# LEV DUTY HOLDERS' TRAINING DAY

## PREPARING LEV SPECIFICATIONS

**11TH SEPT 2025**

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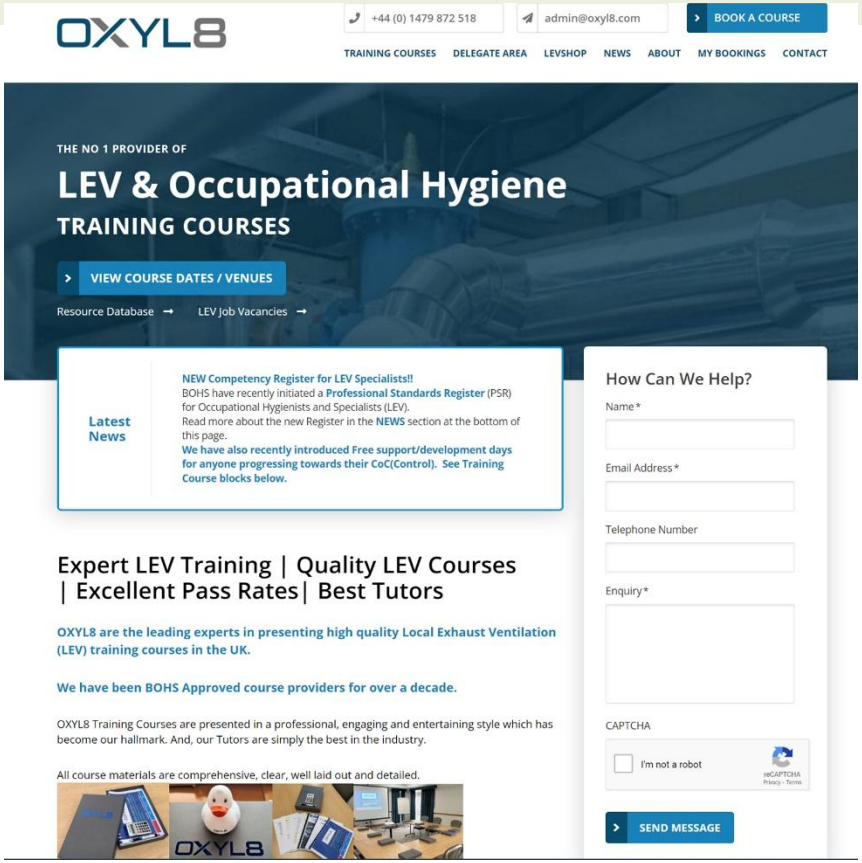


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# LEV Spec …. Design

## Some practical LEV specification points

- Produce a specification – it does not need to be a large document
- Company should look for productive benefits e.g. material & energy savings
- They should specify use of HSG 258 guidance & principles
- Have suitable inspection/cleaning and test points – that are accessible

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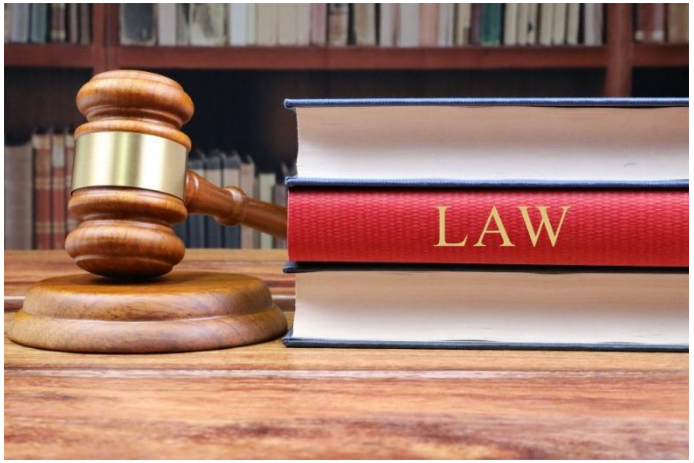
# Selecting Contractors

## A Question of **Competence?**

- Knowledge
- Ability
- Experience
- (Antecedents)

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# Selecting TExT Contractors

## A Question of **Competence?**

Is P601 sufficient for TExT?

