conroy
Email: eastmidlands.yorkshire@bohs.org

East Anglia

Jason Hodgkiss Email: eastanglia@bohs.org

Midlands

Mary Cameron Email: midlands@bohs.org

North East

Duncan Smith Email: northeast@bohs.org

Northern Ireland

Adele McClelland Email:
northernireland@bohs.org

North West & North Wales

Phil Roberts
Email: northwest.northwales@bohs.org

South Wales & South West

Julie Helps/Kelvin Williams
Email: southwales.southwest@bohs.org

London, South and South East

Bob Daunton Email:
london.southeast@bohs.org

Scotland

David Wright/Helen Pearson/Dougie Collin
Email: scotland@bohs.org



The Chartered Society for
Worker Health Protection

breakthrough in just 5 minutes. Many factors, such as temperature, degradation, flexing, etc., will affect the permeation breakthrough time achieved in practice.

This illustrates some of the complexity that arises when selecting and using gloves as protection against chemical hazards. Relying upon manufacturers' published data does not ensure that gloves will adequately protect the user.

Chris Packham

This is part of a series of Exposure articles looking at the importance of skin exposures in the workplace. If you would like to keep informed of discussions in this area, please join the LinkedIn group (<https://www.linkedin.com/groups/8269154>) or consider attending the next Occupational and Environmental Exposure of Skin to Chemicals (OEESC) Conference in Manchester in September 2016, where we hope to have a day specifically of interest to occupational hygienists (<http://oeesc2016.org/>). Your contributions are also welcomed; abstract deadline is 4th April 2016.

You might also be interested to read further comments on the Kilo *et al* paper in a letter by John Cherrie, which is available in the advanced access area of the Annals (<http://annhyg.oxfordjournals.org/content/early/2015/12/18/annhyg.mev090.extract>).

References

Kilo S, Zonnur N, Uter W, Göen G, Drexler H. "Effect of Skin Protection and Skin Irritation on the Internal Exposure to Carbon Disulfide in Employees of the Viscose Industry", Annals of Occupational Hygiene, 2015, Vol 59, no. 8.

Rawson BV, Cocker et al.: "Internal Contamination of Gloves: Routes and Consequences", Annals of Occupational Hygiene, 2005, Vol 49, No 6, 535-541.

Abstract Proposal Submission Now Open for OEESC

We welcome papers on any aspect of occupational or environmental skin exposure.

We would like to build on the successful history of OEESC and provide content that has both scientific merit and will provide practical help for those managing both occupational and environmental skin exposure. We would encourage submission of both scientific papers and those covering case studies or more practical aspects of skin exposure. We are particularly keen to see papers covering topics in the following areas:

- Dermal Exposure Assessment Strategies
- Practical Aspects of Exposure Control for the Workplace and the Individual
- Exposure Related Skin Diseases
- New Understanding in Prevention of Ill Health due to Skin Exposure
- Cancer
- Percutaneous Penetration
- Skin and Eye Decontamination

The organisers require abstracts for all platform presentations, posters and workshops.

Platform Presentations (usually 15 or 20 minutes)

Professional practice, scientific research based presentations or informal talks illustrating real world problems and how they were solved.

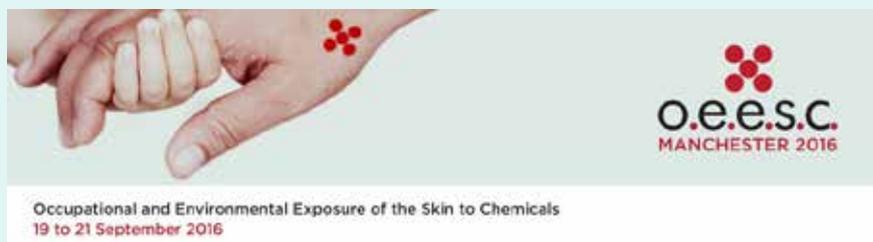
Posters

Posters are especially suited to reporting small studies, preliminary findings or case studies on real world problems.

Workshops (Usually 75-90 minutes)

Workshops are designed to be interactive with a good degree of audience participation. They are the perfect platform to discuss emerging issues and/or to develop participants' skills and knowledge base.

Abstract Proposal Submission Closes: **4 April 2016**



For full conference rates and details of sponsorship and ex

BOHS

The Chartered Society for
Worker Health Protection

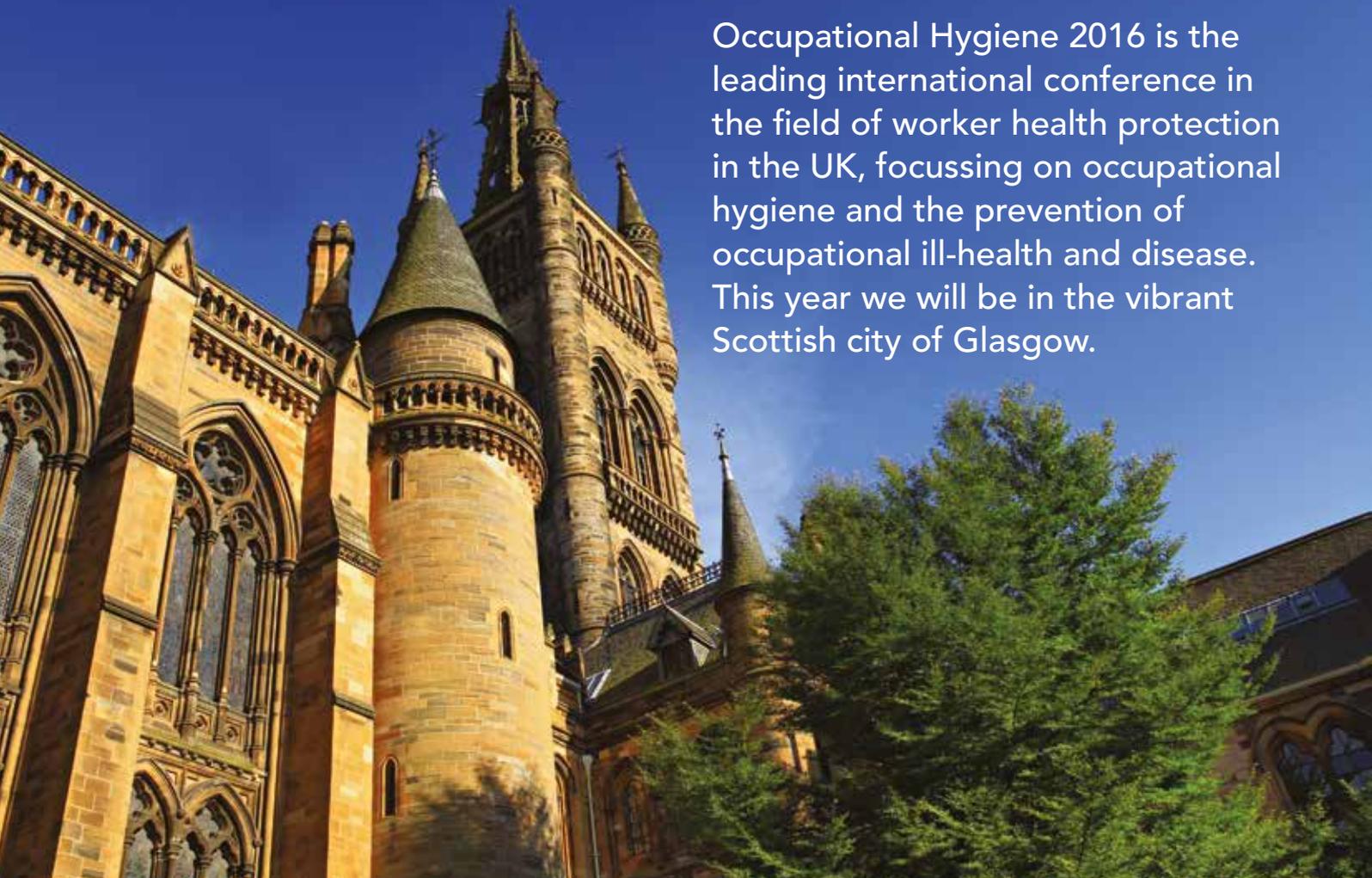
25-28 April 2016
Hilton Glasgow, UK

OH2016

Glasgow



Occupational Hygiene 2016 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. This year we will be in the vibrant Scottish city of Glasgow.



