

PROTECTING PEOPLE  
AND PLACES FOR **50** YEARS 

# HSE's Expectations & Perspective

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11<sup>th</sup> September 2025





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## Expectation No 1

That exposure to  
substances  
hazardous to health  
is *“Adequately  
Controlled”*



Inadequate Respirable Crystalline Silica (RCS) Control



## What is Adequate Control Under COSHH

- Exposures not exceed any WEL
- ALARP – carcinogens / asthmagens
- Principles Good of Control applied

e.g. design & operate processes to minimise emission & spread; controls proportionate to risk; choose most effective & reliable controls; consider all exposure routes; IIT



## Controlling airborne contaminants at work

A guide to local exhaust ventilation (LEV)



HSG258 (Third edition)  
Published 2017

This is a free-to-download, web-friendly version of HSG258 (Third edition, published 2017). This version has been adapted for online use from HSE's current printed version.

You can buy the book at <https://books.hse.gov.uk/> and most good bookshops.

ISBN 978 0 7176 6613 3  
Price £20.00

This book provides guidance on the design of new local exhaust ventilation (LEV) equipment. It describes the principles of deciding on, designing, commissioning and testing effective LEV.

This guidance is written for employers who use or intend to use LEV. The guidance will also help suppliers of LEV, managers, trade union and employee safety representatives. All of these groups need to work together to provide, maintain and use effective LEV and to reduce exposure from the inhalation of hazardous substances.

The book contains information about the roles and legal responsibilities of employers and suppliers; competence; principles of good design practice for effective LEV hoods and their classification; ducts, air movers; air cleaners; and system documentation – with checking and maintenance schedules and the marking of defective equipment.

It also includes guidance on the specification of LEV; commissioning; zone marking; the user manual and logbook; testing and hood labels.

This third edition has been updated and contains minor amendments and clarifications, but the advice is broadly unchanged and includes the updates made in the second edition based on feedback from industry.

## Adequate Control

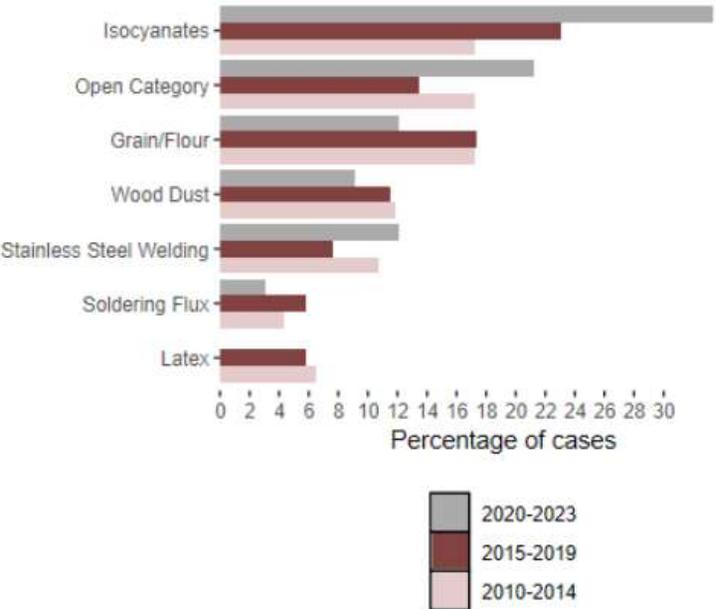
# Just follow HSE guidance?



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# Isocyanate paint spraying

# Isocyanates Health Risks



- There were an estimated 20,000 new cases of self-reported ‘breathing or lung problems’ each year caused or made worse by work according to the Labour Force Survey (LFS) averaged over the last three years.





