

# Local Exhaust Ventilation (LEV) Commissioning Report

**System ID:**

**Date of Inspection:**

**Report Reference:**

Summary of the Assessment of Control

**Satisfactory**

**Unsatisfactory**

**System ID:**

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## 1 Executive Summary

The "enter system description" has been subjected to a commissioning procedure, including a thorough examination and test to ensure it can provide adequate control to comply with the Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended). The outcome of this assessment is that the system has been deemed Satisfactory / Unsatisfactory, there are some areas that require attention to improve the system or bring the system into compliance. These are listed below in order of priority

Item	Responsible person	Due date
1		
2		
3		
4		
5		

## 2 Clients Details

Name:

Address:

Responsible

Person:

Contact details:

## 3 Site Details

Address/site:

Area/room number/name:

Conditions during test:

## 4 LEV Plant Details

Serial number:

Asset number:

Brief description of system:

(what to be controlled, how to be controlled, number of hoods to be used at any time, system details)

Description of process to be controlled:

(including: type of tool/equipment/machinery, frequency of process, duration of process, quantities of substances, operating temperatures, other control measures to be used)

Hazardous substance to be controlled:

(including: substance name, WEL, quantity being used, physical form, corrosivity, vapour density)

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## 5 Test Engineers Details

I can confirm that the system addressed by this report has been carried out in full accordance with COSHH Regulation 9 and can be used as the data required for a comparison for ongoing Text Reports.

Name:

Signature:

Contact details:

## 6 Witnessing

The objective is formally to witness, on behalf of the client or his/her representative, the degree to which the requirements of the commissioning specification have been met.

The witnessing agent should:

1. be satisfied that, throughout the installation and balancing process, the requirements of the commissioning specification have been met
2. check the flow rate at any selected flow measurement point using a similar instrument and compare with the data recorded by the commissioning engineer and with the designer's requirements, which should include any permitted tolerance
3. check performance of all plant and systems
4. visually inspect any part of the system to ensure that certification is correct
5. countersign and endorse as necessary the certificate of the appointed commissioning specialist verifying that systems have been balanced in accordance with the specification requirements
6. where required, complete a separate witnessing certificate confirming satisfaction, one copy of which is handed to the commissioning specialist
7. check correct operation of the control system
8. check the correct operation of life safety systems.
9. check the system is in a clean acceptable condition.

The system performance, and effective control of the hazardous substance (or surrogate), was demonstrated by the above in the presence of:

Name:

Signature:

Contact details:

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## 7 Additional Plant Information

Frequency of testing:	Monthly	6 monthly	14 monthly	Other (specify)
(Tick one)				

Evidence of:	COSHH Reg 6 Risk Assessment	DSEAR Reg 5 Risk Assessment	Material Safety Data Sheets	
(Tick)				

Evidence of:	Design Specification	Logbook	O&M Manual	User training records
(Tick)				

## 8 DSEAR & ATEX

Is the substance:      Flammable?      Y/N      Explosive?      Y/N

Is the generation of an explosive atmosphere:	Present	Likely	Unlikely
(Tick one)			

DSEAR Zoning:	Work area	Hood	Plant
Lower Explosive Limit:		Upper Explosive Limit:	

Explosion vent panel:			
Is one required?	Y/N	Is one fitted?	Y/N
Is it venting to a safe place?	Y/N	Is it in good condition?	Y/N
Explosion non-return damper:			
Is one required?	Y/N	Is one fitted?	Y/N
Is the connecting ductwork suitable?	Y/N		

## 9 Conclusions and Comments

- 1
- 2
- 3
- 4
- 5

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## 10 Drawings

### 10.1 Schematic

Line schematic to show key components of the system.