See what we have planned at www.oh-2016.com/agenda/

8 reasons to attend this unique event

Register for OH2016 today and benefit from:

Three days of top quality scientific and technical presentations and interactive workshops.

24 parallel sessions and workshops.

Refreshments and lunches provided on all three days.

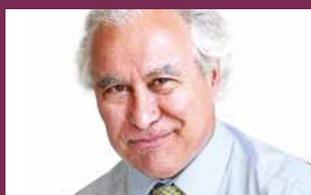
Free access to the official OH2016 Mobile App.

Four Keynote Lectures from leaders across a broad range of disciplines associated with worker health.

A large international exhibition showcasing the latest products and services.

Five Professional Development Courses.

A variety of FREE Networking and Social Events.



Professor Sir Anthony Newman Taylor
President's Envoy for Health, Imperial College



Karen Niven
Shell



Dr Jason Williams
Salford Royal NHS Foundation Trust



Danny Martland
BAE Systems

Asbestos and Other Fibrous Materials: Exposure and Risk Assessment
Andrey Korchevskiy *Chemistry & Industrial Hygiene, Inc.*

Diploma of Professional Competence in Occupational Hygiene, One Day Taster
Mike Slater *Diamond Environmental Ltd.*

Hearing Conservation
Clare Forshaw *HSL*

Practical Applications in Exposure Assessment and Control Banding using Bayesian Statistical Tool
Perry Logan *3M*

"The Worst Plant" - A Virtual Occupational Health, Hygiene & Safety Audit
Corey Briggs *Ramboll Environ*

Q & A with Anthony Newman Taylor, Warner Lecturer at OH 2016



Professor Sir Anthony Newman Taylor will deliver this year's Warner Lecture (sponsored by Shell) at BOHS Annual Conference, Glasgow.

Sir Anthony is the President's Envoy for Health at Imperial College London, and amongst a wide range of other roles in occupational and environmental lung health, chairs the new Workplace Health Expert Committee recently set up by the Health and Safety Executive.



occupational asthma, but the number of cases of mesothelioma has increased very considerably. For some time now, there has been a feeling that occupational disease is a problem of the past, with the key issues in the workplace predominantly being around safety and well-being. More recently, HSE has become aware that that is not the case and that there remain concerns and that we need a refocus on occupational ill health, diseases and their causes. That of course is why HSE has recently formed the Workplace Health Expert Committee.

"If we look at silica for instance, a commonly held view is that silicosis is a disease of the 19th Century and early 20th Century. In fact we are still seeing a significant number of cases in the UK"

Thanks for talking to Exposure magazine Sir Anthony. You've had a long and distinguished career in occupational and environmental medicine, focused around your specialism of lung disease. Without giving away too much, can you give us an idea of some of what you'll be touching on in the Warner Lecture?

It is a very prestigious lecture and so I wanted to present something that would be interesting and relevant. I have been struck by the BOHS Breathe Freely campaign and in this context I felt it would be interesting to talk about the continuing challenge of occupational lung disease. My interest in this field started some 40 years ago, coincidentally at about the time of the new Health and Safety at Work, etc. Act 1974. Since then there has been real change in the incidence of accidents at work and of many occupational diseases.

The accident rate has fallen very considerably, as has the number of reported cases of

occupational asthma, but the number of cases of mesothelioma has increased very considerably. For some time now, there has been a feeling that occupational disease is a problem of the past, with the key issues in the workplace predominantly being around safety and well-being. More recently, HSE has become aware that that is not the case and that there remain concerns and that we need a refocus on occupational ill health, diseases and their causes. That of course is why HSE has recently formed the Workplace Health Expert Committee.

Interestingly, many of the causes of disease are the same as in the past, although often in a different guise. If we look at silica for instance, a commonly held view is that silicosis is a disease of the 19th Century and early 20th Century. In fact we are still seeing a significant number of cases in the UK, in the construction industry for instance, as well as internationally, with occasional rather bizarre epidemics, as in the case of the young men in Turkey dying at an early age from silicosis who were shotblasting silica onto denim jeans to provide a faded look. So silicosis remains an important cause of disease internationally, although less so in the UK than in the past. More recently however, silica has emerged as a cause of lung cancer, with now consistent evidence in support of this. The important question is the magnitude of risk at different levels of exposure and whether there is a threshold.

With asbestos, we are reaching the peak of an epidemic of mesothelioma in the UK, primarily due to the fact that the continuing use of

amosite asbestos in buildings was overlooked during the 1960's and 1970's. Those now at highest risk of developing a mesothelioma are carpenters, plumbers, electricians and others, whereas forty years ago, those at greatest risk were ladders and those who worked in the manufacture of asbestos products. The difficult problem now is how best to deal with asbestos in buildings. Asbestos is quite widely present in public buildings. A recent estimate indicated that some 70% of our schools have asbestos in their buildings. Asbestos remains an important public health concern, but of a different nature.

During the past decade, the incidence of occupational asthma has declined, primarily because of much better control of the relevant exposures. An exception is bakery workers where the number of reported cases has remained the same. The risk for bakery workers is both flour and the enzymes that are added to flour. In the detergent industry, exposures to enzymes have been controlled through granulation. So we have to ask the question: why to date has it not proved possible to control exposure sufficiently to reduce the risk of occupational asthma in bakery workers?

New technologies and processes also bring new risks. An outbreak of organising pneumonia, which was the cause of a number of deaths in textile workers in Valencia in Spain, was due to the introduction of a new formulation for the dye sprayed on the textiles. Several outbreaks of hypersensitivity pneumonitis have been reported attributable to metal working fluid, which my colleague Professor Paul Cullinan recently showed in one outbreak to be caused by *Mycobacterium avium*, a cousin of *Mycobacterium tuberculosis*. Nanotubules share several properties with amphibole asbestos and, if durable in the lungs, pose the potential risk of carcinogenicity, currently the subject of active research.

Early on in your career, you and your colleagues at the Royal Brompton Hospital built up the largest clinical, research and teaching department in Europe to investigate the occupational and environmental causes of lung disease and particularly asthma. Currently, there are concerns that not enough young doctors are moving into occupational medicine. What attracted you to this medical area, as a young physician?

I suppose it was opportunity. I worked as a research registrar at the Brompton Hospital for Professor Jack Pepys, who was at the time a leader in the field of allergic lung disease. By the time I worked with him, he had become very interested in occupational causes of asthma. He published a lot of the original work on the causes of occupational asthma, including isocyanates, flour and enzymes, and how they induce asthma. While working with him, I became very interested in the occupational causes of asthma and other allergic lung diseases. I later worked with Dame Margaret Turner-Warwick, a very distinguished physician at Brompton Hospital, who was also very interested in the more classical occupational lung diseases, such as coal workers' pneumoconiosis, silicosis and asbestosis. She became persuaded that the Brompton Hospital needed to appoint a physician who would take a particular interest in occupational lung diseases, and I was fortunate enough to be appointed to this position. It has been a fascinating and rewarding career. For instance, I have been given several opportunities to investigate outbreaks of lung disease of occupational cause, which I have found tremendously interesting and often very informative.

The Health and Safety Executive is currently involved in discussions to formulate its five year strategy for 2016 to 2020. How do you see the role of occupational hygienists evolving and developing in the UK during this time period?

One of the very important issues that always needs to be considered is risk and particularly for HSE the risk of diseases occurring under different circumstances of exposure in the workplace. Occupational hygienists are particularly geared to thinking about, and measuring, or estimating, exposures and considering their relationship to risk, and doing this both within the world of work and in the world of research.