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### Adequate Control (HSG261)

**Elimination:** If reasonably practicable.

**Substitution:** If reasonably practicable.

**Engineering:** Extracted spray room.

**Admin:** Controlled Access

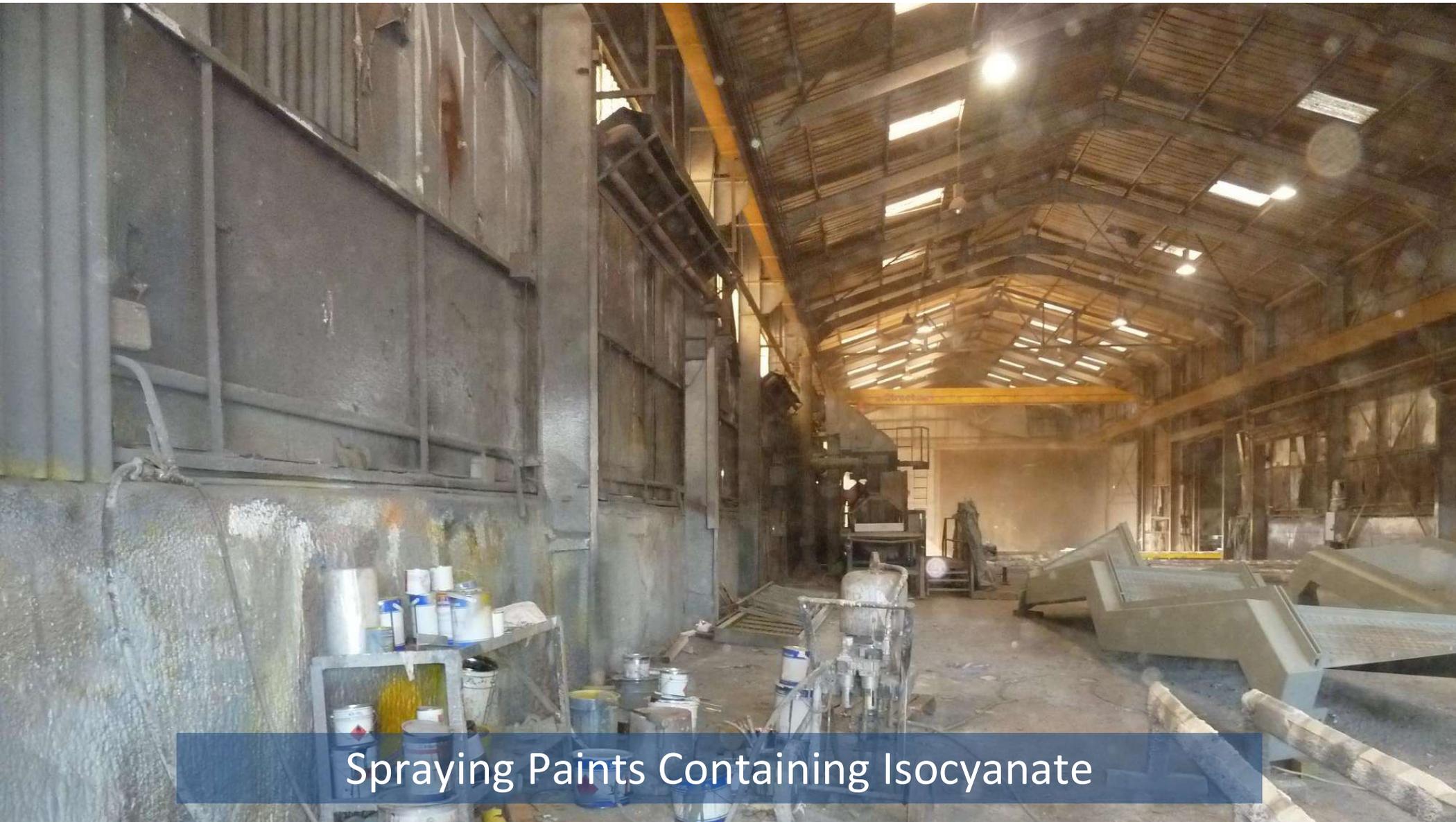
Welfare facilities, IIT

**PPE:** RPE – constant flow airline  
Type 5 Overall / gloves

**Health  
Surveillance**

**Biological  
Monitoring**





Spraying Paints Containing Isocyanate



