

COMMISSIONING vs TeXT

Understanding Two Distinct Activities Within LEV Management

PURPOSE • EVIDENCE • ASSURANCE



VS



COMMISSIONING

Establishes Capability



Demonstrates that adequate control has been achieved



Creates the performance baseline



Provides evidence of control capability under defined conditions

TeXT

Verifies Condition



Verifies that adequate control continues to be maintained



Checks system condition and performance



Compares against the established baseline

LEV ASSURANCE COMPARISON

TWO ROLES – ONE OBJECTIVE:
ADEQUATE CONTROL

	COMMISSIONING	TeXT
PURPOSE	Establishes Capability	Verifies Condition
FOCUS	Effectiveness (Does it work?)	Maintenance (Does it still work?)
TIMING	New or Modified System	Existing System
OUTPUT	Baseline Data & Performance Benchmarks	Verification Against Baseline
OUTCOME	Confidence in Adequate Control Achieved	Confidence in Adequate Control Maintained

COMMISSIONED BY

[Signature]

DATE

11/06/2026

TEXT BY

[Signature]

DATE

11/06/2026



Commissioning establishes evidence that adequate control has been **achieved**.

TeXT provides evidence that adequate control is being **maintained**.



Stronger Evidence.
Better Assurance.
Lower Risk.

OXYL8

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Commissioning vs TExT

Understanding Two Distinct Activities Within LEV Management

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Foreword

Most organisations understand that Local Exhaust Ventilation systems require periodic Thorough Examination and Test (TExT). Far fewer consider a more fundamental question:

How was it originally established that the system was capable of providing adequate control in the first place?

This question sits at the heart of the distinction between Commissioning and Thorough Examination and Test. Whilst both activities involve measurement, assessment and documentation, they serve fundamentally different purposes.

1. **Commissioning establishes capability.**
2. **TExT verifies continued condition.**

One creates the benchmark.

The other measures against it.

The distinction is more than technical terminology. It has significant implications for governance, assurance and the ability of Duty Holders to demonstrate that exposure risks have been adequately controlled.

A system that passes a Thorough Examination and Test may demonstrate that it continues to operate as expected. It does not necessarily demonstrate that adequate control was ever achieved. Similarly, a well-commissioned system cannot provide assurance indefinitely if ongoing verification is absent.

Both activities are essential.

Both contribute to the same objective.

But they answer different questions.

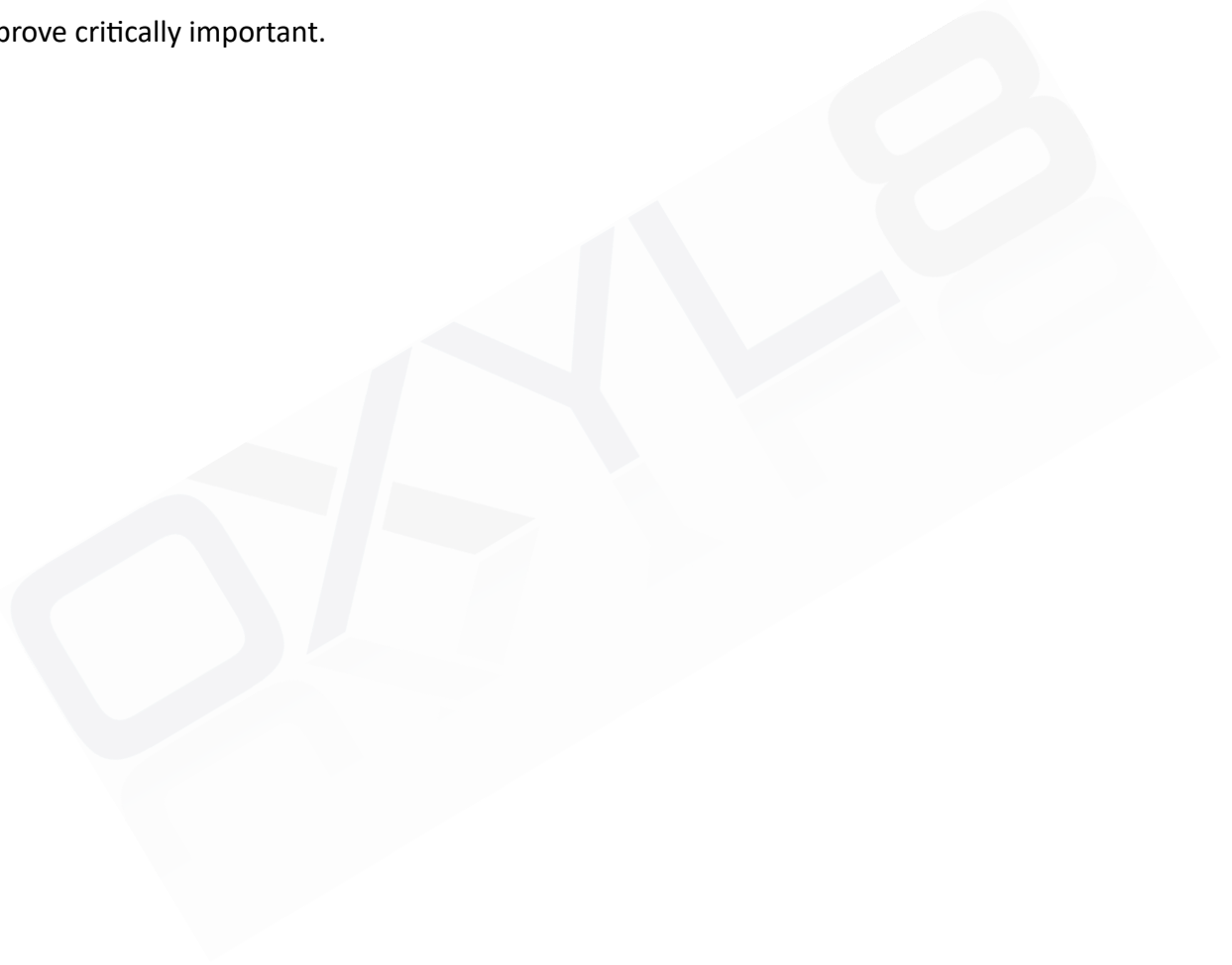
This paper explores why the distinction matters, how confusion between the two activities continues to arise, and why understanding the relationship between **capability** and **condition** is fundamental to a defensible LEV management strategy.

This paper is not intended to advocate unnecessary additional expenditure, bureaucracy or duplication of existing statutory requirements. Nor does it seek to replace established guidance relating to LEV commissioning or Thorough Examination and Test.

Its purpose is to clarify the distinct roles that Commissioning and TExT play within the evidential framework supporting effective exposure control.

By understanding the contribution of each activity, Duty Holders can make better use of the information already being generated, establish stronger assurance and avoid the uncertainty that can arise when different forms of evidence are expected to serve purposes for which they were never intended.

Because when exposure control is scrutinised by regulators, investigators, insurers or courts, the ability to demonstrate both that adequate control was achieved and that it has been maintained may prove critically important.



Section 1: Executive Summary

Commissioning vs Thorough Examination and Test (TExT)

Local Exhaust Ventilation (LEV) systems are installed to control exposure to hazardous airborne substances and so protect worker health.

Two activities play a critical role in demonstrating that these systems are effective: Commissioning and Thorough Examination and Test (TExT).

Although closely related, they serve fundamentally different purposes.

1. Commissioning establishes evidence that adequate control **has** been achieved.
2. TExT provides evidence that this level of control **continues** to be maintained.

Confusion between these activities remains common.