Notes/Comments:

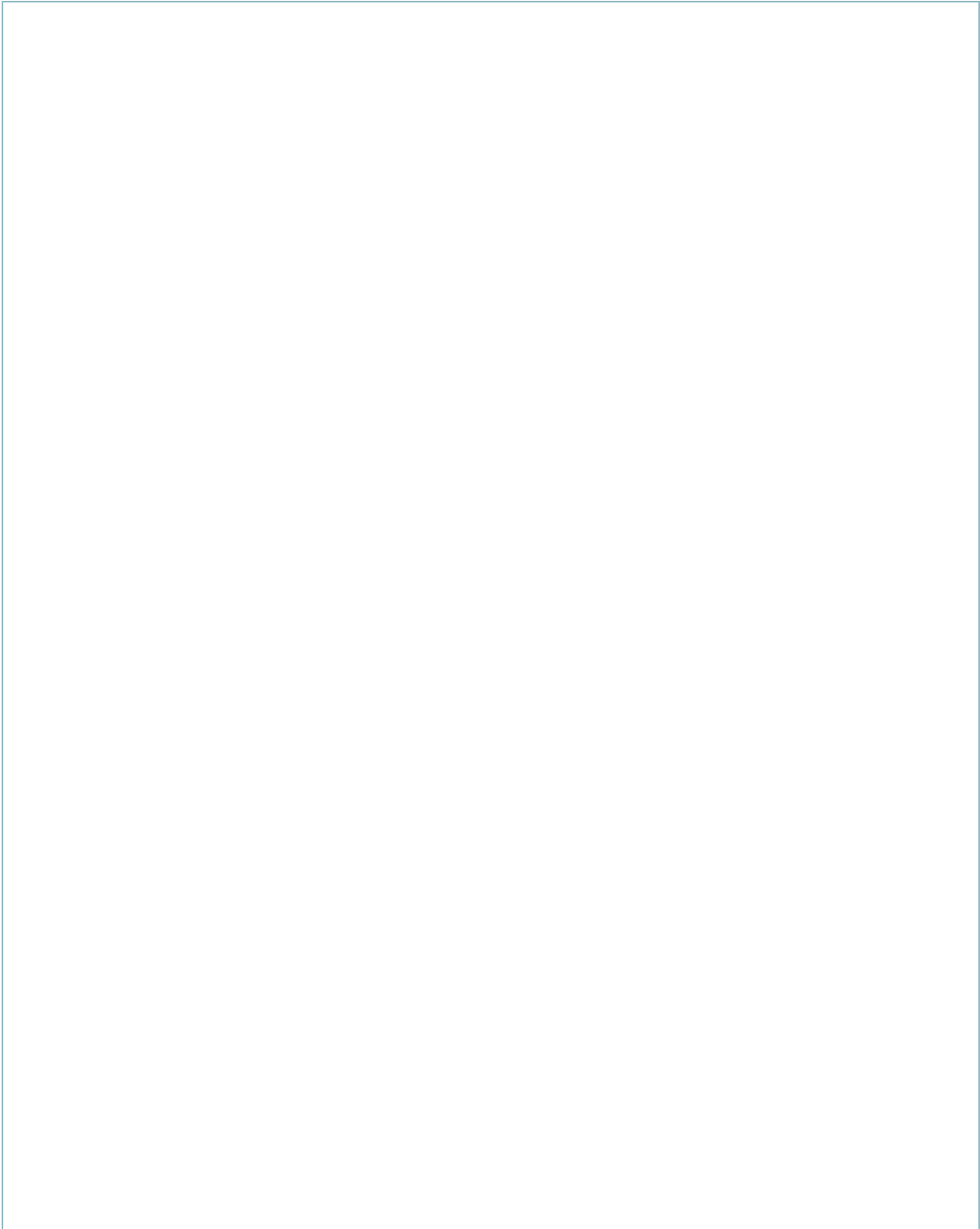
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## 10.2 General Arrangement

Dimensioned drawing of the system to include location of test points and DSEAR exclusion zones.