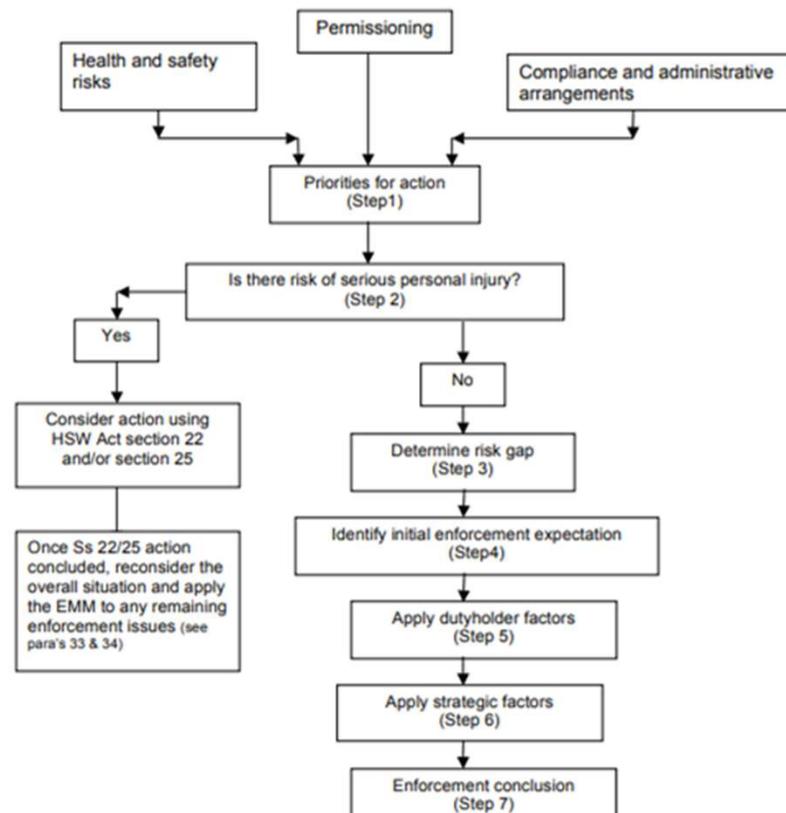
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## How HSE enforces

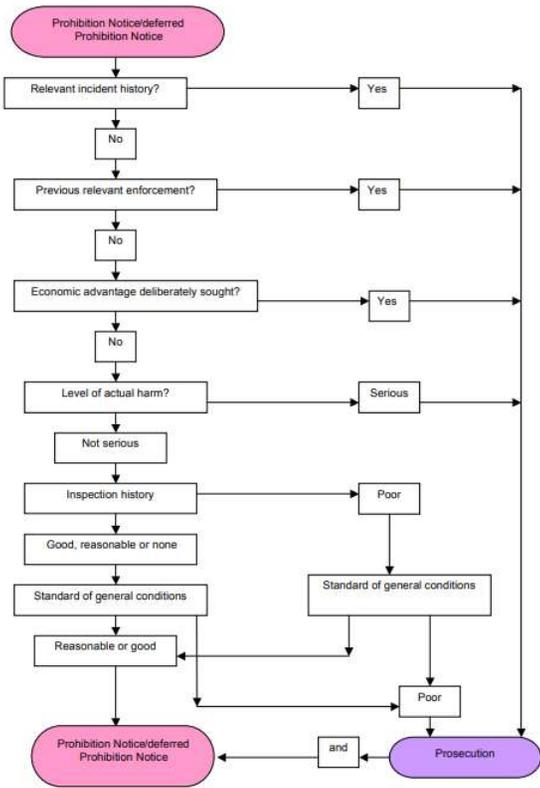
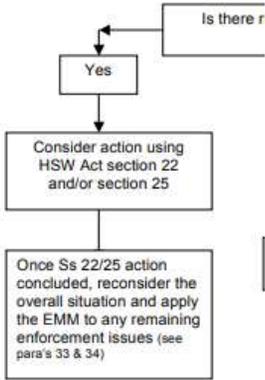
- Prohibition Notices
- Improvement Notices
- Notification of Contravention
- Advice
- Prosecution

## Enforcement Management Model (EMM) Overview



# Serving a PN

- Is there a risk of serious injury?
- Do you need to take further enforcement action for sustained compliance?
- Do you take further action?