As a result, organisations may possess extensive records demonstrating ongoing system performance whilst lacking clear evidence that adequate control was ever demonstrated in the first instance. This distinction is more than technical. It affects the integrity of the evidential chain upon which Duty Holders rely to demonstrate effective exposure control, regulatory compliance and effective governance.

This paper examines the relationship between Commissioning and TExT, explores the risks created when the distinction becomes blurred and proposes a framework for establishing a more defensible approach to LEV assurance.

This distinction should not be viewed as an argument for unnecessary additional cost or bureaucracy.

The purpose is to ensure that money already invested in LEV systems produces evidence that the system is capable of protecting workers.

Poorly defined commissioning, weak baselines or over-reliance on periodic testing can lead to wasted expenditure, repeated remedial work, uncertainty over control effectiveness and increased exposure to regulatory or civil liability.

Clear commissioning evidence and meaningful TExT therefore protect both worker health and the value of the original investment.

Section 2: Commissioning - The Great Misunderstanding

The distinction between Commissioning and Thorough Examination and Test (TExT) appears straightforward when considered in principle. Yet confusion between the two activities remains widespread.

This confusion has not arisen from a single source. Rather, it has developed over time through a combination of industry practice, organisational behaviour and differing interpretations of what commissioning is intended to achieve.

Understanding how this confusion emerged is important because many of the weaknesses observed in LEV assurance arrangements can be traced back to misconceptions established at the commissioning stage.

2.1 Commissioning as Administrative Closure

In many projects, commissioning is perceived as the final step before system handover.

Once installation is complete and a series of technical measurements have been recorded, documentation is compiled, reports are issued and the project is considered complete. Within this interpretation, commissioning functions primarily as an administrative milestone confirming that installation activities have been concluded.

This perspective is understandable but incomplete.

Commissioning should not merely confirm that equipment has been installed and is operational. Its purpose is to establish that the system is capable of achieving the control performance conditions.

When commissioning becomes focused on project closure rather than performance verification, the evidential value of the process is significantly reduced.

2.2 Over-Reliance on Periodic Testing

A second source of confusion arises from the prominence of Thorough Examination and Test (TExT) within ongoing LEV management.

For many Duty Holders, TExT represents the most visible and familiar element of LEV assurance. It is undertaken periodically, generates formal reports and is directly associated with legal compliance under COSHH Regulation 9.

As a result, there can be a tendency to assume that a satisfactory TExT demonstrates that effective control has been achieved.

In reality, periodic examination can only assess performance against an existing reference point. If that reference point has not been clearly established and documented, the assurance provided by subsequent testing may be significantly weakened.

2.3 Absence of Documented Design Intent

Effective commissioning begins with a clear understanding of what the system is intended to achieve.

This requires documented design intent, including, for example, consideration of:

- The hazardous substance or substances involved
- The nature of the process and contaminant generation mechanisms
- The control strategy being employed
- The performance criteria required to achieve effective control (Exposure Benchmark)
- Relevant airflow, pressure and containment requirements

Without a clearly defined design objective, commissioning becomes difficult to assess objectively.

A system cannot be demonstrated to have achieved its intended performance at commissioning if the intended design performance has never been clearly defined.

The absence of documented design intent therefore weakens not only the commissioning process itself but also the evidential foundation upon which future assurance activities depend.

2.4 Competence and Professional Judgement

Another contributing factor is the tendency to view commissioning as a largely procedural activity.

While technical qualifications and formal training play an important role, effective commissioning frequently requires the application of professional judgement in areas such as contaminant behaviour, control effectiveness, system performance and interpretation of evidence.

The ability to record measurements is not necessarily the same as the ability to determine whether adequate control has been demonstrated.

Commissioning therefore depends not only upon technical knowledge and understanding but also upon experience, judgement and the ability to interpret the evidence within the context of the specific process being assessed.

So, 'Competence' is demonstrated not simply through the collection of data, but through the ability to interpret the evidence correctly and appropriately and to then reach defensible conclusions regarding control effectiveness

2.5 Commissioning Without Governance Context

Commissioning decisions are often made at project level with limited consideration of their long-term significance. However, commissioning documentation frequently becomes an important source of evidence when organisations are required to demonstrate how exposure risks have been assessed and controlled.

This may occur during:

- Regulatory inspections/investigations
- Civil litigation
- Occupational illness claims
- Internal audits and assurance reviews
- Corporate due diligence activities

Where commissioning records fail to explain control assumptions, limitations, design decisions or the basis upon which performance was considered acceptable, their value under scrutiny may be significantly reduced.

Commissioning must therefore be viewed not only as a **technical** activity but also as a **governance** activity.

2.6 The Resulting Assurance Gap

Collectively, these factors create an environment in which commissioning is often viewed as a procedural requirement (almost 'tick-box') rather than a process for establishing defensible evidence.

The result can be an assurance gap.

Organisations may possess extensive records demonstrating that systems have been inspected, maintained and periodically tested, whilst possessing limited evidence that effective control was ever established and demonstrated when the system entered service.

In these circumstances, the distinction between **proving** capability and **verifying** ongoing condition becomes blurred. Understanding why this distinction matters requires a closer examination of the different purposes served by Commissioning and Thorough Examination and Test.



Section 3: Commissioning vs TExT

Different Questions, Different Evidence

The distinction between Commissioning and Thorough Examination and Test (TExT) lies at the heart of effective LEV assurance.

Although both activities involve technical assessment, measurement and documentation, they serve fundamentally different purposes within the lifecycle of an LEV system. Confusion arises because the activities often appear similar. Both may involve airflow measurements, pressure readings, visual inspection and performance assessment. Both generate technical reports. Both contribute to the management of exposure control risks. However, similarity of method should not be mistaken for similarity of purpose.

The critical distinction is not **what** is measured.

The critical distinction is **why** it is being measured.

However it should be noted that neither commissioning nor TExT should be viewed solely as a measurement exercise. Measurements provide evidence, but adequate control must ultimately be demonstrated in the context of the hazard, process and control objective.

3.1 Two Activities, One Objective

Commissioning and TExT ultimately support the same objective:

To provide confidence that an LEV system is effectively controlling exposure to airborne hazardous substances.

Both activities contribute to this objective by generating evidence. However, they do so at different stages of the system lifecycle and for different reasons.

Commissioning is undertaken when a system is first installed, significantly modified or formally re-commissioned. TExT is undertaken periodically throughout the operational life of the system.

As a result, each activity is required to answer a different question.

3.2 The Fundamental Difference

Commissioning asks:

Has adequate control been demonstrated?

TExT asks:

Does adequate control continue to be maintained?

This distinction may appear subtle, but it has significant implications for the type of evidence required and the conclusions that can reasonably be drawn. A useful way to understand the relationship is to consider the difference between capability and condition.

Commissioning establishes capability. It seeks to demonstrate that the LEV system, when operated as intended, is capable of achieving the required level of exposure control.

TExT establishes condition. It seeks to verify that the system continues to operate in a manner consistent with the level of performance required and previously demonstrated.

In simple terms:

Commissioning proves that a system can achieve adequate control.

TExT provides assurance that it continues to do so.

Neither activity can fulfil the role of the other.

3.3 Different Evidence Requirements

Because Commissioning and TExT answer different questions, they require different forms of evidence.

Commissioning must provide evidence that adequate control has been achieved. Depending upon the application, this may include, for example:

- Design intent and performance objectives.
- Capture effectiveness assessment.
- Containment assessment.
- Smoke visualisation.
- Process observation.
- Exposure monitoring.
- Engineering performance measurements.

The objective is to demonstrate **effectiveness**.