I spent about 10 years being responsible for a

number of parallel epidemiological studies looking at asthma which was caused by allergies to laboratory animals, to flour and enzymes, and to acid anhydrides. At the time we started these studies, the accepted view was these diseases were due to primarily individual susceptibility along the lines of: "You're an allergic sort of person and therefore you are particularly likely to develop occupational asthma: to prevent that we need to prevent you working with any of the agents which cause it".

The difficulty with this approach was really brought home to me by our work in the platinum refinery industry. We had found that people who were 'atopic' had a greater risk of developing an allergic reaction to platinum salts. We subsequently found that there was also an increased risk of developing asthma due to platinum salts in cigarette smokers. So before people joined



Glasgow - Venue for OH2016

the refinery, they would be screened to see if they were 'atopic', presently about 35% of the population, and if they were cigarette smokers, a similar and often different proportion of the population. In addition working with precious metals they were screened for evidence of a criminal record. The screening process probably prevented almost anyone from being employed!

We later embarked on the study looking at the underlying risk factors for developing occupational asthma in laboratory animal, bakery and acid anhydride workers. We found that the primary risk factor for each of these was the level of exposure to the cause.

At the time many were surprised because the general view was that asthma was a consequence of individual susceptibility (e.g. atopy, smoking etc). These findings shifted the focus from identifying and excluding susceptible individuals to better control of exposure in the workplace. As a consequence, in the past 10 or 15 years levels of exposure have been reduced and with it the incidence of occupational asthma: with the exception of bakery workers.

In doing this work, we needed measures of exposure – we had to be able to measure the concentration of allergens in the air and developed the methods to do this. This was critical: without methods of measurement we would have been unable to investigate exposure-response relationships. So occupational hygiene, exposure measurement and assessing risk in relation to exposure and vulnerability is of critical importance. The occupational hygiene profession is in a particular position to inform on these issues.

You've advised a number of government bodies, including in Greece, Spain and India, on the occupational and environmental causes of lung disease. BOHS has an extensive international membership in 61 countries around the world. What role do you think our occupational hygienists can play in helping to protect worker health on a global scale?

Currently in the UK, Europe and USA we are exporting many of the risks of occupational diseases. Asbestos use is a prime example; but also the risks of coal extraction and of silica exposure. These are currently occurring for instance in India and China. There is an important need for a well-informed understanding of the risks posed by these hazards and how best to control them. There is an important role that BOHS could play in terms of providing evidence and guidance for how to handle these materials safely. An important barrier, which is a real cause for concern, is that in general people disregard problems until they occur. The long latency conditions of illnesses such as chronic lung disease, where the latent period can be 30 to 40 years, mean that people can be inured to the experiences of others. But there is a lot of knowledge and experience within BOHS that could be valuable in providing good advice around the world.

Occupational hygiene and occupational health have been described as two sides of the same coin, the former focusing on prevention of ill health and the latter on treatment. How, do you think, occupational hygienists and

occupational health professionals such as nurses and doctors could collaborate better, in the interests of enhanced worker health?

Occupational health physicians would say that they are also primarily in the business of prevention, to inform management about risk and to give them advice on how risk can be mitigated. From my perspective, hygienists and occupational health professionals are in the same business, but bring different experiences and perspectives. There is a partnership which needs to be co-ordinated. My personal experience has been of good communication between occupational hygiene and occupational health practitioners in addressing common problems.

I think that there is a natural synergy between the two disciplines in the nature of the problems they are trying to address. They just bring different perspectives and experience to the issues. Recognition of this and good communication is key to working well; understanding what each other brings to the table.

In June 2015, as the Chair of the new Workplace Health Expert Committee set up by the Health and Safety Executive, you highlighted the role the new Committee would play in providing HSE with “robust evaluation of emerging evidence of new hazards and new evidence of well recognised hazards”. Can you comment on any particular hazards the Committee expects to focus on in the immediate future?

I've written a quarterly digest which can be accessed via the HSE website which explains where we've started since our first meeting. We are looking at lung cancer and silica and whether or not the workplace exposure limit, (0.1mg/m³), put into place to minimise the risk of silicosis, is sufficient to minimise the risk of developing lung cancer. Second, we have been asked by the Bakers, Food and Allied Workers Union to look at both occupational asthma and heat stress in bakers. We are looking at the evidence in relation to both of these.

In the future we plan to review the evidence in relation to other causes of cancer, for example breast cancer and shift work. Current evidence would suggest that those engaged in shift work for 20 or more years have a 40% increased risk of breast cancer. If this turns out to be a robust estimate, the question of how this should be addressed will require considerable thought and will not be straightforward.

In April 2015 we at BOHS launched our Breathe Freely initiative, to prevent occupational lung disease in the construction industry, taking the view lung disease, and specifically lung disease in this particular sector, is crucial to real success in tackling Britain's occupational disease burden. As a respiratory expert, what key developments would you like to see within the industry to help protect workers' lungs?

I think the critical need is for accurate and accessible information. It's understanding what the risks are and how these can be mitigated, by those involved in the workplace and by those responsible for them. Robens great insight was that risks were best controlled where they were generated. In other words, understanding in the Boardroom needs to be translated into personal responsibility taken at the level at which the risks are being generated. For that, there needs to be clear understanding, information and knowledge about risks, their consequences and managerial support in the means to mitigate these.

“I think the Breathe Freely initiative is a great start and that this is the model for industry to get engagement of the workforce at all levels”

We know that thousands of people die from work-related lung diseases every year and conditions such as silicosis, chronic obstructive pulmonary disease, asthma, emphysema and lung cancer can ruin lives. Too often the hazards endangering lung health are “invisible” in British workplaces. How much progress do you see, in terms of raising awareness of occupational lung disease in the UK, and how far have we to go, do you think?

I think the Breathe Freely initiative is a great start and that this is the model for industry to get engagement of the workforce at all levels. One of the concerns often raised is that health and safety is not a topic frequently found on Board agendas. In reality it is an issue that has to be the responsibility of everyone from the Board to the shop floor so that everyone knows about where the risks lie and how to minimise them. That's why I think your Breathe Freely campaign is so important.

Getting the chief executives signed up and then giving responsibility to a named person (and I hope that that someone is a Board member) is important because you need to be responsible at that level to make this work. But it can only work if understanding of risks and responsibility for controlling them is taken at all levels in an organisation.

This does need individuals to ensure that health and safety issues are kept at the top of the agenda. There needs to be understanding of the risks and how to mitigate them with wholehearted support and encouragement for those engaged in mitigating them.

Your career has included contributions as an author, a government advisor, a research scientist, in teaching and academia, and of course as a physician. What do you do to relax, in your downtime?

Well one of the things I have spent more time on than I should is supporting the England cricket team - one of the great roller coaster rides! At the moment, we've been doing rather well, but it can go up and down quite dramatically! I'm a member of the MCC and go to Lords to watch cricket there which I greatly enjoy at least when England lets me! I also greatly enjoy the theatre and films.

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.

Everything You Need to Know About Oral Exams

Oral examinations have been a feature of the BOHS qualifications system since the Society was set up, and continue to play a vital role in assessing the competence of those who aspire to our qualifications. Depending on your viewpoint, they represent the fairest way of determining whether an individual is fit to practise as a hygienist or a topic specialist, or a potentially terrifying ordeal inflicted on an unsuspecting candidate. Let's see if I can explode a few myths about the oral process.

Why do we need orals? Well, if a hygienist wishes to use our post-nominal letters or obtain a Faculty membership grade, BOHS needs to be sure that he or she obtains this on merit. Written exams are fine, but much of the hygienist's role involves an ability to think on your feet, and it's this quality that's tested by the oral examination. If you've got a good grip on your subject (or know where to go to find out more), you will have nothing to fear from the oral experience. But if you have significant knowledge gaps, and haven't done any pre-exam revision, you may be heading for a fall.