Or should it be P601 + P602

Simple vs Complex LEV Systems

Commissioning?

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# Selecting Design Contractors

## A Question of **Competence?**

And for LEV Design?

Should it be P601 + P602 + ??

**Note:**

No short (4-day) can make an LEV Specialist a "Competent Design Engineer"

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# LEV Design Spec

## Specification document

- Describe the production process
- Numbers of people you think are exposed
- Are there any current LEV controls?
- What standard of LEV design and control do you need?
- LEV costs, and functionality should be specified
- Don’t pay until the LEV is installed and is shown to work effectively
- Full instructions and training

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# LEV Design Spec

## Outline of LEV specification process (1 of 2)

1. Identify all processes and sources to be controlled
2. Re-arrange processes to make them suitable for LEV application (may need help)
3. Assess shortcomings of existing LEV
4. Are some/all standard processes with standard & effective LEV designs?
5. Specify compliance with HSG 258 “Design principles” (inc para 100)

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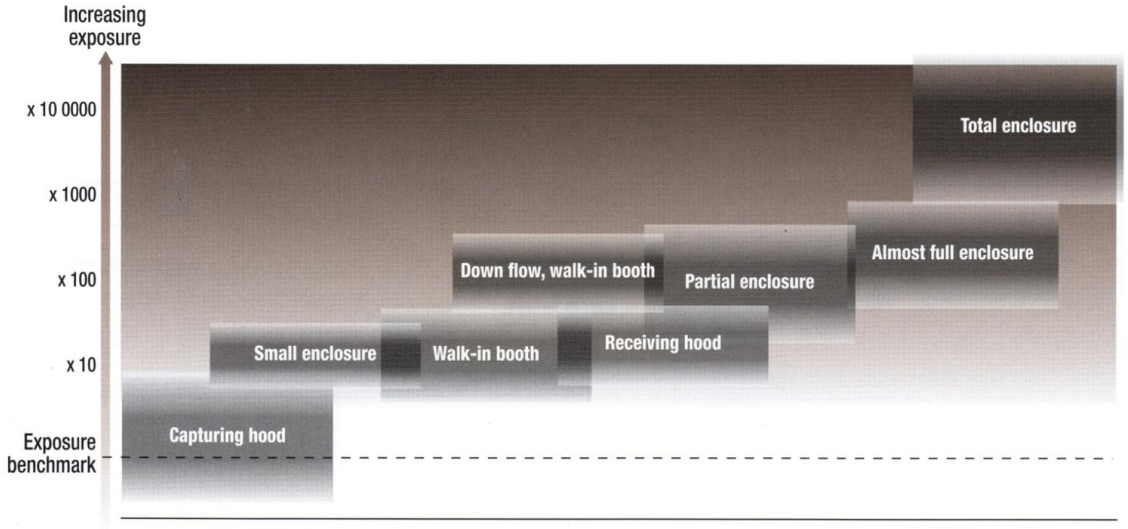
# Benchmarking!

## Outline of LEV specification process (1 of 2)





6. What benchmark(s) of control success are acceptable?

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# LEV Design Spec

## Outline of LEV specification process (2 of 2)

7. Invite tenders
8. Insist suppliers visit the site
9. Ask for references, examples of LEV work and qualifications
10. Select based on cost-effectiveness, competence and draw up a programme of work
11. Get detailed quotation, including drawings and standards to be worked to

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# LEV TExT Spec

## What the LEV Examiner should do

- The examiner must be competent
  - Qualifications (P601?) and experience
- The examiner must be provided with:
  - commissioning report
  - User Manual which should cover details of any thorough examination and testing work
  - the log-book recording checks and maintenance activities
  - full access to the systems and the co-operation of relevant staff
- If no commissioning report or manual available:
  - The system will need to be retrospectively commissioned.