TExT, by contrast, is primarily concerned with determining whether previously demonstrated performance continues to be achieved. Evidence may therefore focus on:

- System condition.

- Performance measurements.
- Visual inspection.
- Functional assessment.
- Comparison against established reference values.
- Identification of deterioration or deviation.
- Operator behaviour.

The objective is to verify consistency.

Both activities may collect similar information. However, the conclusions being supported are fundamentally different.

3.4 Why Similar Measurements Create Confusion

One of the main reasons Commissioning and TExT are frequently confused is that they often employ the same measurement techniques.

Airflow measurements may be taken during commissioning.

Airflow measurements may be taken during TExT.

Static & velocity pressure readings may appear in both reports.

Smoke visualisation/Tyndall beam scans may be used in both assessments.

To an observer reviewing the documentation, the activities can appear remarkably similar. Yet identical measurements can be used to answer entirely different questions.

An airflow measurement collected during commissioning may contribute to demonstrating that adequate control has been achieved.

The same measurement collected during TExT may be used to determine whether performance has deteriorated since the system was originally assessed.

The measurement itself is not what distinguishes the activities. The purpose of the measurement is what matters.

3.5 The Importance of the Performance Benchmark

A further distinction arises from the concept of performance benchmarking.

In order to determine whether performance is being maintained, there must first be a clear understanding of what acceptable performance looks like.

Commissioning plays a critical role in establishing this reference point. Without a clearly defined benchmark, periodic examination can demonstrate **consistency** but may struggle to demonstrate **adequacy**.

A system may continue to produce stable measurements for many years. However, stable measurements alone do not demonstrate that the original level of performance was sufficient to achieve effective exposure control.

This distinction becomes particularly important where commissioning records are incomplete, unavailable or insufficiently detailed.

3.6 Why the Distinction Matters

The relationship between Commissioning and TExT is therefore not one of duplication.

It is one of dependency.

TExT relies upon the existence of evidence established through commissioning. Commissioning provides the foundation upon which future verification activities are built.

When the distinction becomes blurred, organisations may possess extensive records demonstrating that systems continue to operate, whilst possessing limited evidence that effective control was ever demonstrated in the first place.

The result is an evidential weakness within the assurance process.

Understanding how this weakness develops requires consideration of the role played by performance baselines and the information against which future examinations are assessed.

Section 4: Understanding the Purpose of Commissioning

Having established that Commissioning and TExT perform distinct functions within the LEV assurance process, the next question becomes:

What constitutes defensible commissioning?

If commissioning is expected to demonstrate that adequate control has been achieved, it cannot be reduced to a simple collection of measurements taken at system handover. It must provide a structured body of evidence capable of supporting future assurance, regulatory scrutiny and organisational decision-making.

The purpose of commissioning is not merely to record system performance. Its purpose is to demonstrate, document and preserve evidence that the installed control system is capable of achieving the intended level of exposure control under defined operating conditions.

Defensible commissioning therefore requires a methodology that extends beyond technical measurement alone.

The **OXYL8 Defensible Commissioning Framework™** provides one example of a structured methodology (see separate paper in this series).



The framework separates commissioning into five interdependent stages. Together, these stages create a coherent evidential chain linking design intent, installation quality, demonstrated control performance and future assurance activities.

Failure at any stage weakens the integrity of the commissioning process and may compromise the ability of Duty Holders to demonstrate that adequate control has been achieved.

Stage 1: Design Intent Definition

Defensible commissioning begins before any measurement is undertaken. Before performance can be evaluated, it must first be understood what the system is intended to achieve and how success will be judged.

Stage 1 establishes the evidential foundation upon which all subsequent commissioning activities depend. This requires documentation of:

- The nature of the hazardous substance or contaminant
- The mechanism by which exposure may occur
- The selected control strategy (and justification)
- The intended performance objectives (and why)
- The design assumptions upon which system performance depends

The purpose of this stage is not simply to describe the system. It is to establish the benchmark against which commissioning evidence will ultimately be evaluated.

Without documented design intent, it becomes difficult to determine whether measured performance represents adequate control or merely operational functionality.

Stage 2: Technical Verification of Installation

Once design intent has been established, attention turns to whether the installed system reflects that intent.

Stage 2 seeks to verify that the physical installation is consistent with the design assumptions upon which control performance depends. This may include, for example, assessment of:

- Hood design and positioning
- Ductwork configuration
- Air cleaning equipment
- Fan selection and installation
- Instrumentation and monitoring arrangements
- System balancing and airflow distribution

The objective is not yet to demonstrate effective control. Rather, it is to establish confidence that the system has been installed in a manner capable of delivering the intended performance.

A system that departs materially from design assumptions may compromise control effectiveness regardless of subsequent measurement results.

Stage 3: Performance Benchmarking

Performance benchmarking represents the central evidential activity within commissioning. At this stage the question becomes:

Has adequate control actually been demonstrated?

The answer requires more than airflow measurements alone.

Depending upon the application, evidence may include:

- Airflow and pressure measurements
- Capture or containment assessment
- Smoke/Dust Lamp qualitative visualisation
- Process observation/Operator behaviour
- Exposure monitoring
- Operational verification under normal working conditions

The objective is to demonstrate that the system is capable of controlling exposure as intended. Where adequate control is demonstrated, the resulting evidence establishes the performance baseline against which future TExT activities can be assessed.

This stage therefore creates the critical link between commissioning and ongoing assurance.

*Commissioning establishes the benchmark.
TExT subsequently verifies it.*

Stage 4: Structured Documentation and Evidence Preservation

Evidence has limited value if it cannot be understood, interpreted or relied upon in the future.

Stage 4 converts commissioning findings into a structured and durable record.

The commissioning report should document not only what measurements were obtained, but why conclusions regarding control effectiveness were reached. It should be prepared in a clear, readable, accessible format.

The resulting documentation should enable future Duty Holders, managers, examiners and regulators to understand:

- What the system was designed to achieve
- Under what conditions control was demonstrated
- Which performance parameters were considered significant
- What evidence supported the commissioning conclusion
- What baseline performance characteristics were established

The report therefore becomes more than a technical record. It becomes a governance asset that preserves organisational knowledge and supports future assurance activities.

Stage 5: Ongoing Assurance and Change Management

Commissioning should not be viewed as a permanent validation of system performance. Its conclusions remain valid only while the conditions under which control was demonstrated continue to exist.

Stage 5 therefore recognises that LEV systems operate within changing environments. Modifications to processes, contaminants, operating practices or system components may alter the assumptions upon which commissioning conclusions were originally based. Examples may include:

- Process changes
- Material substitutions
- Hood modifications
- Ductwork alterations
- Fan replacement
- Filter upgrades
- Significant production changes

Where such changes occur, Duty Holders should consider whether re-commissioning is necessary to re-establish the performance baseline. This stage reinforces a central principle of defensible LEV assurance:

*Commissioning establishes evidence of capability.
TExT verifies continued performance.*

Neither activity can fully substitute for the other.



Framework Summary

The **OXYL8 Defensible Commissioning Framework™** provides a structured approach to demonstrating that adequate control has been achieved and can be evidenced.

The framework progresses from design intent, through installation verification and performance demonstration, to documentation, baseline creation and ongoing assurance. Taken together, the

five stages create a defensible evidential chain capable of supporting Duty Holders, regulators and future examiners throughout the operational life of the LEV system.

The outcome is not simply a commissioned system. The outcome is a documented and defensible demonstration that adequate control has been achieved.

Section 5: Governance Implications

Commissioning as a Governance Activity

Commissioning is often viewed as a purely technical exercise. In reality, its significance extends far beyond the technical domain.