So what's the fundamental point of an oral? A significant part of the role of the hygienist is to do with communication – whether it's convincing management to spend money on risk reduction, explaining a complex issue in layman's terms to employees affected by a hazard, or simply reporting the results of an investigation. What the oral examiners are trying to do is find out, in the course of a technical conversation, how much you know about the subject and whether you're ready to represent the Society through the use of CertOH, DipOH or via a specialist membership grade.

Who are the examiners? There are usually three of them, all experienced occupational hygienists. I'll stick with the Certificate and Diploma orals, since they are the ones most likely to be encountered by readers of *Exposure*, but be aware that most oral exams currently run by BOHS are for the Certificate of Competence (Asbestos) qualification. For these, most of the examiners are asbestos specialists. We have a pool of around 15 Certificate/Diploma examiners, all holders of DipOH. There is a gradual turnover, usually when an individual examiner retires, so there's



always an opportunity for fresh blood to come into the pool.

Do they receive any training? A new examiner is required to observe a couple of oral exam sittings before being asked to sit on a panel. Every examiner receives detailed guidance from BOHS on the conduct of the oral and this guidance is generally updated every couple of years. In addition, we hold training days on a regular basis to update examiners on new developments, changes to qualification routes or amended guidance, etc.

“Written exams are fine, but much of the hygienist's role involves an ability to think on your feet, and it's this quality that's tested by the oral examination”

Is there any quality control process for oral exams? We used to audit a few exams by having a QA observer 'sit in' – but this was felt to be potentially unsettling for both candidate and examiners. Now, examiners complete an audit proforma after each sitting in which they anonymously rate the performance of their fellow panel members. These are reviewed by the Chief Examiner and if an individual examiner receives consistently poor ratings, he or she will be removed from the panel.

Do I need to come to Derby for an oral exam? Yes, if you're an individual candidate and elect to have a face-to-face exam.

However, we envisage an increasing number of on-line oral exams in the years to come, using Skype or similar systems. We've already run a few on-line orals for candidates outside the UK. There's no reason why UK-based candidates can't have the same option.

How long does the oral exam last? Never more than an hour, except under exceptional circumstances.

What sort of questions might I be asked? It depends on the qualification you're seeking. For CertOH candidates, expect a lot of 'nuts and bolts' questions on the basics of hazard recognition, measurement, data interpretation and risk reduction measures. Remember - you'll be asked questions across the full spectrum of occupational hygiene, so it's good policy to revise areas of the topic you're not too familiar with. The questions for Diploma candidates tend to be more scenario-based; in other words, here's a situation – how would you deal with it? Expect topics such as risk management, communication of information and ethics to feature in these questions in addition to technical aspects. If your oral is for a Certificate of Competence in an individual subject, or for a specialist membership grade, expect the majority of questions to be related to your specialism – but with a sprinkling of questions on the principles of occupational hygiene, too.



What if I don't know the answer to a question? Don't worry – this is bound to happen! The best advice is to admit you don't know, but then suggest how you might find out the answer. What you shouldn't do is take a wild guess – the chances are, it will be wrong and rapidly lead you down a blind alley. Examiners won't push for an answer if you honestly don't know, but may give you the occasional prompt if you're on the right track. The secret is to listen to the examiner – and don't be afraid to ask for clarification if there are bits of the question you don't understand.

I tend to get nervous in an interview situation – any tips to help me? The panel chair will try to put you at ease by inviting you to talk a bit about your current job before the technical questions start. In fact, this may be used as a lead-in to the examination proper. But of course, an oral exam is an inherently stressful occasion, and we all deal with stress in different ways. The best advice is to do as much pre-exam preparation and revision as you can, arrive in plenty time (but not too early – 10 to 15 minutes before the appointed time is fine) and get off to a good start by talking expansively about your current role. Any early nerves tend to settle down after the first couple of minutes.

How do the examiners assess a candidate? Each exam has an assessment form which the examiners complete as the exam is progressing. For CertOH, candidates have to pass each of the four core topics (Health Effects of Hazardous Substances, Measurement of Hazardous Substances, Control of Hazardous Substances,

Assessment and Control of Noise) and perform adequately in the optional topics (Asbestos, Ergonomics, Thermal environment). For DipOH, examiners score performance in five key categories – problem-solving skills, practical skills, knowledge of current issues, communication skills and their ethical approach to dealing with conflicts.

How soon will I find out the result? Normally within two weeks. The panel will usually spend a few minutes discussing your performance after you've left the interview room, and agree the result of the exam. The chair then completes a candidate assessment form and at the end of the sitting, these are collated by Qualifications staff. Fail results are normally reviewed by the Chief Examiner and all candidates then notified individually by letter. If you have failed, the reasons for the panel's decision are highlighted in the letter.

What if I fail – how soon can I re-sit the oral? The examiners may recommend a timescale but if you're confident of passing next time, as soon as you like. Oral exams are held at Derby every three months. But don't rush into this unless you have identified what caused you to fail first time, and know what to do to give yourself a better chance of passing next time.

Will I get a different panel of examiners next time? That's highly likely. So remember to revise across the full range of occupational hygiene topics; chances are, you'll get a completely different set of questions in the re-sit.

What are the pass rates for the oral exams?

We've analysed data over the last eight years, and the overall pass rate for CertOH candidates is just over two-thirds (67%). For Diploma candidates, the pass rate is slightly lower at 60%. Virtually all candidates who re-sit the oral exam pass at the second attempt. Concern about the Diploma pass rate was one of the reasons we decided to introduce the Professional Experience Portfolio/ Researched Essay route for Diploma candidates this year. We hope and expect the vast majority of candidates taking this new route to pass the oral exam first time.

RESEARCHED ESSAY TOPICS

At its meeting in November, Faculty Board looked at a shortlist of ten topics that had been suggested as suitable for the Researched Essay component of the new route to the Diploma of Professional Competence in Occupational Hygiene.

Three topics were selected and these are:

- ***Discuss the impact of REACH on occupational hygiene practice***
- ***Review and discuss the practicality of hearing conservation programmes designed for professional orchestras***
- ***Review critically the means of controlling exposures to silica dust in stonemasonry***

These topics will remain 'live' for the first six months of 2016. Diploma candidates who have submitted an acceptable Professional Experience Portfolio (PEP) during this period and who are required to produce a Researched Essay should select one topic from the three above. Faculty Board will select a further three Researched Essay topics at its meeting in May 2016, and these will apply to candidates preparing essays between 1st July and 31st December 2016.

Full details of the process for submitting PEPs and Researched Essays are available via the BOHS website.

Ian Kellie



BREATHE FREELY



Controlling Exposures to
prevent occupational lung disease
in the construction industry



Do you
breathe freely?

Construction workers are at high risk of contracting lung disease from the work that they do. In 2015, approximately 3,500 will die from cancer caused by past exposures to asbestos, 500 more from silica dust, another 5,500 will be diagnosed with occupational cancer, and – today alone – an unknown but significant number will breathe in the hazardous substances that will one day seriously affect their health or kill them.

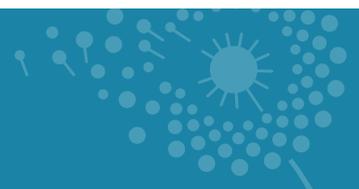
Breathe Freely is a collaborative initiative led by BOHS in partnership with key organisations within the construction industry. It will provide guidance, tools and resources that facilitate the recognition, evaluation and control of workplace exposures leading to the implementation of a recognised management standard.

In partnership with



Join us and be part of the solution

www.breathefreely.org.uk





BREATHING EASIER – PROTECT AGAINST CONSTRUCTION DUST

Adam Willcock Product and Procurement Manager for PPE at Arco

Are you an Occupational Hygienist consulting with construction companies?

The following article is an advertorial from Arco.

Thousands of tradesmen operate in dusty environments every day. Many of these companies require Occupational Hygienists to visit site to assess which employees are at highest risk of exposure to construction dust. Safety experts Arco provide specialist guidance on the Personal Protective Equipment (PPE), training and consultancy suitable to protect against construction dusts.