# Determining the Risk Gap

## Actual Risk Vs. Benchmark Risk

- **Likelihood** of someone coming to harm doing that activity
- **Consequence** of the action
- Benchmark will change either the likelihood or the consequence

Measure of actual risk (where the dutyholder is)	Consequence	Likelihood	Dutyholder complies with or exceeds legal standard				Dutyholder complies with or exceeds legal standard				Dutyholder complies with or exceeds legal standard				
	Nil	Nil													
	Minor injury	Remote	Possible Probable												
		Possible													
		Probable													
	Significant injury	Remote	Possible Probable												
		Possible													
		Probable													
	Serious personal injury	Remote	Possible Probable												
		Possible													
		Probable													
	Likelihood		Possible	Remote	Nil/neg	Probable	Possible	Remote	Nil/neg	Probable	Possible	Remote	Nil/neg		
Consequence		Serious personal injury				Significant injury				Minor injury/ Nil					
Benchmark risk (where dutyholder should be)															



# Initial Enforcement Expectation

**Table 5.1** Health and safety risks: Initial enforcement expectation

Risk gap	Standards	Initial enforcement expectation (to secure compliance with the law)	Consider prosecution?
Extreme	Defined	Improvement Notice	Yes
	Established	Improvement Notice	Yes
	Interpretative	Improvement Notice	
Substantial	Defined	Improvement Notice	
	Established	Improvement Notice	
	Interpretative	Letter/inspection form	
Moderate	Defined	Improvement Notice	
	Established	Letter/inspection form	
	Interpretative	Letter/inspection form	
Nominal	Defined	Verbal warning	
	Established	Verbal warning	
	Interpretative	Verbal warning	
Immediate risk of serious personal injury has already been considered and dealt with where appropriate.			

# Standards

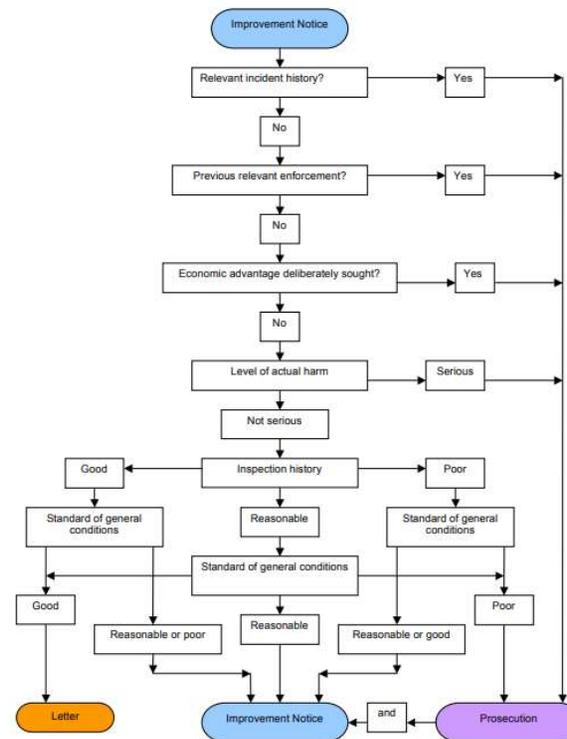
- Defined Standard Example:  
COSHH Reg 9(2)

LEV TEXT

Descriptor	Definition
<b>What is the authority of the appropriate standard?</b>	
<b>Defined standard</b>	Minimum standard specified by Acts, Regulations, Orders and ACoPs. For example, defined standards of edge protection, requirement to fit rated capacity indicators to cranes, prohibitions of certain work activities, requirement to have a licence for certain asbestos work, set licence conditions.
<b>Established standard</b>	Codes of Practice and other standards linked to legislation, e.g. CEN standards, providing specific standards of health, safety and welfare. Also published or commonly known standards of performance interpreted by HSE, HSE's technical Support Groups (SG) or other specialists, industry or other organisations, as levels of performance needed to meet a general or qualified duty under health and safety law.
<b>Interpretative standard</b>	Standards put forward by HSE, and SG or other HSE specialists, which are not published or available generally, but are examples of the performance needed to meet a general or qualified duty. Also standards interpreted by inspectors from first principles.