The conclusions determine not only how system performance is initially assessed, but also how organisations will later demonstrate that exposure risks have been effectively controlled.

For this reason, commissioning should be recognised as both a technical and a governance activity.

Governance is ultimately concerned with the conclusions that measurements taken during Commissioning support the evidence available to justify those conclusions.

When exposure control arrangements are later scrutinised by regulators, investigators, insurers or courts, the central question is rarely whether measurements were taken.

The question is whether the organisation can demonstrate, through credible and defensible evidence, that adequate control was achieved and subsequently maintained. Commissioning therefore occupies a critical position within the evidential chain that supports exposure control assurance.

Commissioning evidence is not only a technical record; it is information upon which organisations make decisions regarding system acceptance, continued operation and risk management.

5.1 Commissioning as Evidence of Adequate Control

Periodic Thorough Examination and Test (TExT) provides evidence regarding the current condition of a system. Commissioning establishes the original basis upon which control effectiveness was accepted.

Without a clearly documented commissioning process, organisations may be able to demonstrate that a system continues to operate consistently whilst remaining unable to demonstrate that adequate control was ever established in the first instance.

From a governance perspective, this represents a significant evidential weakness. The issue is not whether a system appears to function correctly today. The issue is whether there is sufficient evidence to justify the conclusion that exposure risks were adequately controlled when the system entered service.

5.2 Duty Holder Accountability

Under COSHH, responsibility for ensuring adequate control rests with the Duty Holder.

While specialist LEV designers, installers, commissioners and examiners may contribute technical expertise, responsibility for demonstrating effective control cannot be delegated.

Duty Holders therefore rely upon commissioning documentation as evidence that reasonable steps were taken to assess, verify and document control performance. Where commissioning records are incomplete, poorly justified or lack clear performance criteria, the organisation may struggle to demonstrate how critical decisions were reached.

The governance challenge is therefore not simply whether commissioning occurred, but whether the commissioning process generated evidence capable of supporting Duty Holder accountability.

5.3 Competence, Independence and Professional Judgement

The competence of those undertaking commissioning is fundamental to the credibility of the evidence produced. However, competence alone does not automatically guarantee objectivity.

Commissioning frequently occurs where the same organisation may be responsible for design, installation, commissioning and, in some cases, subsequent TExT. Whilst such arrangements are common and may be entirely appropriate, they can create perceived or unmanaged conflicts of interest.

This is not a suggestion of impropriety. Rather, it reflects a governance reality: evidence is often considered more robust when the process used to generate it can be demonstrated to be objective, transparent and capable of independent scrutiny.

From a Duty Holder perspective, an important question is therefore not simply:

"Was the system commissioned?"

but also:

"How independent and objective was the process used to reach the commissioning conclusion?"

Where commissioning arrangements incorporate clear separation of responsibilities, transparent decision-making and robust documentation of assumptions etc, the resulting evidence is generally more resilient under regulatory, legal or corporate scrutiny.

Independence should therefore be viewed as a continuum rather than a binary requirement.

In some situations, full third-party commissioning may provide the highest level of assurance. In others, independence may be demonstrated through peer review, technical oversight, documented challenge processes or organisational separation between those delivering the installation and those verifying performance.

Ultimately, the objective is not independence for its own sake.

The objective is confidence that commissioning conclusions have been reached through competent, evidence-based and professionally objective assessment.

When questions arise regarding exposure control, occupational illness, regulatory intervention or civil litigation, the ability to demonstrate that commissioning findings were reached independently of commercial influence may significantly strengthen the credibility and defensibility of the organisation's overall assurance position.

5.4 Documentation as a Corporate Asset

Commissioning records are often viewed as project documentation. In practice, they frequently become long-term organisational assets.

Years after installation, commissioning reports may provide the only available evidence explaining:

- What hazards were considered
- What control strategy was selected
- What performance criteria were adopted
- Why the system was considered acceptable
- What assumptions were made during assessment

This information may prove essential when investigating incidents, responding to regulatory enquiries, supporting insurance claims or defending civil litigation.

Well-structured commissioning documentation preserves organisational knowledge and provides continuity when personnel, contractors or management teams change. Poor documentation, by contrast, can result in critical decisions becoming difficult or impossible to reconstruct.

5.5 Managing Change and Maintaining Evidential Integrity

LEV systems rarely remain unchanged throughout their operational life. Processes evolve, production demands change, equipment is modified and facilities are reconfigured. Each change has the potential to affect control performance.

The governance challenge is not simply managing technical change but preserving evidential integrity. Where significant changes occur, organisations should be able to demonstrate whether the original commissioning assumptions remain valid and whether re-commissioning is required.

Without a structured approach to change management, the relationship between original commissioning evidence and current system performance may gradually weaken.

Over time, organisations can find themselves relying upon data that is no longer clearly connected to the conditions under which adequate control was originally demonstrated.

5.6 Regulatory and Board-Level Exposure

When exposure control arrangements are examined following an incident, occupational illness claim or regulatory investigation, scrutiny often extends beyond technical measurements.

Investigators may seek to understand:

- How control effectiveness was originally demonstrated
- What evidence supported commissioning decisions
- Whether assumptions were documented
- How changes were managed
- Whether assurance arrangements remained proportionate to risk

These questions are fundamentally governance questions. They concern decision-making, accountability and evidence.

Boards and senior leaders may never become involved in the technical details of commissioning. However, they remain accountable for ensuring that appropriate systems exist to demonstrate that exposure risks have been adequately controlled.

The quality of commissioning evidence can therefore become a significant factor in determining how effectively an organisation can defend its decisions under scrutiny.

5.7 From Compliance to Evidential Integrity

Many organisations focus primarily on demonstrating compliance with specific procedural requirements. While compliance remains important, governance requires a broader perspective.

The objective is not simply to demonstrate that activities were completed. The objective is to demonstrate that conclusions are supported by credible evidence.

Commissioning represents the point at which the evidential foundation for LEV assurance is established.

TExT, maintenance and ongoing monitoring subsequently build upon that foundation.

Where the foundation is weak, the value of later assurance activities may also be weakened. Where the foundation is robust, organisations are better positioned to demonstrate both that adequate control was achieved and that it has been maintained.

5.8 Summary

The distinction between commissioning and TExT is not merely a technical matter. It is a governance issue with direct implications for accountability, evidential integrity and organisational assurance.

Commissioning establishes the evidence that adequate control has been achieved.

TExT provides evidence that the established level of control continues to be maintained.

Both activities are essential. However, they serve different purposes and generate different forms of assurance.

Understanding this distinction enables organisations to move beyond procedural compliance and towards a more defensible approach to exposure control governance.

THE LEV ASSURANCE LIFECYCLE

Distinct activities. Different questions. Complementary assurance.

LIFECYCLE STAGE	KEY QUESTION	PRIMARY ACTIVITY	EVIDENCE PRODUCED	ASSURANCE OUTCOME
 1. DESIGN INTENT	What level of control is required?	Hazard assessment, process evaluation, control strategy selection	Design criteria, performance objectives, control requirements	 Defined control objectives
 2. COMMISSIONING	Has adequate control been demonstrated?	Verification of installation, performance assessment, control effectiveness evaluation	Commissioning evidence, baseline measurements, documented conclusions	 Demonstrated capability
 3. PERFORMANCE BASELINE	What does acceptable performance look like?	Documentation and preservation of commissioning evidence	Reference measurements, operating conditions, performance benchmarks	 Established benchmark
 4. TEXT	Is adequate control continuing to be maintained?	Periodic examination, testing and verification	Inspection findings, performance data, trend analysis	 Verified condition
 5. CHANGE MANAGEMENT / RE-COMMISSIONING	Have changes affected the validity of the original evidence?	Review of modifications, process changes and operating conditions	Updated commissioning evidence where required	 Maintained evidential integrity
 6. ONGOING ASSURANCE	Can the organisation demonstrate effective control throughout the system lifecycle?	Governance oversight, record retention and assurance review	Complete evidential chain	 Defensible exposure control assurance



DESIGN INTENT

Defines what must be achieved through hazard assessment, process evaluation and control strategy selection.