Activities which may create dust in high concentrations include wall chasing, grinding and sanding, block and stone cutting, drilling, sweeping floors, cutting of softwood, hardwood and wood based products, movement of rubble during site clearance and during demolition.

When considering the correct type of RPE for the type of hazardous dust present, activity being undertaken, workplace environment and timeframe of exposure should all be assessed by the employer to determine whether a disposable, reusable half mask, full face mask or powered air unit is most suitable. Disposable masks are most appropriate for short duration applications, providing a maintenance free protection solution, while full face masks provide integrated eye and face protection. Powered air respirators are also available for longer duration applications, helping to reduce burden on the lungs and increase wearer acceptance, as well as facilitating with PPE compatibility. For all applications a P3 filter, providing high efficiency protection is recommended when working with construction dust. Arco recommend to fully protect your employees that face fit testing is carried out on every type of tight fitting RPE, with the exception of powered air solutions, as this will ensure that it is providing the correct level of protection.

It takes just 20 minutes to test and kit out a worker with a professionally fitted face mask to protect them against deadly silica dust. You wouldn't submerge a diver under water with a leaking mask, so why do we send

construction workers into potentially deadly breathing conditions every day? Arco now has the largest mobile Fit2Fit accredited face fit testing team in the UK so can conduct testing on an organisation's site, dramatically reducing the amount of employee down time involved in attending a testing centre.

As people's faces all differ in shape and size, it is unlikely that one particular type or size of RPE face-piece will fit every individual. Face-fit testing checks that the equipment selected is suitable for the wearer.

Arco conduct training and testing on two methods, quantitative and qualitative, both of which result in matching an individual's face shape with a compatible mask to ensure that a tight seal is achieved. For disposable and half face masks, the qualitative method can be used, which involves the use of a bitter solution sprayed into a test hood. If the individual can taste the solution, it is deemed as a break in the mask's seal. The quantitative method is employed for all tight fitting RPE (Disposables, half masks and full face masks) and involves the use of a particle counting machine and probe to measure contamination levels inside the mask compared with the external environment.

The [Arco Training & Consultancy](#) team also provide on site air monitoring, COSHH awareness courses and training on Confined Spaces, how to use self-contained breathing apparatus, gas tight suits, positive pressure respiratory protection equipment and negative pressured respiratory protection equipment.

Demonstrating its commitment to driving change in the construction industry, Arco is an official sponsor of [Breathe Freely](#), the collaborative initiative led by [BOHS](#). For further information or to book face-fit testing, please visit [www. http://safetyervices.arco.co.uk/](http://safetyervices.arco.co.uk/)

HSE News

At the turn of the year HSE brought cases to court relating to asbestos, chemical burns, chemical inhalation, lead exposure, electric shocks and HAVS. Two educational establishments - a university and a choir school – were prosecuted after explosions caused injury to workers. In this month's column we also include details of an Office of Rail and Road (ORR) prosecution following the death of a rail bridge worker as a result of exposure to toxic vapours.

Company fined after failure to act on asbestos risks

An engineering firm has been fined after asbestos was found at their factory and they failed to document or manage the risks to employees or visitors to the site.

Darlington Magistrates' Court heard how Blue Diamond Engineering Limited of County Durham, was notified of the presence of asbestos materials during a survey carried out at the company's factory premises in 2006. Work undertaken at the premises had the potential to disturb the hazardous asbestos materials, and until HSE's intervention, the company had not documented or implemented an Asbestos Management Plan to adequately control the risk of exposure.

Blue Diamond Engineering Limited, of Shildon Industrial Estate, Shildon, was fined a total of £11,000, with costs of £1,610 after pleading guilty to offences under Regulation 4(8)(b) of the Control of Asbestos Regulations 2012.

Construction firm fined after worker suffers cement burns

A construction firm was fined after a 54-year-old employee suffered severe cement burns to his knees while laying concrete flooring. Sefton Magistrates' Court heard that on the 26 November 2014, an employee of DLP Services (Northern) Limited, knelt in wet concrete to manually finish the concrete flooring being laid in a domestic bungalow. The cement burns to both his knees resulted in 12 days hospitalisation and ongoing treatment.

HSE investigation found the firm failed to adequately assess the risks and implement

suitable and sufficient control measures to protect employees from contact of the wet concrete with the skin. In addition, it did not provide suitable Personal Protective Equipment (PPE) and there were no welfare facilities on site. The court heard the company had been served with HSE Improvement Notices for lack of welfare facilities in September 2014 and June 2014.

DLP Services (Northern) Limited of Cobden Street, Brindle Heath Industrial Estate, Pendleton, Salford, pleaded guilty to breaching Section 22 (1)(c) of the Construction (Design and Management) Regulations and Regulation 7(1) of the Control of Substances Hazardous to Health Regulations. The company was fined £14,000 with £1590 costs.

Cinema director fined for asbestos management failings

A St Albans cinema director has been fined after he put workers and members of the public at risk of exposure to asbestos. James Hannaway, 68, from Berkhamstead, the sole director of The Alpha Cinema (St Albans) Limited was prosecuted by HSE after he allowed refurbishment of the derelict multiscreen cinema to begin in 2010 without proper checks for asbestos.

On 26 November 2015 Stevenage Magistrates' Court heard that in April 2012, James Hannaway went on to engage around 30 members of the public to remove the debris from the demolition work over the course of two days. An asbestos survey was eventually carried out in early October 2012, which identified the presence of asbestos in the building (after the debris removal), and recommended that no-one entered the affected areas. Despite this, the court was told Hannaway was seen taking people into the building to view the ongoing work.

James Hannaway of Waterside, Berkhamstead, Hertfordshire pleaded guilty to breaching Section 3 of the Health and Safety at Work etc. Act 1974 and to breaching Regulation 5 of the Control of Asbestos Regulations 2006 and Regulation 16 of the Control of Asbestos Regulations 2012. He was fined £11,660 and ordered to pay £7,000 in costs.

Caustic burns to worker at food manufacturing company

On 1 December food manufacturing

company, Princes Ltd was sentenced for safety breaches after a worker suffered from chemical burns. Bradford Magistrates' Court heard how 41-year-old Mark McLean was working at the company's Bradford plant when a hose carrying a caustic substance spilt spraying him with the solution. He suffered chemical burns to the left side of his face and arms and was also temporarily blinded during the incident.

An investigation by HSE found that there was no evidence of preventative measures taken by the company before the incident that occurred in July 2013. Princes Ltd of Weaverthorpe Road, Bradford, pleaded guilty to breaching Section 2(1) of the Health and Safety at Work Act 1974 and was fined £13,000.00 with £1,323.15 costs.

Man fined for unlicensed removal of asbestos

A Surrey man was fined for exposing the residents of a house in Putney, himself and his assistant to asbestos. Westminster Magistrates' Court heard how the owner of a three-storey town house in Putney was upgrading the central heating system of his home when his plumbers identified that the boiler cupboard in his loft was made of material they believed could contain asbestos. The owner contacted Dean Callaghan of Esher, Surrey, trading as Rubbish Taxi, after searching on the website, Checkatrade for asbestos removal companies.

Dean Callaghan carried out the removal of the boiler cupboard, assisted by another worker, on 28 December 2014. During that day the homeowner witnessed panels of asbestos containing material (ACM) being carried down four flights of stairs. These panels were not bagged or wrapped, potentially spreading asbestos through the house. After the work was completed, he discovered a lot of dust and debris had been left in the loft area. He contacted an asbestos surveying company who sampled this material and found the loft to be widely contaminated with asbestos. The samples indicated that the material removed was probably asbestos insulation board (AIB). The homeowner had ultimately to engage a licensed asbestos contractor to carry out an environmental clean of the loft area in his home to remove all asbestos debris.

An investigation by HSE into the incident, identified that Dean Callaghan had removed

approximately 8m² of asbestos insulation board and that the removal was poorly carried out. Work of this nature should only be carried out by companies who hold a licence granted by HSE and, although he had been on a training course for low risk, non-licensable work with asbestos, Mr Callaghan did not hold such a licence.