Notes/Comments:



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## 11 Photographs

Photo

Description/Comments

1

2

3

4

5

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## 12 Assessment

### 12.1 Installation

Element of system	Component check list completed (see Appendix A)	Installed in accordance with the system design? (Tick)	Installed in accordance with manufacturer's instructions? (Tick)	Comply with Regulations? (Tick)	Comply with industry standards and best practice? (Tick)	Comments
Hoods						
Air flow indication devices						
Ducting						
Test points						
Inspection panels						
Balancing dampers						
Filters						
Pressure gauge to filters						
Air mover						
Discharge arrangement						
Fixings and support systems						
Electrical installation						
On/off controls						
Earth bonding						
Waste collection						

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12.2 Hoods								
Hood Ref	Type Receiving   Capture   Partial   Full Enclosure   Other (specify)	Dimensions  (m)	Measured		Air volume flowrate  (m <sup>3</sup> /sec)	Future Benchmark		Test kit used  Hotwire / Rotating Vane
			Static pressure  (Pa)	Face Velocity  (m/sec)		Velocity  (m/sec)	Static Pressure  (Pa)	

Hood diversity \_\_\_\_\_ of \_\_\_\_\_ in use at any given time.

Statement on effective capture zone:

The contaminant is / is not released in the effective capture zone of the hood.

Method of test:  
(Provide photographic evidence)

Smoke release | Dust Lamp | Other (specify)

Notes/comments:  
e.g. Installed in accordance with design, appropriateness, usage, effectiveness of control, air flow indication devices etc.

12.3 Capture hoods		Is appropriate?	YES (complete below)	NO (move to next section)	IO (mo
Hood Ref	Size	Capture velocity	Capture distance	Is working zone in capture zone?	Comments
	(m x m)	(m/sec)	(m)	Yes/No	

12.4 Clearance time		Is appropriate?	YES (complete below)	NO (move to next section)
Hood Ref	Size	Air volume flow rate	Clearance time	Comments
	(m x m)	(m <sup>3</sup> /sec)	(minutes)	

12.5 Filter		Is a filter fitted?	YES (complete below)	NO (move to next section)
Visual assessment				
Filter type			Manufacturer	
Model			Serial number	
Filter media type			Filtration area (m <sup>2</sup> )	

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Antistatic	Condition of filter media
Air Return to working environment (if yes see below)	Filter Monitoring e.g. Alarms
Cleaning device type (compressed air/shaker/water pump etc)	Condition
Duration of cleaning period	Frequency of cleaning
ATEX Rating	Explosion Relief
Earth bonding	Explosion relief location
Explosion non-return damper	High pressure ducting (between plant and non-return damper)

**12.6 Quantitative assessment**

Inlet Static pressure (Pa)	Outlet Static (Pa)
Differential Pressure (Pa)	Volume Airflow rate (m <sup>3</sup> /hr)
Contaminant Breakthrough	Filter efficiency

Notes/comments:

*e.g. Installed in accordance with manufacturers design, pressure gauges fitted either side of filter, noise levels, vibration, corrosion etc.*

**12.7 HEPA Filter**

Is the air returned to the working environment?  
Is a HEPA filter fitted?

YES (complete below)

NO (move to next section)

YES (complete below)

NO (move to next section)

Visual assessment

Filter type	Manufacturer
Model	Serial number
Filter media type	Filtration area (m <sup>2</sup> )
Condition of filter media	Filter Monitoring e.g. Alarms
Has it been tested to ISO14644-3	Test results
Date of last test	Date of next test (minimum 6 to 12month)

**12.8 Quantitative assessment**

Inlet Static pressure (Pa)	Outlet Static (Pa)
Differential Pressure (Pa)	Volume Airflow rate (m <sup>3</sup> /hr)
Contaminant Breakthrough	Filter efficiency

Notes/comments:

*e.g. Installed in accordance with manufacturers design, pressure gauges fitted either side of filter, compliance to ISO14644-3 etc.*

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### 12.9 Fan

Visual assessment

Fan type	Type of impeller
Manufacturer	Impeller plate RPM
Model	Impeller direction of rotation
Fan Serial number	Fan Monitoring - Alarms
ATEX Rating	Fan size
Direction of Rotation	

### 12.10 Quantitative assessment

Static pressure:	Fan Volume Airflow rate (m <sup>3</sup> /hr)
Inlet (Pa)	Total pressure (Pa)
Outlet (Pa)	