COMMISSIONING

Demonstrates that adequate control has been achieved through verification and performance assessment.



PERFORMANCE BASELINE

Records the evidence from commissioning to create a reference for future comparison.



TEXT

Verifies that the established level of control continues to be maintained through periodic examination and testing.



CHANGE MANAGEMENT / RE-COMMISSIONING

Ensures the original evidence remains valid when processes, equipment or operating conditions change.



ONGOING ASSURANCE

Provides confidence that exposure risks remain effectively controlled throughout the life of the LEV system.

THE CENTRAL DISTINCTION

COMMISSIONING ASKS:

“Has adequate control been demonstrated?”

TEXT ASKS:

“Does adequate control continue to be maintained?”

Although similar measurements may be used, the activities answer fundamentally different questions and generate different forms of evidence.



KEY PRINCIPLE: Commissioning establishes capability. TEXT verifies condition. Together, they create a complete evidential chain for effective exposure control assurance.

Section 6: The LEV Performance Baseline

The Foundation of Ongoing Assurance

The relationship between Commissioning and Thorough Examination and Test can be understood through a single concept:

The Performance Baseline.

A performance baseline represents the documented evidence that defines how an LEV system performed when adequate control was demonstrated. It represents the point at which assumptions become evidence.

In this sense, the baseline is not an additional administrative burden; it is the mechanism that allows future testing, maintenance and assurance activity to be interpreted efficiently and meaningfully.

The baseline records not only what was measured, but also the operating conditions, performance criteria and supporting observations that justified the conclusion that adequate control had been achieved.

Once established, the baseline becomes the reference point against which future performance can be assessed.

Without a clearly defined baseline, it becomes difficult to determine whether:

- Current performance remains acceptable
- System deterioration has occurred
- Process changes have affected effectiveness
- Maintenance activities have restored original performance
- Regulatory expectations continue to be satisfied

The performance baseline therefore forms the evidential bridge between Commissioning and TExT.

Commissioning establishes the baseline.

TExT evaluates performance against it.

6.1 What Constitutes a Performance Baseline?

A meaningful performance baseline extends beyond a collection of airflow measurements.

To support future assurance activities, the baseline should provide sufficient information for Duty Holders, managers, engineers and examiners to understand:

- What the system was intended to achieve
- What constituted adequate control
- Under what operating conditions performance was demonstrated
- Which parameters were considered critical
- What evidence supported the final commissioning conclusion

Depending upon the application, baseline information may include:

- Design intent and performance objectives
- Exposure Benchmark required
- Control Benchmark
- Process descriptions
- Hood configurations and positions
- Airflow and pressure measurements
- Capture velocity measurements
- Qualitative visualisation results
- Containment assessments
- Exposure monitoring data
- Photographic records/System schematics
- Operating instructions and limitations

The precise content will vary according to the complexity of the application and significance of the hazardous substance to be controlled. The principle remains the same.

The baseline must provide sufficient evidence for a competent person to understand what was demonstrated, how it was demonstrated and why the system was considered effective.

6.2 Why Baselines Matter

The value of a performance baseline becomes most apparent after the system enters service.

Over time, LEV systems experience change:

- Components wear/become damaged
- Filters load
- Processes evolve

- Materials change
- Work practices drift

Without an established baseline, it may be impossible to determine whether measured performance remains consistent with the level originally demonstrated.

*A measured airflow rate may appear acceptable.
A static pressure reading may fall within historical changes.*

Yet without knowledge of the original benchmark, there may be no reliable basis for determining whether adequate control continues to exist.

The baseline therefore transforms individual measurements into meaningful evidence. It provides context. Without context, data alone has limited evidential value.

The Quality of the Baseline also Matters

The existence of a performance baseline does not, in itself, demonstrate adequate control. A baseline is only as valuable as the commissioning process used to establish it.

If commissioning is undertaken without clearly defined design intent, appropriate assessment of contaminant behaviour, competent professional judgement and sufficient evidence of control effectiveness, the resulting benchmark may provide consistency but not necessarily assurance.

Subsequent TExT activities may demonstrate that system performance remains consistent with the established baseline, but they cannot retrospectively confirm that the original benchmark represented adequate control.

For this reason, the objective of commissioning is not simply to create a set of reference measurements. It is to establish a defensible performance benchmark that is demonstrably linked to the achievement of adequate control under the conditions for which the system was designed.

The quality of the baseline therefore depends upon the quality of the commissioning process from which it is derived.

6.3 The Baseline as a Governance Asset

From a governance perspective, the performance baseline represents more than a technical record. It forms part of the organisation's exposure control assurance framework.

When questions arise regarding the adequacy of control, the baseline provides evidence of:

- What was originally assessed
- What conclusions were reached
- What assumptions were made
- What evidence supported those conclusions

A well-documented baseline preserves organisational knowledge and provides continuity as personnel, contractors and management teams change over time.

It becomes part of the organisation's corporate memory.

6.4 The Relationship Between Commissioning and TExT

Commissioning and TExT should not be viewed as competing activities. They are complementary stages within a single assurance process. Commissioning establishes confidence that adequate control has been achieved. TExT provides confidence that the same level of control continues to be maintained.

Neither activity can fully replace the other.

Together they create a continuous evidential chain extending from system installation through its operational life.

The performance baseline is the point at which those two activities connect. It is the reference point that allows assurance to remain meaningful over time.

Where original commissioning records are unavailable, incomplete or incapable of demonstrating adequate control, organisations may need to undertake a structured **retro-commissioning** exercise to establish an appropriate performance baseline. While retrospective assessment cannot fully recreate the original commissioning process, it may provide a defensible basis for future examination, maintenance and assurance activities.

Figure 4: The Relationship Between Commissioning and Thorough Examination & Test (TExT)



Commissioning establishes capability.



TExT verifies continuity.



Together they provide **assurance**.

6.5 Summary

The performance baseline is one of the most important outputs of the commissioning process. It captures the evidence that demonstrates adequate control, establishes the benchmark against which future performance can be assessed and provides the evidential foundation for ongoing LEV assurance.