# Dutyholder Factors

- Specific to the dutyholder and their activities
- Confirm the action, or move up or down the hierarchy by **one** level
- Flow chart start from the IEE



# Strategic Factors

- Qualify a decision they do not determine it
- You may then review whether the outcome is appropriate

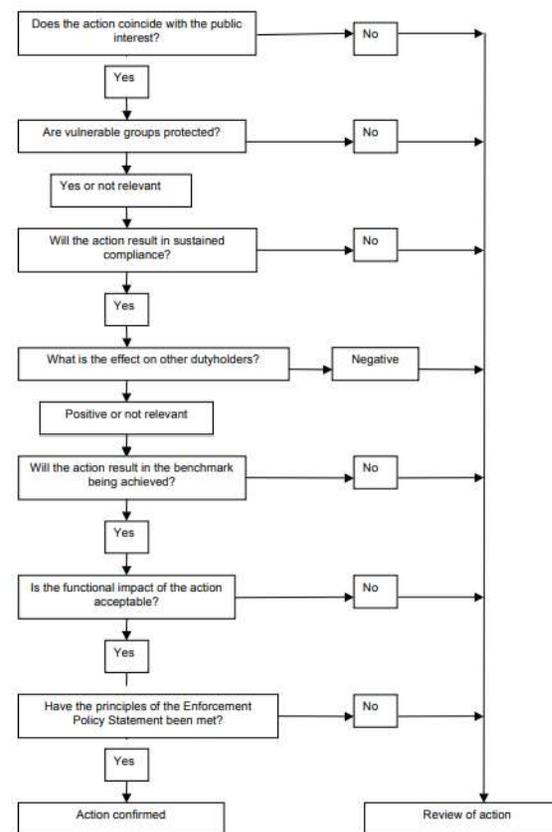


Figure 7 Strategic factors flowchart

## [Operational guidance](#)

<https://www.hse.gov.uk/foi/internalops/index.htm>

Help us to improve the website - [give your feedback](#).

[Home](#) > [Notify HSE](#) > [Freedom of Information](#) > [Operational Guidance](#)

### Freedom of information

[Operational guidance](#)

**[New operational guidance](#)**

[Operational Circulars \(OCs\)](#)

[Operational Minutes \(OMs\)](#)

[Sector Information Minutes \(SIMs\)](#)

[Permanent manuals](#)

[Semi-permanent circulars \(SPCs\)](#)

## New operational guidance

### Titles

[Transport and Public Services Unit work plan 2022-23: Inspections to assess the management of asbestos in school buildings \(PDF\)](#)

[Welfare standards for construction work \(PDF\)](#)

[Waste and recycling Sector work plan 2022-23: Targeted inspections \(PDF\)](#)

[Manufacturing Sector work plan 2022-23: Occupational lung disease \(OLD\) caused by wood dust in wood working and furniture making industries \(PDF\)](#)

[Agriculture sector workplan 2022 to 2023: Inspection in conjunction with agriculture compliance events \(PDF\)](#)

[National Fairground Inspection Team \(NFIT\) Sector Workplan 2022 to 2023 \(PDF\)](#)

[Onshore decommissioning and dismantling of offshore installations - Intervention planning \(PDF\)](#)

[The Pipelines Safety Regulations 1996 \(PDF\)](#)

[Manufacturing sector work plan 2021 to 2022: Impact Evaluation Inspections: Occupational Lung Disease \(OLD\) caused by wood dust \(PDF\)](#)

[Moving and handling construction materials \(PDF\)](#)

