OCCUPATIONAL HYGIENE

PAST PRESENT FUTURE

CHALLENGES

Northern Ireland Safety Group 1953 - 2023 70th ANNIVERSARY

BOHS 70 Years of Protecting Worker Health

sac Safety Advice Centre

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PAST FUTURE

CHALLENGES

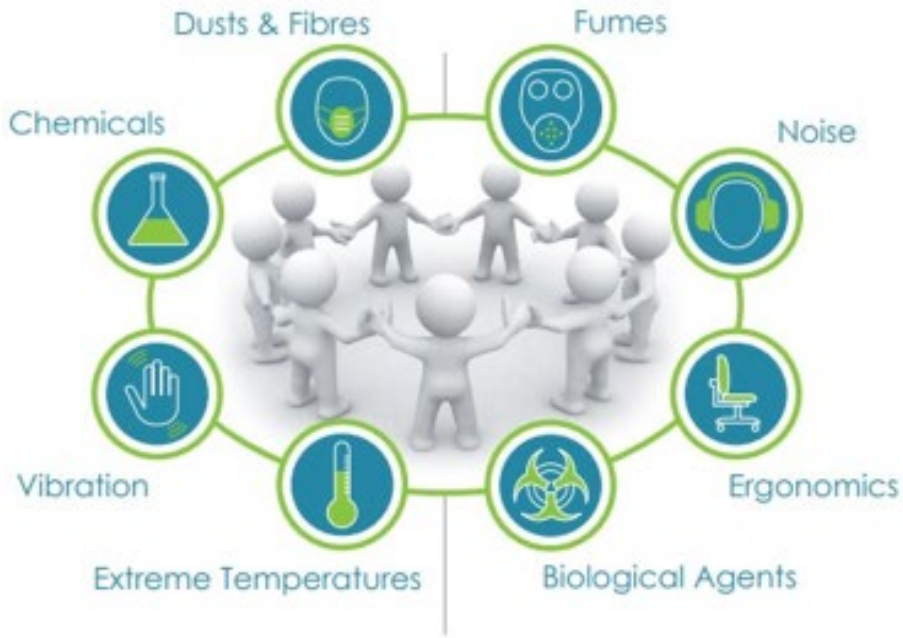
Occupational Hygiene is

Recognition

Evaluation

Control

Health Hazards



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Why should we prioritise worker health?

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Late 1970's

Network of Occupational Health Doctors

Dr Gerry Hall	EMAS
Dr Liam Conlon	Shorts
Dr Hall Campbell	ICI/Lear Fan
Dr Courtney	STC

Ill health a bigger issue than accidents

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Early 1980's

Thousands of Shorts and Ship Yard workers – Noise induced hearing loss – compensation claims in tens of millions.

Hundreds, possibly thousands, suffering from various forms of respiratory disease from welding, soldering, asbestos, Paint spraying etc.

THE BRITISH
EXAMINING AND REGISTRATION BOARD
IN
OCCUPATIONAL HYGIENE

William James McAllister

through his knowledge of the broad principles of occupational hygiene and his education, training and experience, is competent to practice in the comprehensive field and is duly awarded the

Certificate of Operational Competence in Occupational Hygiene

chairman

date 5th June 1980

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1980's

Noise Levels – 100+ dBA

Changing Technology

1984 - Lear Fan – 50% of work force suffering from sensitising dermatitis - compensation claims £4million+

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1983

Hansard 28 July 1983, Vol 46, C1411

Asbestos - “It is not a substitute for which one can set a level below which there is no risk but a substance about which we do not know the lowest level of risk. We must, therefore, assume that a single fibre could do real damage which may not be seen for 20 years or more”

Minister Gummer - Member for Suffolk

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1988 - Big Game Changer

From **HASAWO - General Employer Duties**

To ensure SFARP

Safe use, handling, transport and storage of articles and substances

To **Control of Substances Hazardous to Health Regulations**

Risk Assessment

Prevention/Control Exposure

Use and maintenance of Control

Monitoring Exposure

Health Surveillance

Provision of Information Training

Arrangements to deal with Emergencies (1999)