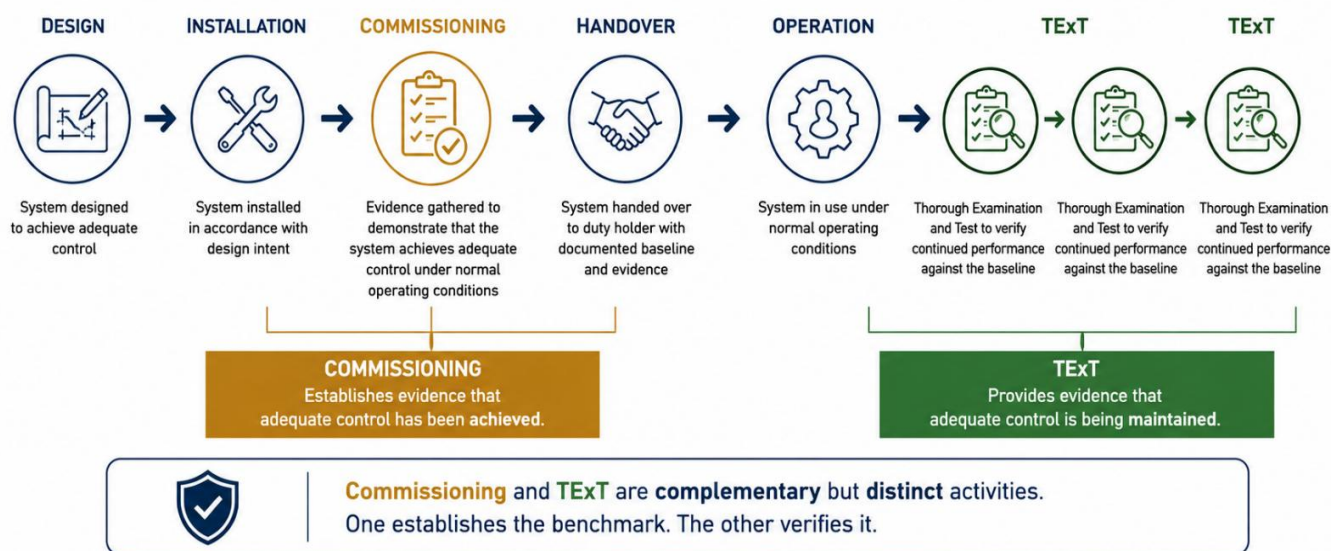
Without a baseline, ongoing verification becomes more difficult to interpret.

With a robust baseline, organisations gain a clear and defensible reference point that supports effective management of exposure risks throughout the life of the system.

Commissioning creates the baseline. TExT verifies the baseline

FIGURE 1 – THE LEV ASSURANCE CHAIN

The Lifecycle of an LEV System and the Role of Commissioning and TExT



A defensible approach requires both activities to be properly planned, executed and documented.

Section 7: Why Confusion Persists

Despite the fundamentally different purposes of Commissioning and Thorough Examination and Test (TExT), confusion between the two activities remains widespread throughout the LEV industry.

The distinction itself is relatively straightforward. Commissioning establishes evidence that adequate control has been achieved and creates the performance baseline against which future performance can be assessed. TExT provides ongoing verification that the established level of control continues to be maintained.

If the distinction is so clear in principle, an obvious question arises:

Why does confusion persist?

7.1 Similar Measurement Techniques

One reason is that both activities utilise many of the same technical measurement methods.

These may include, for example:

- Airflow measurement
- Velocity measurement
- Static pressure measurement
- Visual inspection
- System observation

From a practical perspective, the activities can therefore appear very similar. The same instruments may be used, similar data may be collected and many of the same technical observations may be recorded.

This similarity of method can create the impression that Commissioning and TExT are interchangeable activities.

In reality, identical measurements may serve entirely different purposes depending upon when they are undertaken and the questions they are intended to answer.

7.2 Similar Documentation

Confusion is further reinforced by the appearance of the resulting reports.

Commissioning reports and TExT reports often contain many of the same elements, including:

- System descriptions
- Measurement data
- Diagrams
- Photographs
- Recommendations

To those unfamiliar with the underlying objectives of each activity, the documents may appear largely indistinguishable. However, similar content does not necessarily indicate a similar purpose. Reports that appear alike may support very different forms of evidence and assurance.

7.3 Historical Industry Practice

Perhaps the most significant contributor to confusion lies within historical industry practice.

For many organisations, periodic examination has become an established and familiar part of LEV management. By comparison, commissioning has often received less attention and may not always have been approached as a structured evidential process.

Where commissioning records are absent, incomplete or of limited value, TExT practitioners may find themselves attempting to establish reference points retrospectively in order to assess ongoing performance.

Over time, this can blur the distinction between the activity that should establish the performance baseline and the activity that should verify it.

7.4 Understanding the Difference

The persistence of confusion does not arise because the distinction between Commissioning and TExT is technically complex. Rather, it arises because similarity of measurement techniques, similarity of documentation and historical industry practice can obscure a fundamentally different purpose.

Commissioning and TExT are complementary activities within the LEV assurance process, but they are not the same activity. Recognising this distinction is essential if duty holders are to establish meaningful performance benchmarks and obtain reliable evidence of ongoing control effectiveness.

Section 8: Consequences of Treating Commissioning and TExT as the Same

Confusing Commissioning with Thorough Examination and Testing (TExT) is not merely a matter of terminology. The two activities serve different purposes within the lifecycle of an LEV system and treating them as interchangeable can have significant practical consequences for duty holders, LEV specialists, and regulators.

8.1 Loss of a Meaningful Performance Baseline

The principal purpose of commissioning is to establish and document the performance of the LEV system when it is first brought into service. This provides a reference point against which future performance can be assessed.

Where commissioning is absent, incomplete, or confused with TExT, there may be no reliable baseline against which subsequent measurements can be compared. Although later examinations may demonstrate that the system is operating within acceptable limits, they cannot necessarily confirm whether performance has remained stable, improved, or deteriorated since installation.

The absence of a documented baseline can therefore reduce confidence in long-term assessments of system effectiveness.

8.2 Reduced Ability to Demonstrate Effective Control

COSHH requires employers to maintain control measures in:-

- an efficient state
- in efficient working order
- good repair, and
- clean condition.

Demonstrating this requires more than the collection of periodic test data; it requires evidence that the system was capable of delivering adequate control from the outset.

Organisations may possess extensive TExT records but limited evidence that the system ever achieved its intended design performance.

This can make it more difficult to demonstrate that effective control has been established and maintained throughout the life of the installation.

8.3 Greater Reliance on Professional Judgement

TExT frequently involves comparison with previous results and assessment of trends over time. In the absence of commissioning data, examiners may be required to rely more heavily on professional judgement when determining whether observed performance remains satisfactory.

While professional judgement is an important part of LEV assessment, it is inevitably strengthened by the availability of robust commissioning information. The existence of documented baseline measurements allows changes in performance to be identified more objectively and supports greater consistency between examinations.

8.4 Increased Risk of Performance Drift Going Unrecognised

LEV systems can experience gradual changes in performance due to wear, contamination, modifications, changes in process conditions, or alterations to the working environment. Such changes may occur slowly and remain unnoticed over extended periods.

A properly documented commissioning baseline assists in identifying these trends. Without such a reference point, gradual deterioration may be more difficult to recognise, particularly where the system continues to appear operational and routine measurements remain broadly consistent.

8.5 Challenges for Regulatory and Legal Assurance

Commissioning and TExT records may both form part of the evidence used to demonstrate compliance with statutory duties. Where commissioning has not been adequately documented, organisations may find it more difficult to demonstrate that the LEV system was originally installed and configured to provide effective control of exposure.

Although TExT remains an essential requirement under COSHH Regulation 9, periodic examination alone cannot fully substitute for evidence that the system was properly commissioned and proven fit for purpose when first introduced into service.

8.6 The Need for Both Activities

As we have discussed, Commissioning and TExT should be viewed as complementary activities rather than alternatives.

Commissioning establishes the initial performance of the LEV system, verifies that the installation meets its intended objectives, and creates the benchmark against which future performance can be assessed. TExT provides the mechanism for periodically confirming that the system continues to operate effectively and remains capable of controlling exposure.

A robust LEV management regime therefore requires both activities. Commissioning provides the starting point; TExT provides ongoing assurance. Together they support the objective of maintaining effective control of hazardous substances throughout the operational life of the system.