# Isocyanates



				Probable	Possible	Remote	Nil/Negligible		
3	Exposure to Respiratory Sensitisers R42/H334	Inhalation	Occupational asthma, Extrinsic allergic alveolitis. (EAA).	<b>Serious</b>	Repeated and/or prolonged exposure	Repeated low level or single high level exposures	Single/occasional low level exposure	Exposure reduced to ALARP or ALARP below WEL value where available	Since individuals can become sensitised by exposure to these substances yet cannot be identified in advance, AND exposure of a sensitised person can result in a massive adverse health effect consider the consequence of exposure to be serious. Topic Inspection Pack & OG are in development.

SOURCE - [OC 273/19:Enforcement Management Model \(EMM\): Application to Hazardous substances](#)



## **Isocyanate Paint Spraying Initial Enforcement Expectations (IEE's)**

- Improvement Notices – Poor control, exposure likely – e.g lifting visor, no LEV at paint mixing, ignoring clearance times, TExT inadequate, lack of biological monitoring

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## Expectation No 2

**Test the LEV System  
(and action  
recommendations)**



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## Expectation No 3

**Appoint Competent  
Person**







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# Enforcement - Consultants

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## Health & Safety at Work Act s3

*“ It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.”*

## Management of Health & Safety at Work, Reg7

*“ Every employer shall, appoint one or more competent persons to assist him in undertaking the measures he needs to take to comply with the requirements and prohibitions imposed upon him by or under the relevant statutory provisions”*

*“ A person shall be regarded as competent..... where he has sufficient training and experience or knowledge and other qualities.”*



**Intelligent Customer**



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# Proactive Projects



## Commissioning



## Commissioning – Simple Systems





Commissioning – Complex



Commissioning – Complex or Simple?

Visit HSE's website for more guidance about [local exhaust ventilation \(LEV\)](#).

## Commission your LEV system

### New webpage launched on commissioning LEV systems.

LEV helps control exposure to gas, vapour, dust, fume and mist in workplace air by extracting the clouds of contaminant at source before people breathe them in.

'Commissioning' is proving that the LEV system is capable of providing adequate control. As an employer, you should commission your LEV system to make sure it adequately protects people from breathing in harmful substances.

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH) dutyholders must adequately control exposure to substances in the workplace that cause ill-health.

In Great Britain, occupational lung disease accounts for around 12,000 annual deaths, estimated to be linked to past exposures at work. A crucial part of our 10-year strategy '[The HSE Strategy - protecting people and places](#)' is to reduce work-related ill-health, with a priority of tackling occupational lung disease.

Read our new webpage: [Commission your LEV system](#).

### [Commission your local exhaust ventilation \(LEV\) system - HSE](#)

commissioning.htm

## Commission your local exhaust ventilation (LEV) system

### Contents

- [Why you should commission](#)
- [The commissioning report](#)
- [Before using LEV](#)
- [Core elements of commissioning](#)
- [LEV condition](#)
- [Commissioning results](#)
- [Training and information](#)
- [Self-employed](#)
- [What the law says](#)
- [Further guidance](#)