Notes/comments:

*e.g. Installed in accordance with manufacturers design Are pressure gauges fitted either side of fan, noise levels, vibration, corrosion etc.*

### 12.11 Fan Drive type

Direct

Belt

Fan pulley size	No. of belts
Motor pulley size	Belt type
Pulley centres	Belt tension
Measured fan RPM	Measured motor RPM
Notes/comments:	

### 12.12 Motor

Electrical supply – Voltage	Motor rating (kW)
Manufacturer	Motor Current Plated (Amps)
Model	Motor Current Measured (Amps)
Motor Serial number	Motor plate RPM
ATEX Rating	
Notes/comments:	

### 12.13 Controls

On/Off or Variable Speed Drive	Manual / Automatic
Speed setting	Alarms / Warning devices fitted
Electrical compliance (evidence of certification to IEE BS7671)	Condition

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Notes/comments:

### 12.14 Other

Fire suppression system

Notes/comments:

### 12.15 Ducting

Visual assessment

Material	Condition – inside
Balancing dampers	Condition – outside
Flexible ducting condition	Inspection hatches
Earth bonding	Explosion hatches

Notes/comments:

*e.g. Installed in accordance with design*

### 12.16 Quantitative assessment

Test point Ref	Diameter (m)	Measured Static pressure (Pa)	Measured Transport Velocity (m/sec)	Future Benchmark		Balancing damper position % closed	Comment <i>e.g. Potential for blockage, Ease of access, suitability of test point etc.</i>
				Velocity (m/sec)	Static Pressure (Pa)		

### 12.17 Discharge Arrangement

Type	Location
Stack height	Stack discharge velocity

Notes/comments:

*e.g. Effectiveness, risk of  
recirculation, effect on  
neighbours, source of make up  
air etc.*

### 12.18 Air sampling results

Has air monitoring  
been conducted?

YES (complete below)

NO (move to next section)

Report reference

Date of report

Notes/comments:

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Report Reference:

## 13 Calibration Certificates

Hotwire Anemometer

Rotating Vane Anemometer

Manometer

Tachometer

Other:.....


Other:.....

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## 14 Appendix A – Design information checklist

I. AIR DISTRIBUTION SYSTEM – DESIGN INFORMATION CHECKLIST		
Client:		
Project:		
System:		
Check that the design documentation includes:	✓/✗	Comments / Follow-up references
<b>System information</b>		
1. Description of system operation		1.
2. Drawing showing air distribution system layout		2.
3. Numbering system for all main ducts and terminals		3.
4. Location of dampers and flow measuring positions		4.
5. Fan characteristic curves for each fan duty		5.
6. Controls schematic and description of operation		6.
<b>Schematic drawings incorporating:</b>		
7. Volumetric flow rates and cross sectional areas at:		7.
8. * supply fan		8.
9. * extract fan		9.
10. * air handling units		10.
11. * main ducts		11.
12. * branch ducts		12.
13. * sub-branches		13.
14. * terminals		14.
14. Static pressure loss: * filters		14.
15. * cooling batteries		15.
16. * heating batteries		16.
17. * air washers		17.
18. * silencers		18.
<b>Wiring diagrams covering</b>		
19. System		19.
20. Method of operation		20.
21. Fans		21.
22. Controls		22.
23. Interlock arrangements		23.
24. Fuse ratings		24.
25. Design times for staged starting and motor run up control		25.
26. Voltages for electrostatic filters		26.
27. Design times for staged starting and motor run up control		27.
28. Design values for reduced voltage starting or speed control		28.
<b>Filters</b>		
29. * Identity of filter media		29.
30. * Tolerances on air velocity distribution across electrostatic filters		30.
<b>Fans</b>		
31. * Clearances for fan impeller		31.
32. Static deflection at vibration mountings		32.
33. Grade of lubricant for fan and fan motor bearings		33.
Date: / /	Engineer:	Approved by:
		Sheet: /

\* These items will sometimes be the installer's responsibility