Dean Callaghan, of Hillcrest Gardens, Hinchley Wood, Esher, was fined a total of £2,500, with costs of £701 after pleading guilty to an offence under Regulation 11(1) of the Control of Asbestos Regulations 2012.

Electrical explosion leaves worker scarred for life

Two construction companies have been fined £90,000 after two workers were seriously burned, and one scarred for life after they cut into a live 11,000v electrical cable. Southwark Crown Court heard the labourer and a bricklayer were working in a House of Lords site at Millbank, London, on 1 July 2013, to lay bricks around a manhole.

One of the men, who was 22 at the time of the incident, hit the cable with a jackhammer when removing old brickwork and suffered serious burns to his arms, legs, hands and face. He was in hospital for nearly a month receiving treatment to his injuries. The other worker, a 63-year-old man, suffered significant burns to his face and neck. He has been treated for the longer term traumatic stress because of the incident and is unable to continue working with drills and machines.

Clive Graham Associates Limited (CGA) of 55 Farrington Road, London, who was the principal contractor for the project, pleaded guilty to a breach of Section 3(1) of the Health and Safety at Work Act 1974 and was fined £45,000 with £6,612 in costs.

The employer of the two injured workers, Bellmoor Construction Limited (Bellmoor) of Swakeleys Road, Ickenham, Uxbridge, Middlesex, pleaded guilty to a breach of Section 2(1) of the Health and Safety at Work Act 1974 and was fined £45,000 with £6,612 in costs.

HSE carried out an investigation into the incident and the conditions found at the construction site. CGA had failed to identify the risk from live electrical cables that had been dug up and exposed, failed to provide information warning that the incident cable was live, and failed to adequately manage the site and the contractor. Bellmoor also failed to carry out an adequate risk

assessment before the work started, failed to provide effective supervision during the work and failed to check competence before allocating tasks including the operation of the jackhammer.

21 workers' lives affected after health was carelessly ignored

A Merthyr Tydfil based manufacturer has been fined after 21 employees were left permanently injured after being diagnosed with hand-arm vibration syndrome (HAVS).

In 2011 Linde Heavy Truck Division Ltd appointed a new health and safety manager who recognised the need to put measures in place to manage HAVS, including health surveillance. These measures had not been in place before.

On 18 December 2015 Merthyr Tydfil Crown Court heard how the HSE investigation showed there had been no recognition of the risks from hand-arm vibration and no effective management of these risks over many years.

A total of 21 employees were diagnosed with HAVS and this was reported to HSE under RIDDOR. The employees that are affected by HAVS suffer symptoms such as tingling, pins and needles, numbness and pain in their hands. This affects sleep when it occurs at night and they have difficulties in gripping and holding things, particularly small items such as screws, doing up buttons, writing and driving. The biggest impact on the employees' lives was that the factory closed down at the end of 2013 and they were made redundant.

The duties of employers regarding hand-arm vibration have been very clearly set out for many years, yet the company failed to implement the necessary measures until the risks had been identified by their new H&S manager.

Linde Heavy Truck Division Ltd pleaded guilty of breaching Section 2(1) of the Health and Safety at Work etc Act 1974 and was fined £50,000 and was ordered to pay £14,793.60 in costs.

Company fined for exposing employees to health risks

A company who specialises in paint coatings has been fined for exposing its employees to health risks. Newport Magistrates' Court heard how in March 2015 Limited Specialist Paint Coatings Limited of Cardiff was refurbishing 72

metal window frames at premises on High Street, Newport. They exposed employees and others to health risks by high pressure shot blasting old lead based paint. An investigation by HSE into the incident, found that there was an inadequate risk assessment and a lack of control measures to reduce the risk of exposing workers and others to lead.

Special Paint Coatings Limited, of Llewelyn Goch, St Fagans, Cardiff, was fined a total of £9,000, with costs of £1,324 after pleading guilty to offences under Regulation 5, Regulation 6 and Regulation 10 of the Control of Lead at Works Regulations 2002.

Worker paralysed after fall caused by electric shock

An electrical power company was fined after a worker was paralysed after receiving an electric shock and falling from a ladder.

Cwmbran Magistrates' Court heard how Alan Mosley, an employee of Bristol based Western Power Distribution PLC, suffered permanent spinal injuries as a result of falling from height after coming into contact with live electrical equipment.

Mr Mosley, 56, was part of a two-man team tasked with changing an antenna at Brithdir cemetery in April 2013. After climbing a ladder he received an electric shock when he touched the antenna. Pushing himself off the ladder to avoid potential electrocution, he fell four and a half metres. Mr Mosley had been married for only eight months before the incident and, as a result of his injuries, he now has to use a wheelchair.

An investigation by HSE found there to be a fault in the wiring causing the external metal to become connected to the 230v power supply. Western Power Distribution (South Wales) PLC, of Avonbank, Feeder Road, Bristol, was fined a total of £300,000, and ordered to pay £18,178 in costs, after pleading guilty to an offence under Regulation 4(1) and 4(3) of the Electricity at Work Regulations 1989.

Two companies fined for safety failings after two separate incidents

Chemicals Europe Limited and Capper Industrial Contractors have been fined following safety failings on two separate occasions. Chester Crown Court heard how the first incident which occurred on the 30 May 2012, at Tata Chemicals Europe

Limited (TCEL) plant in Lostock, when an employee of Cappers Industrial Contractors (CIC) was engulfed in hot caustic lime dust and sustained chemical burn whilst he was operating an open fronted vehicle to shovel a mound of hot/wet lime which slumped into the open cab.

An investigation by HSE into the incident found that unsafe work methods meant employees exposure to levels of dust was higher than they had to be. The second incident occurred at the Winnington Plant on 3 May 2013 when an employee of TCEL was on a walkway eight feet high when the grating failed and he fell through and became trapped up to his waste in a corroded section of the grating, fortunately without serious injury.

An investigation by HSE into the incident found that the company did not have an adequate inspection regime for the walkway, and did not ensure it was maintained in good condition. Tata Chemicals Europe Limited, of Mond House, Winnington, Northwich, was fined a total of £349,850, with costs of £58,392 after pleading guilty to an offence under Section 3 (1) of the Health and Safety at Work etc Act 1974, and an offence under Regulation 12 of the Work at Height.

Capper Group Industrial Contractors Limited of Winnington, Northwich, was fined a total of £10,000, and ordered to pay £3,000 in costs after pleading guilty to an offence under Section 2(1) of the Health and Safety at Work etc Act 1974.

University fined after bomblet explosion seriously injures worker

Cranfield University has been fined after a worker suffered potentially life-threatening injuries whilst dismantling a bomblet. On 23 December 2015 Swindon Crown Court were told that, on 4 February 2011, three employees from the Explosives Research Section at the Defence Academy of Cranfield University were working to deactivate former military cluster bomblets, so they could be recovered for use in demonstrations. As the team were carrying out the deactivation at the Shrivensham Campus, one of the bomblets exploded causing serious injuries to one of the workers.

The injured worker suffered severe abdominal injuries and his right colon which was penetrated by a shard of metal required removal after surgery. He also suffered lacerations to his face and shoulder, and nerve damage to his right hand.

An investigation by HSE found no suitable risk assessment had been carried out for this type of activity and therefore the system of working was unsafe. Swindon Crown Court heard the university's management team were unaware of the process being carried out by their workers to break down explosive ammunition of this nature.

Cranfield University, of Cranfield, Bedfordshire, pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc. Act 1974 Section 2(1); and Section 4(1) of the Manufacture And Storage of Explosives Regulations 2005 and were fined £80,000 with costs of £75,000.

School in court over science experiment injury

A chemistry laboratory technician lost parts of three fingers and sustained a serious internal injury while preparing a highly sensitive explosive for use in a 'fireworks' demonstration to a class of children.