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**Recirculatory Systems**





**The selection, use, and  
maintenance of recirculating  
local exhaust ventilation: a  
review.**

Prepared by researchers at the  
Health and Safety Executive

**RR1224 (2025)**

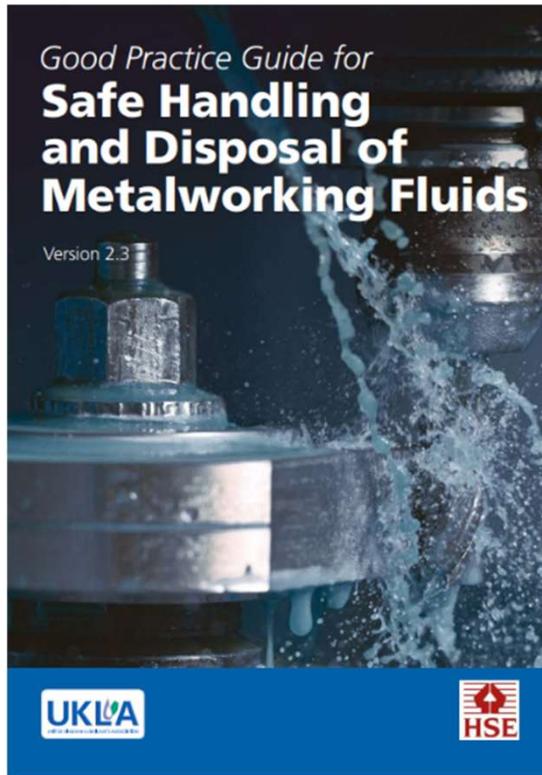
**Research Report**

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## Recirculatory Project





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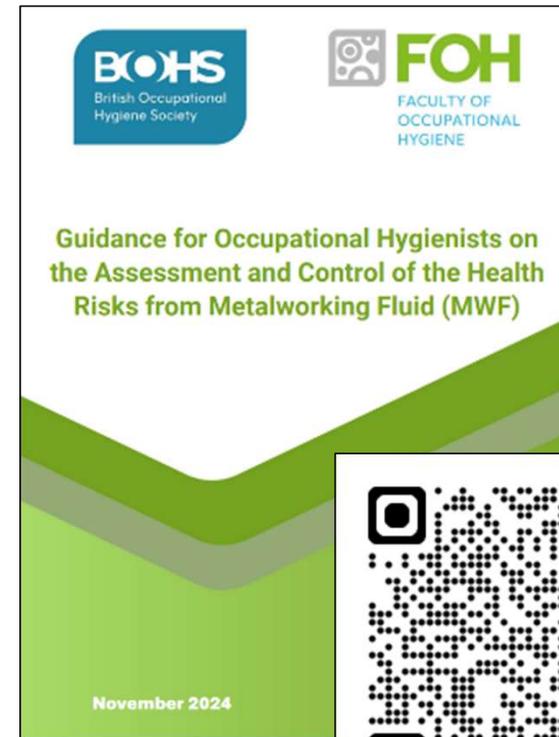
## Metal Working Fluids (MWF)



## British Occupational Hygiene Society (BOHS) MWF Expert Group

- **Membership** comprises Faculty of Occupational Hygiene members from HSE, industry, consultancy and technical specialists
- **Objective:** to produce practical guidance for occupational hygienists on how to assess and control MWF exposure using qualitative techniques such as audit tools, mist and air visualisation methods.
- **New Guidance published** in Nov 2024 and available as a free download on the BOHS website (blank audit/checklist forms also available)

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## HSE Inspection Results

Inspections are still identifying three key MWF failings:

**LEV not present on all CNC machines where it is required**

**Fluid quality checks** not being undertaken appropriately

Respiratory and skin **health surveillance** not being undertaken



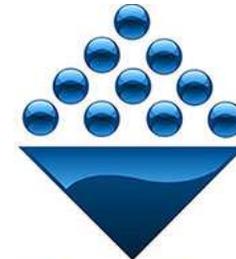
# HSE YouTube Channel

## Metalworking fluid mist ▶ Play all

Control worker exposure to metalworking fluid (MWF) mist when CNC machining and use monitoring methods to assess control of MWF mist and check local exhaust ventilation (LEV) is...

			
<b>Local exhaust ventilation to control worker exposure to...</b>	<b>Monitoring methods for metalworking fluid mist</b>	<b>Assessing control of metalworking fluid mist...</b>	<b>Monitoring methods to check local exhaust ventilation for...</b>
Health and Safety Executive 266 views • 4 weeks ago	Health and Safety Executive 199 views • 4 weeks ago	Health and Safety Executive 80 views • 4 weeks ago	Health and Safety Executive 118 views • 4 weeks ago
			

# Stakeholders



## Expectations - Summary

- 1. That exposure to substances hazardous to health is *“Adequately Controlled”***
- 2. Test the LEV System (and action recommendations)**
- 3. Appoint Competent Persons**



**Thank you**