Section 9: Establishing Evidence of Adequate Control

If Commissioning is to provide the evidential foundation for future assurance, it must do more than demonstrate that an LEV system is mechanically operational. It must establish credible evidence that adequate control has been achieved.

This distinction is critical.

A system may generate acceptable airflow readings, maintain stable pressures and appear to operate as designed, yet still fail to control exposure effectively if the hood, process, contaminant behaviour or working practice has not been properly assessed.

Adequate control is therefore not demonstrated by measurement alone. It is demonstrated by the relationship between design intent, operating conditions, system performance and control effectiveness.

9.1 Evidence Beyond Airflow Measurements

Airflow and pressure measurements are essential components of LEV assessment. They provide important information about system performance and help define the operating characteristics of the installation. However, they should not be treated as the sole evidence of adequate control.

Airflow data can demonstrate that air is moving. It does not necessarily demonstrate that hazardous substances are being captured, contained or removed effectively from the worker's breathing zone.

For commissioning evidence to be meaningful, engineering measurements must be interpreted in the context of the process being controlled.

This requires consideration of how contaminants are generated, how they move, how operators interact with the process and whether the LEV system achieves the intended control objective under normal working conditions.

As has been stated at Section 3, commissioning nor TExT should be viewed solely as a measurement exercise. Measurements provide evidence, but adequate control must ultimately be demonstrated in the context of the hazard, process and control objective.

9.2 Demonstrating Control Effectiveness

The evidence required to demonstrate control effectiveness will vary depending upon the nature of the process, the contaminant and the control strategy.

In some cases, engineering measurements may provide strong evidence of performance. In others, additional assessment may be required.

This may include:

- Qualitative control visualisation
- Capture effectiveness/Face velocity assessments
- Containment assessment
- Process observation
- Exposure monitoring
- Review of operator position and working method

The purpose of this evidence is not to duplicate TExT.

Its purpose is to establish whether the system, as installed and operated, achieves the level of control required for the identified hazard.

9.3 Establishing a Defensible Baseline

Where adequate control has been demonstrated, commissioning should convert that evidence into a clear performance baseline.

This baseline should document:

- Operating conditions under which control was demonstrated
- Process assumptions relied upon
- Performance parameters considered critical
- Measurements and observations obtained
- Acceptance criteria applied
- Any limitations affecting the commissioning conclusion

The baseline should enable a future examiner to understand not only what the system achieved, but why that performance was considered acceptable. This is what allows future TExT activity to move beyond isolated measurement and become meaningful verification against an established reference point.

9.4 The Evidential Chain

Defensible LEV assurance depends upon continuity of evidence.

That continuity can be understood as an evidential chain:

- Design intent defines what the system is intended to achieve.
- Commissioning demonstrates whether that objective has been achieved.
- Performance baseline records the evidence and conditions under which adequate control was demonstrated.
- TExT verifies whether that established level of performance continues to be maintained.
- Change management determines whether the original evidence remains valid when processes, materials, equipment or working practices change.

Where each link in this chain is present, Duty Holders are better positioned to demonstrate that exposure risks have been effectively controlled. Where a link is missing, assurance becomes weaker.

Without design intent, commissioning lacks a clear standard against which success can be judged. Without commissioning evidence, the performance baseline may be uncertain. Without a baseline, TExT may lack a meaningful reference point. Without change management, historical evidence may become outdated without being recognised as such.

9.5 What Good Evidence Looks Like

Good commissioning evidence should be capable of supporting future scrutiny.

It should be:

- Relevant to the hazard and process being controlled
- Traceable to the design intent and commissioning method
- Contextualised by operating conditions and process assumptions
- Sufficient to explain why adequate control was concluded
- Capable of being compared with future examination findings
- Clear enough to be understood by those who were not involved in the original project

The strongest commissioning records do not merely state that a system has passed.

They explain what was assessed, how it was assessed, under what conditions it was assessed and why the evidence supports the conclusion that adequate control was achieved.

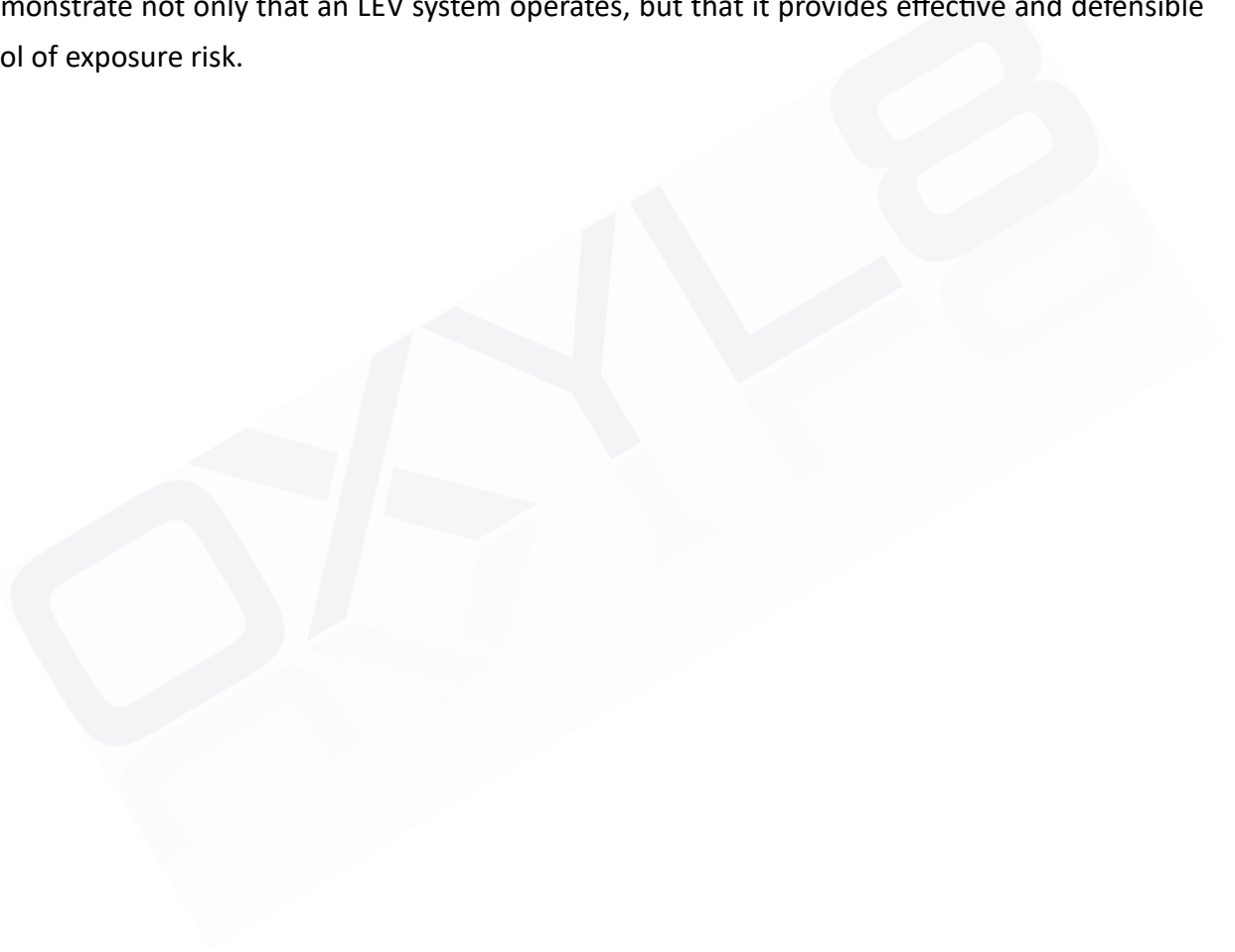
9.6 Summary

Evidence of adequate control is not created by measurement alone. It is created by a coherent assessment that links design intent, system performance, process behaviour, operating conditions and control effectiveness.