On 11 January 2016 Bristol Magistrates' Court heard the now retired staff member lost the top joints of his left hand index, middle and ring fingers and ruptured his bowel while preparing the explosive at Bristol Cathedral Choir School. The HSE prosecuting told the court the laboratory technician spent 12 days in total in hospital after the October 2014 incident. Although he returned to work in February 2015, he has since retired.

It was revealed that the preparation of explosive substances had been carried out in the school several times a year since 2009. The mixture in question and other substances had been used in 'fireworks' demonstrations. The court also heard that other explosive substances, namely flash powder and gunpowder, were stored in the school's chemistry storeroom.

HSE said the incident could have been avoided if the school had implemented clear management arrangements to control and review the risks posed by the chemicals used in its teaching activities.

Bristol Cathedral Choir School, of College Square, Bristol, admitted that it failed to ensure, so far as is reasonably practicable, the health and safety of its employees, in breach of its duty under Section 2 of the Health and Safety at Work etc Act 1974. It also admitted failing to conduct its

undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in its employment, in this case its pupils, were not exposed to risks to their health and safety, in breach of its duty under Section 3 of the same act.

The school was fined a total of £26,000 [£8,000 for the section 2 offence and £18,000 for the section 3 offence] and ordered to pay £12,176 costs.

Firm fined after worker suffered cement burns on first day of work

A building products manufacturer was fined after a worker suffered serious cement burns on his first day of work.

On 14 January Leicester Magistrates' Court heard how a 21-year-old inexperienced agency worker – on his first day of full time employment – was exposed to alkaline cement slurry by standing in a drainage pit with inadequate Personal Protective Equipment. The young worker suffered chemical burns to his feet and ankles. He required plastic surgery and his feet and lower legs are scarred for life. He was in hospital for three weeks.

An investigation by HSE into the incident which occurred on 28th April 2014 at Station Road, Stoney Stanton found that the company had not appreciated that slurry from cured concrete dust posed the same risks as that from cement or wet uncured concrete. They had no risk assessment for the slurry or suitable and sufficient controls to eliminate, reduce or control the risks. A mechanical system to remove slurry from the water pit would have prevented these life changing injuries.

In his statement provided to the Court, the worker said: "A year after the accident my feet are scarred. My right foot is worse than my left. I find it difficult still to walk. I don't know how my feet will improve in the long term. I wouldn't like anyone to go through what I have had to go through". Stressline Limited pleaded guilty to breaching Section 3(1) of the Health and Safety at Work etc Act 1974 and was fined £12,000 and ordered to pay costs of £2,121.

Firm fined over Tay Rail Bridge death

Following an Office of Rail and Road (ORR) investigation, an industrial access company has been fined £200,000 after a rail bridge worker died as a result of exposure to toxic vapours during reprinting work in a pier leg of the bridge in January 2010.

Dundee Sheriff Court heard that the 44-year-old was overcome with fumes after not being given the correct protective clothing or equipment. The worker was just wearing a paper dust mask for protection, rather than full breathing apparatus. Proper ventilation or extraction equipment was also not in place. The court was also told that there was no monitoring of oxygen levels in the area, as well as inadequate supervision and a lack of rescue facilities in the event of an accident. Industrial services company Xervon Palmers Ltd was fined £200,000 after admitting failing to identify the area being worked in as a confined space and therefore placing employees at risk of exposure to concentrations of chemicals far in excess of the workplace exposure limit.

New Year's Honours

Judith Hackitt CBE, the Chair of the Health and Safety Executive, has been made a

Dame in the New Year's Honours List for 2016. More good news for HSE is that Paul Hamey, a long-serving member of its Chemical Regulations Directorate, is awarded an MBE.



Judith's award recognises her services to health and safety and for being a role model in engineering, especially for young women. A chemical engineer, Judith worked in the chemicals manufacturing industry for 23 years before joining the Chemical Industries Association in 1998, becoming its director general in 2002. She then worked in Brussels for the European Chemical Industry Association.

Judith is a Fellow of the Institution of Chemical Engineers and was elected a Fellow of the Royal Academy of Engineering in 2010. She was awarded her CBE for services to health and safety in 2006.

Paul Hamey is awarded an MBE for services to the regulation of pesticides. A specialist in human exposure to pesticides, particularly in the agriculture sector, Paul is recognised as a world-leading regulatory scientist.

Which was the best Annals paper?

Every two years BOHS awards the Bedford Prize for the best paper in the Annals of Occupational Hygiene. We are due to award a prize this year, and we need to hear from any reader who has looked at a paper from 2014 or 2015 and thought that it was particularly interesting or especially useful. A representative of the winning authors will then be given the prize at the BOHS Annual Conference next year.

We start by drawing up a shortlist. Anyone can nominate a paper to the list, and we need to make sure that it includes all papers that should be considered. If you have thought any paper interesting or useful, or in other ways worthy of consideration, please nominate it. You do not need have to have read all the other papers – just to have felt that a paper (or commentary or invited editorial) could be considered for the prize. As a quick way of reminding yourself which papers are eligible, go to <http://annhyg.oxfordjournals.org/> and "browse the archive" for 2014 and 2015.

Any reader may nominate up to three papers, except for someone working in the organisation of one of the authors, or with a close personal link with an author. The winner is chosen from the list of nominated papers by a panel of the Editorial Board and recent officers of BOHS, who report to Council.

Nominations should be sent to the Editorial Administrator, Roz Phillips, at annals@bohs.org any time up to 30 May 2016. A nomination should be accompanied by up to 150 words drawing attention to the paper's strong points, and by the name and address of the nominator (which will not be disclosed to the panel).

The prize is named after Thomas Bedford, a pioneering scientist in the development of occupational hygiene as a discipline, and the first President of BOHS. Those interested in knowing more about this important figure in our history are encouraged to read his obituary which appeared in the Annals of Occupational Hygiene in 1963, <http://annhyg.oxfordjournals.org/content/6/4/281.full.pdf+html>.

Noah Seixas
Chief Editor, Annals of Occupational Hygiene

New Sue Davies Prize for Best-Performing OHTA ICertOH Student



A new annual prize will be awarded for the first time in 2016 for the student from a developing country with the best performance in achieving the OHTA ICertOH (International Certificate in Occupational Hygiene).

The Sue Davies Prize has been established to commemorate the invaluable contribution of the late Sue Davies to the Occupational Hygiene Training Association (OHTA). In the association's early years, Sue was a driving force and wise counsel to those trying to establish the international training scheme and qualifications framework.

The prize will be attendance at one of the following conferences:

- Australian Institute of Occupational Hygiene (AIOH), or
- British Occupational Hygiene Society (BOHS) conferences, or
- American Industrial Hygiene Conference and Exposition (AIHce).

Conference fees, accommodation and economy air fare (including travel insurance) will be paid up to the award value of US\$5,000, making this an excellent opportunity to experience a major international occupational hygiene conference. These events bring together individuals with an interest in occupational hygiene from around the world and enable delegates to expand and share knowledge in a sociable environment.

To be eligible for the prize:

- Candidates must have successfully completed the OHTA ICertOH;
- Those permanently resident in a country considered a developing economy (with less than 25% US GDP per capita, and without an industrial hygiene association that is a member of IOHA) will

- normally be given priority by the judging panel;
- Candidates must have a valid passport and meet the visa entry requirements of U.S.A., U.K. and Australia.
- Candidates must not have attended any of the above conferences before.

Candidates will need to submit an application form including an essay between 800 and 1,000 words (in English) on why they should be considered for the prize. The essay should include the following:

- What benefits winning the prize will bring to both the applicant and the advancement of the profession in their country?
- What are the career plans of the applicant in regard to the occupational hygiene profession?
- Which conference would the applicant wish to attend and why?
- The applicant will submit a budget for the trip outlining how the money would be spent. No cash payments will be made directly to the successful candidate, and all expenses will be paid directly to organization providing the service, e.g.

accommodation, airline, conference, etc.

Further information including the application form and guidelines can be found on the OHlearning website (www.OHlearning.com) or by contacting Roz Phillips at roz.phillips@ohlearning.com.