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# LEV TExT Spec

## Step 1: Thorough visual and structural examination

**May include as appropriate:**

- External/internal examination for damage, wear and tear
- Checking that filter cleaning devices work, e.g. shake down
- Checking air cleaners, e.g. filter fabric
- Inspection of air mover mechanisms e.g. drive belts
- Look for indicators of ineffectiveness, e.g. dust deposits
- Check monitors, alarms etc

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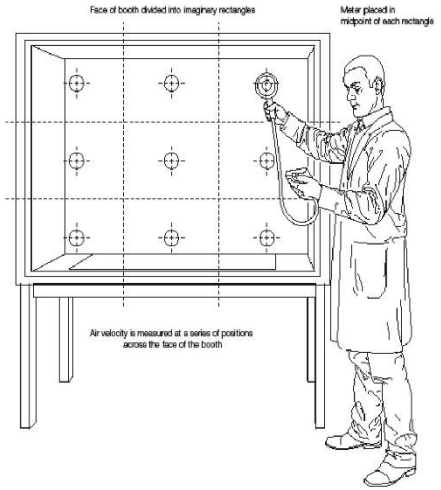
# LEV TExT Spec

## Step 2: Measurement of technical performance

### May include as appropriate:

- Measuring air velocities and pressure at suitable test points
- Measuring system dimensions
- Checking fan speed, motor speed and electrical power consumption
- Checking make up air supply
- Testing alarms by simulating failure
- Measuring air temperatures
- Testing air cleaner performance (recirculating system)
- The examiner should calculate volumetric flow rates.

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# LEV TExT Spec

## Step 2: Measurement of technical performance

**The next steps are:**

- Compare the results of testing with the LEV design specification from the User Manual and the system Log Book
- Diagnose the causes of any discrepancies
  - Examiner can make simple adjustments if required
  - If the defect is fundamental or obscure, the examination should stop until the system has been repaired
  - The examiner should warn the client promptly

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# LEV TExT Spec

## Step 3: Assessment of control effectiveness

**May include as appropriate:**

- Observation – LEV matched to processes and sources?
- Adequate LEV hood/system airflow
- LEV system matches effective standard
- Where possible challenge tests with smoke with process running
- Dust lamp check of control effectiveness (with process running)
- Observe the way operators work
- Assessment of LEV effectiveness at controlling operators' exposure

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# LEV TExT Spec

## What Should a Suitable Test Report Contain?

- Site and test details
- Prioritised remedial actions (inc any red labels)
- The process and substance/substances controlled
- LEV diagram showing location and test points
- LEV system condition inc photos, serial numbers etc
- Qualitative and quantitative methods used
- Qualitative and quantitative assessment records
- Required and assessed LEV system performance compared
- Comments on operator methods of working
- Comments on system wear and tear
- Date of next examination and test
- Signature

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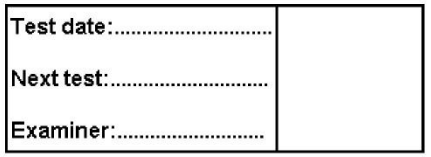
# LEV TExT Spec

## LEV hood label

Inadequate control if the hood has failed


- Examiner should issue a simple label for every hood examined and tested.
- Failure labels should be accompanied by a failure report.

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# TExT Templates

## COMMISSIONING/INITIAL THOROUGH EXAMINATION AND TEST REPORT (TExT)

### LOCAL EXHAUST VENTILATION (LEV) PLANT

In Compliance with Regulation 9 of CoSHH Regulations 2002

SUMMARY OF ASSESSMENT OF CONTROL

**SATISFACTORY**

*Refer to next page for Defects & Recommendations*

| SITE DETAILS & SYSTEM ID | | | |
|---|---|---|---|
| Client/Duty Holder Name | | System ID | |
| Site Address | | Location of LEV | |
| Date of TExT | | Date Next TExT Due | |
| Brief Description of Process | | Hazardous Substances Used or Produced | |