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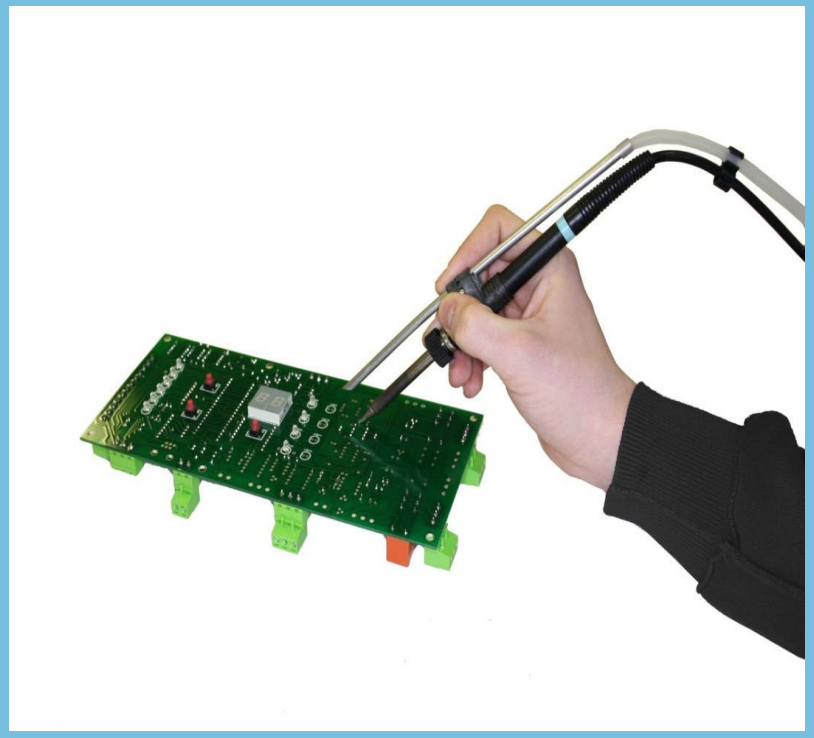
COSHH Issues

Hierarchy of Controls

Maintenance of Controls - LEV

Monitoring Exposure - MDHS



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Occupational Hygiene Survey Reports

Recent HSENI study highlighted a general lack of detail and clarity

- Client details, site address, terms of reference, service provider detail - names/competency/experience/authorisation of report
- Description of the type of work processes/task/activity, substances and materials used, employee work patterns and exposure period
- Existing controls in place, LEV, PPE, RPE
- Sampling methods, equipment used, period monitored, total number of employees exposed
- Calculation of results in relation to Workplace Exposure Limit
- Health surveillance often stated but not explained.

HSENI study on LEV Reports

- Did not give enough detail of systems, eg photographs, diagrams, measurements taken, test points
- Reference to commissioning report data
- Judgement on system performance
- Comments on how operatives used the LEV

Methods for the Determination of Hazardous Substances

MDHS 14/4

General methods for sampling and gravimetric analysis of respirable, thoracic and inhalable aerosols

- End result - time weighed average concentration

MDHS List needs to keep pace with changing technology: Direct Reading Instruments

- Can provide time weighed average concentrations
- Real time concentrations
- Identify when and where peak exposures occur
- Useful for substances with acute effects

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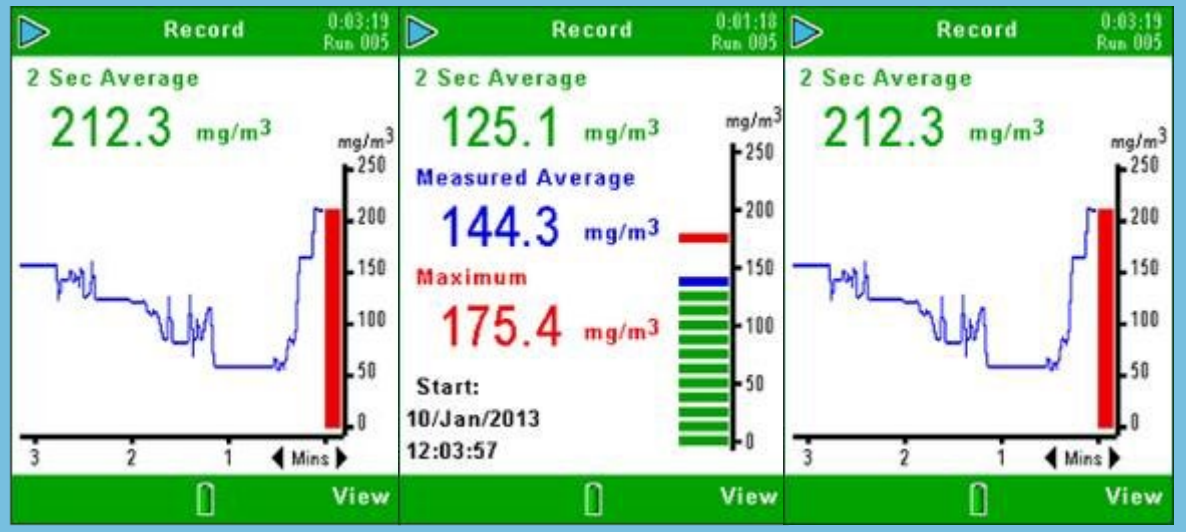
Real Time Dust Monitor

Casella Microdust Pro



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MDHS 25/4 Organic Isocyanate in Air

This is the only method that allows data generated to be compared directly with WEL's

Need to work under a Home Office Licence

The sampling media used in MDHS 25/4 contains 1-(z-methoxyphenyl) piperazine, known as 1,2-MP. This is a controlled drug and those supplying or handling these sampling medias can only legally do so under a Home Office Licence. Members of BOHS Faculty of Occupational Hygiene can work under a BOHS Group Authority Licence (GAL), subject to certain conditions.