The application period will run from 1 April 2016 to 30 September 2016.

After the closing date of 30 September, a judging panel of OHTA stakeholders and board members will make a decision based on exam results throughout the six modules, ICertOH oral exam, essay, and the person who is considered to have the most potential. The winner will be notified in December.

The funding of the Sue Davies Prize is by the Sue Davies Scholarship which was established in Australia in April 2015. Although funding has and will continue to come from donations from the public, in future other opportunities such as sponsorship will also be explored. If you would like to make a donation or discuss sponsorship opportunities, please contact Noel Tresider, one of the trustees of the Sue Davies Scholarship, at ntreside@bigpond.net.au



Hazards of Silica Dusts in Construction and Demolition

by Dr. Steve Goodman, Product Specialist Manager, Shawcity

The following article is an advertorial from Shawcity.



Silica is a naturally-occurring substance found in most rock, sand and clay; hence, it is also found in products such as bricks and concrete. In the workplace silica exposure presents serious health hazards, demonstrated by the fatalities and

disabling illnesses that continue to occur in certain occupations.

Respirable Crystalline Silica (RCS) is classified as a human lung carcinogen but the effects of breathing crystalline silica dust can also cause silicosis, resulting in disabling or fatal lung disease.

When silica dust is inhaled the contact with lung tissue causes scar tissue, reducing the

lungs' ability to take in oxygen and increasing susceptibility to lung infections.

Silicosis is classified as follows: Chronic/classic, accelerated or acute. Chronic/classic silicosis occurs after 15–20 years of low to moderate exposure to RCS. Initial symptoms present as shortness of breath upon exercising. Latter stages of the disease present as fatigue, extreme shortness of breath, chest pain or respiratory failure.

Accelerated silicosis can occur after five–ten years of high exposures whereas acute silicosis can occur after only a few months to two years following exposure to extremely high concentrations of RCS. Symptoms of both include severe shortness of breath, weakness and weight loss, which often leads to death.

Exposure to RCS occurs in various construction/demolition activities. The most severe instances occur during sandblasting, jack hammering, rock drilling, concrete mixing, concrete drilling and brick and concrete block cutting/sawing. Other exposures occur in the manufacture of cement/brick, asphalt, china, ceramic, steel, household abrasives, adhesives, paints, soaps and glass.

In Britain, RCS has a workplace exposure limit (WEL). The WEL for RCS is 0.1 mg/m³ expressed as an 8-hour time-weighted average (TWA). Exposure to RCS is also subject to the Control of Substances Hazardous to Health Regulations 2002 (COSHH). This should be achieved initially through good occupational hygiene practice and instigation of control measures such as:

- - Replacing crystalline silica with safer substitutes
- - Providing controls such as local exhaust ventilation (LEV)
- - Wearing disposable or washable work clothes, ideally providing shower facilities
- - Vacuuming dust from clothes or changing clothing before leaving site.
- - Training, health screening and exposure monitoring.

As part of the control process it is often critical to identify the sources and levels of crystalline silica exposure through live dust monitoring. Shawcity offers a range of the latest technology from the world's leading manufacturers. If you would like more information on monitoring crystalline silica in indoor or outdoor spaces, please contact us on Tel: 01367 899424 or email: occhyg@shawcity.co.uk

VOC Monitoring

Sound, Noise & Vibration

Air Quality & Dust

Confined Space

Fixed Gas Systems

Impartial, bespoke monitoring solutions

The UK's widest range of health & safety, occupational hygiene and environmental monitoring instruments available to HIRE or BUY

- Manufacturer-approved in-house Service Centre
- Unlimited expert technical support & advice.

01367 899419
info@shawcity.co.uk
shawcity.co.uk



Celebrating our 40th anniversary in 2016

25-28 April 2016
Hilton Glasgow, UK

OH2016

Glasgow

Can you afford not to attend?

Sponsorship and Exhibition Opportunities

In addition to having a stand presence at the event itself as an exhibitor, you can take advantage of the many other opportunities to raise the profile of your brand, through the publicity which will aim to reach the c.20,000 members of IOHA across the globe.

A range of exhibition and sponsorship packages are available to suit all budgets.

www.oh-2016.com/exhibition-and-sponsorship/

Exhibitor Packages

£250 per square metre
Minimum size 3m x 2m

All our sites are offered on a 'shell space only' basis and are based on a minimum space of 3m wide x 2m deep.
See back page for exhibition floorplan.

Includes:

- > 2 delegate places** - these will also be your exhibition stand representatives and will also receive:
 - Access to all conference sessions
 - Morning, afternoon and lunchtime refreshments
 - Invitations to sponsored social events (excluding gala dinner)
- > Exhibitor recognition in all pre and post conference literature, direct mail and emails
- > Logo and company profile in the hard copy conference programme
- > Logo on holding slides throughout the conference in all session rooms
- > OH2016 mobile app, logo and company profile listing
- > Logo and hyperlink to company website on sponsors page of www.oh-2016.com
- > Logo rotation on home page of www.oh-2016.com

Spaces will be allocated on a first come first served basis. To book an exhibition space please complete the booking form which is available by visiting

www.oh-2016.com/exhibition-and-sponsorship/

Here you will also find the exhibition floor plan and the terms and conditions of exhibiting at OH2016.

Sponsorship Packages

Sponsorship of the conference mobile app
£4,000

Includes:

- > **Unique branding of mobile app**
- > **Enhanced logo and company profile in the hard copy conference programme**
- > **Exhibition shell stand 3m x 2m**
- > Enhanced sponsor recognition in all pre and post conference literature, direct mail and emails
- > 2 delegate places** - these will also be your exhibition stand representatives and will also receive:
 - Access to all conference sessions
 - Morning, afternoon and lunchtime refreshments
 - Invitations to sponsored social events (excluding gala dinner)
- > Enhanced logo on holding slides throughout the conference in all session rooms
- > OH2016 mobile app, logo and company profile listing
 - 1 x Banner advert
- > Logo and hyperlink to company website on sponsors page of www.oh-2016.com
- > Logo rotation on home page of www.oh-2016.com

Product Showcase: £500

Insert in Delegate Pack: From £300

Advertise in the Conference Handbook

> Half page: £175 > Full Page: £300

Elite Sponsor

CASELLA

Exhibitors

DEKATI
Excellence in Particle Measurements
SCIOLUTIONS

DIAMOND ENVIRONMENTAL

Sponsors



For full details on our exhibition and sponsorship opportunities visit
www.oh-2016.com/exhibition-and-sponsorship/

Find out what's happening at OH2016

Open up to the middle pages for more details about the conference and benefits of registering



The Chartered Society for
Worker Health Protection

OH2016

Glasgow

25 - 28 April 2016 Hilton Hotel Glasgow

BOHS are pleased to confirm that booking is now open for what we anticipate will be a fantastic conference.

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 and it will take place from 25 to 28 April. Professional Development Courses will take place on Monday 25 April.

Full Conference Rates 26 - 28 April 2016

Delegate Type	Full Conference	Day Rate
BOHS Member	£590.00	£285.00
Speaker**	£510.00	£255.00
Non Member	£735.00	£365.00

Cancellations received before 31 January 2016 will be entitled to a full refund, minus a £100 administrative fee. Any cancellations received after this date will NOT be entitled to a refund but substitutions will be accepted up to 17 April 2016.

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 now via the website.

** Does not apply to IGNITE presenters.

*** Maximum of one day free for those presenting on one or more days at conference.

All rates above are subject to UK VAT at the appropriate rate, currently 20%.

Professional Development Courses (PDC's) Monday 25 April 2016

See centre pages for more details.

5 PDC courses available £200 + VAT per PDC

Book now at
www.oh-2016.com/professional-development/

Book now by visiting
www.oh-2016.com/registration/

Book your accommodation at
www.oh-2016.com/accommodation/

See what we have planned at
www.oh-2016.com/agenda/

Sponsorship and
Exhibition Opportunities

See reverse for more details.

Earn extra
CPD points