Commissioning is the point at which this evidence should be established and preserved.

TExT is the mechanism by which its continuing validity is periodically assessed.

When both activities are connected through a clear evidential chain, organisations are better able to demonstrate not only that an LEV system operates, but that it provides effective and defensible control of exposure risk.



Section 10: Conclusions & Recommendations

The central argument presented throughout this paper is that Commissioning and Thorough Examination and Test (TExT) are not interchangeable activities within the LEV assurance process. Although both involve technical assessment of LEV systems and may utilise similar measurement techniques, they serve fundamentally different purposes.

Commissioning establishes evidence that a newly installed or significantly modified LEV system is capable of achieving adequate control under defined operating conditions. It creates the evidential foundation upon which future assurance activities depend.

TExT serves a different function. It verifies that the level of control previously established through commissioning continues to be maintained throughout the operational life of the system.

Failure to distinguish between these activities can create significant weaknesses within the evidential chain relied upon by Duty Holders to demonstrate effective exposure control. A system may continue to pass periodic examination while lacking sufficient evidence that adequate control was ever established in the first place.

The distinction is therefore not merely technical. It is a matter of governance, accountability and evidential integrity.

10.1 Key Conclusions

The following conclusions emerge from the analysis presented in this paper:

1. Commissioning and TExT perform separate but complementary functions within LEV management.
2. Commissioning should be understood as the process by which evidence of adequate control is established and documented.
3. TExT should be understood as the process by which continued effectiveness is verified against established benchmarks.
4. Measurement data alone does not automatically demonstrate adequate control.
5. Defensible commissioning requires clear documentation of design intent, operating conditions, performance criteria and demonstrated control capability.
6. Performance benchmarks established during commissioning provide the reference against which future examination and testing should be assessed.
7. The evidential value of TExT is significantly strengthened when supported by robust commissioning records.

8. Changes to process, equipment, operating conditions or system configuration may invalidate existing commissioning assumptions and require re-commissioning.
9. Effective LEV governance depends upon maintaining a complete evidential chain from design intent through commissioning, operation, examination, maintenance and change management.

10.2 Recommendations for Duty Holders

Duty Holders seeking to strengthen LEV assurance arrangements should consider the following actions:

- Ensure that design intent and required control outcomes are clearly defined before installation.
- Require commissioning activities to demonstrate adequate control rather than simply record engineering measurements.
- Establish documented performance benchmarks that can be used as reference points for future examination.
- Retain commissioning documentation as part of the long-term LEV management record.
- Ensure that TExT activities reference and assess performance against established commissioning benchmarks wherever reasonably practicable.
- Introduce formal change-management procedures to identify circumstances that may require re-commissioning.
- Recognise commissioning documentation as a governance asset supporting regulatory compliance and organisational assurance.
- Maintain clear separation between those responsible for establishing control capability and those responsible for independently verifying continued effectiveness.

10.3 Recommendations for the LEV Industry

The wider LEV industry also has an opportunity to strengthen professional practice by improving the distinction between commissioning and periodic examination.

Future development should seek to:

1. Promote greater understanding of the different objectives served by Commissioning and TExT.

2. Encourage commissioning methodologies that focus on evidence of control rather than measurement collection alone.
3. Improve the documentation of design intent and performance criteria within commissioning processes.
4. Strengthen competency expectations relating specifically to commissioning activities.
5. Support guidance and training that addresses evidential integrity and governance considerations alongside technical performance.
6. Encourage the development of commissioning records that provide meaningful support to future examination and assurance activities.

Improving these areas would strengthen the overall quality of LEV assurance and help Duty Holders demonstrate more effectively that exposure risks are being adequately controlled.

10.4 Final Reflections

The effectiveness of an LEV system cannot be demonstrated solely through periodic examination and testing. Assurance begins with the establishment of evidence that adequate control has been achieved and continues through the ongoing verification of that evidence throughout the life of the system.

Commissioning and TExT should therefore be viewed not as competing activities, but as sequential components of a single assurance process.

Commissioning establishes the benchmark.
TExT verifies its continued achievement.

When both activities are properly defined, competently delivered and appropriately documented, Duty Holders are placed in a far stronger position to demonstrate effective exposure control, support regulatory compliance and protect the health of those who rely upon the control measures provided.

The challenge facing the industry is therefore not whether LEV systems should be tested, but whether sufficient evidence exists to demonstrate that effective control was established in the first place.

The purpose of any Local Exhaust Ventilation system is straightforward:

To adequately control exposure to airborne hazardous substances and protect the health of those who may be affected by them.

Achieving this objective requires more than installation, more than measurement and more than periodic testing. It requires evidence. Specifically, evidence that adequate control was achieved in the first instance and evidence that adequate control continues to be maintained throughout the operational life of the system.

This paper has examined the relationship between Commissioning and Thorough Examination and Test (TExT) and has demonstrated that, whilst the two activities are closely related, they serve fundamentally different purposes.

Commissioning establishes capability.

TExT verifies condition.

Commissioning demonstrates that a system is capable of achieving adequate control under defined operating conditions. TExT demonstrates that the established level of performance continues to be maintained.

One creates the benchmark.

The other measures against it.

Confusion arises because both activities often employ similar measurement techniques and produce documentation that appears superficially similar. However, similarity of method should not be mistaken for similarity of purpose.

When organisations fail to distinguish between Commissioning and TExT, important risks emerge. Performance benchmarks may never be properly established. Periodic examinations may be conducted against assumptions rather than evidence. Duty Holders may possess records demonstrating continued operation but lack evidence demonstrating that adequate control was ever achieved.

The result is not merely technical uncertainty.

It is an assurance gap.

In many organisations, the strongest indication of this gap is the absence of a clearly documented commissioning baseline. Without such a baseline, it becomes difficult to demonstrate how performance criteria were established, whether design intent was achieved and whether subsequent examinations are assessing the correct parameters.

The challenge for Duty Holders is therefore not simply to ensure that LEV systems are tested. It is to ensure that LEV systems are supported by a complete and coherent evidential chain. [grey box again]?

That chain begins with design intent:-

- It is strengthened through commissioning.
- It is maintained through TExT.
- And it is preserved through effective governance, documentation and change management.

Ultimately, the distinction between Commissioning and TExT is a distinction between proving capability and verifying continuation.

Both activities contribute to the same objective.

Both are essential.

But neither can substitute for the other.

Organisations that understand this distinction are better positioned to demonstrate compliance, withstand scrutiny and provide confidence that exposure risks are being effectively controlled.

In the final analysis, the question is not simply “can a system can pass a Thorough Examination and Test?”.

The more important question is whether there is credible evidence that the system was shown to provide adequate control in the first place.

Commissioning answers that question.

TExT confirms that the answer remains valid.

Together they form the foundation of a defensible LEV assurance strategy.

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About OXYL8 Professional Publications

OXYL8 Professional Publications publishes practical guidance, technical monographs and professional resources intended to support Duty Holders and other professionals responsible for achieving and demonstrating effective control of hazardous substances in the workplace.

The publications are developed from practical experience, recognised good practice and current legislation, with the objective of promoting robust engineering, sound governance and evidence-based decision making.

The Duty Holder Guide Series explores the wider principles that underpin effective LEV governance, commissioning, performance verification and ongoing assurance.

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