But not in Northern Ireland !!!

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HSE Asbestos Guidance

The Licensed Contractors Guide

HSG247 - Published 2006

Asbestos Essentials Guide

Provides good general guidance but lacks required detail

The Non-Licensed Contractors Guide

Introduced 8 years ago but never published

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Keeping Pace with Changing Technology

Exposure to silica from engineered stone

- Worktops
- Silica content - up to 90%

Cutting, sanding, drilling causing high levels of airborne silica.

Significant issue in Australia

Safe Work in Australia - National policy body has recommended a prohibition on the use of engineered stone

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EU Protection of Workers from Asbestos at Work

OEL or Control Limit for Asbestos to decrease by 10fold 0.1 f/ml to 0.01 f/ml without transition period (use of PCM).

Following transition period (max 6 years) - move to SEM

OEL to reduce to 0.002 f/ml

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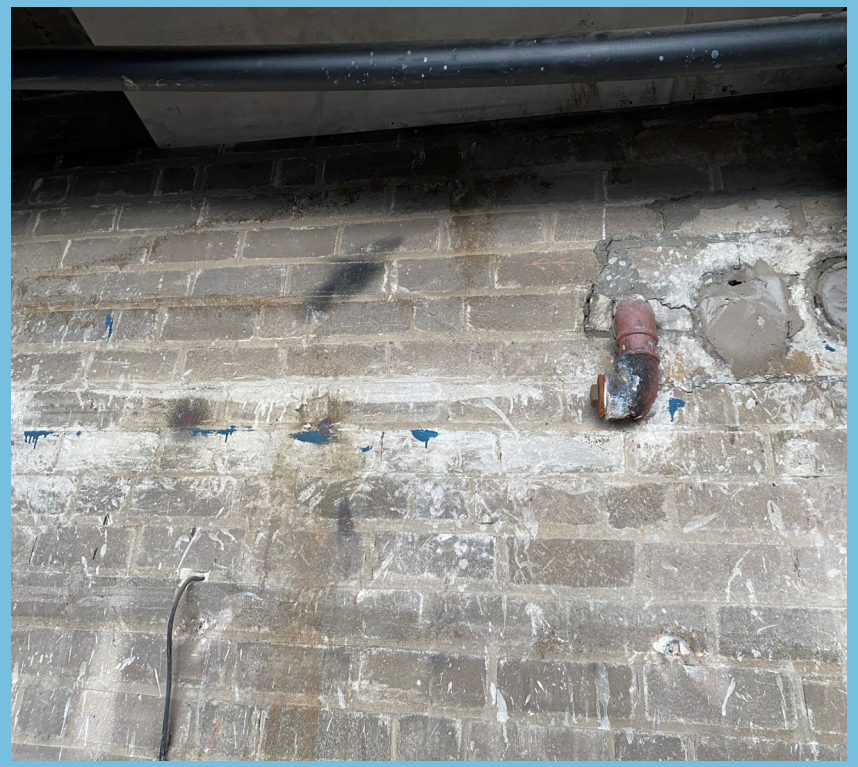
Public Sector



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Private Sector

Graphene

Extracted from graphite and is made of pure carbon

- 200 x stronger than steel
- 5 x lighter than aluminium
- Conducts electricity with no resistance or heat
- Transparent, absorbs little light
- Very flexible

Construction products: for strength and sustainability
Health: bones, muscles, prosthetics
Batteries: smaller, lighter, charge faster, last longer than lithium - ion

Graphene (contd.)

Is Graphene safe?

No long-term studies/research.

The more carbon nanomaterials like graphene that accumulate in the body, the riskier it can be for organs to function adequately. Jagged nanoparticle edges have been found in the immune cells, skin and lung cells, showing that it is possible for graphene to be dangerous in the long term.

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Please visit BOHS stand in the Exhibition Hall

Informal networking at end of Conference

Free NI Webinar on 29 November 12:00 - 13:30
Work-Related Ill Health Crisis

www.bohs.org

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