**15b. CAPTOR HOOD QUANTITATIVE MEASUREMENTS**

| Hood ID | Hood Shape | Hood Dimensions LARGE dim (mm) | Hood Dimensions small dim (mm) | Hood Area ($m^2$) | Average Velocity (m/s)# | Static Pressure (Pa) | Captor Distance (mm)* | Distance Cross Checked? | Volume Flow $m^3/s$ |
|---|---|---|---|---|---|---|---|---|---|
| H1 | Circle | 300 | | 0.0707 | 11.20 | | | Select | 0.792 |
| | Select | | | | | | | Select | |
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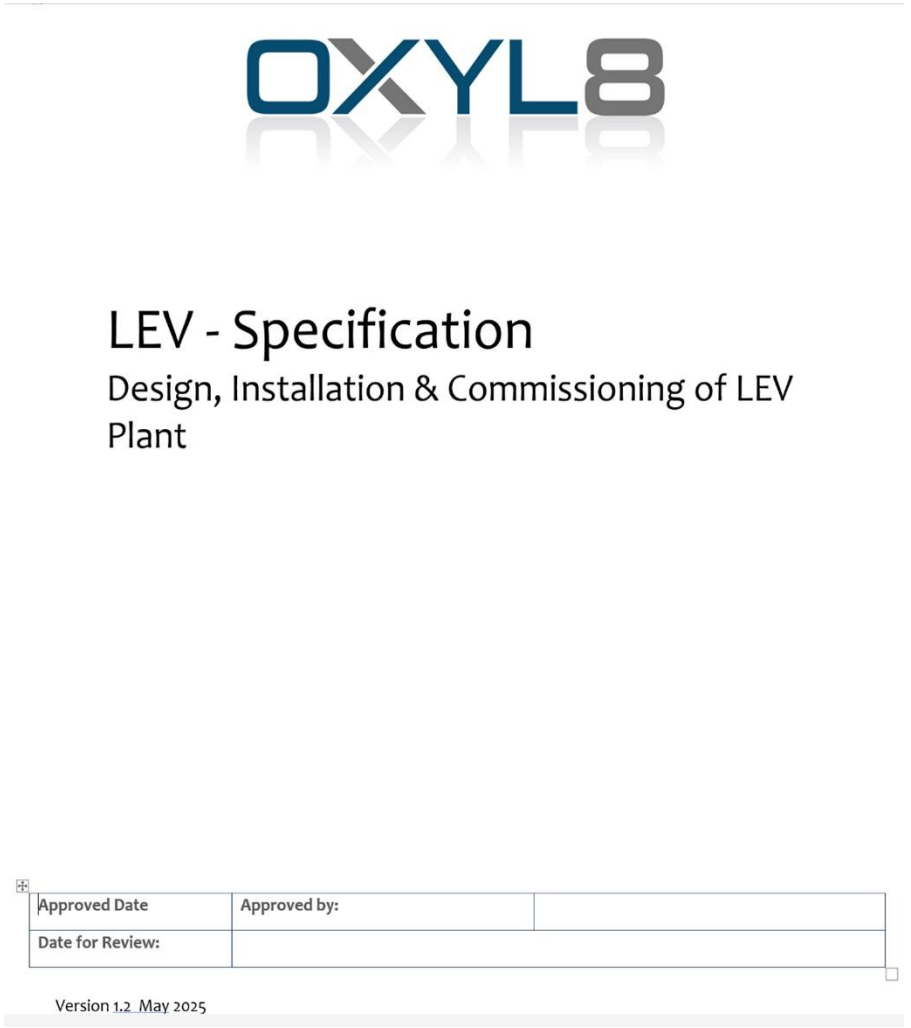
# LEV Design & TExT Specifications

Both LEV TExT and LEV Design draft Templates in Word available by following the QR Code



LEV - Specification

Design, Installation & Commissioning of LEV Plant

| Approved Date | Approved by: | |
|---|---|---|
| Date for Review: | | |

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