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THE FELLOWSHIP OF LEAD PAINT ASSESSORS

LP-601 – Lead Paint Safety | Non-statutory guidance for Local Authorities & Dutyholders

Published by the Fellowship of Lead Paint Assessors (FOLPA)

For guidance and support, contact FOLPA at **info@folpa.org.uk** or visit **www.folpa.org.uk**

Foreword

This guidance document (LP-601) provides essential information for local authority officers, dutyholders, refurbishment professionals and surveyors working with buildings that may contain lead paint. Lead paint remains a significant occupational and public health concern across the UK's building stock, particularly in properties constructed before 1992.

The prevalence of lead-based paints in older buildings presents ongoing challenges during refurbishment, maintenance and demolition activities. When disturbed, lead paint can release hazardous dust and fumes that pose serious health risks to workers and building occupants, especially vulnerable groups such as children and pregnant women.

This is non-statutory guidance designed to complement existing legal frameworks including the Control of Lead at Work Regulations 2002 (CLAW) and the Construction (Design and Management) Regulations 2015 (CDM). It provides practical advice to help dutyholders understand their responsibilities and implement effective control measures.

Key Purpose

To support duty compliance through practical guidance on identifying, assessing and safely managing lead paint risks in refurbishment projects.

Who Should Read This

- Local authority building control
- Property owners and managers
- Contractors and surveyors
- Health and safety professionals

For the purposes of this document any reference to Lead Paint should also include Varnishes, Stains, Lacquers, Shallac, Clear coats, Waxes and any other coating

This document is issued by the Fellowship of Lead Paint Assessors (FOLPA) as non-statutory guidance

Contents

Understanding Lead Paint

Lead-based paints were extensively used throughout the UK until the late 20th century due to their excellent durability, coverage and weather resistance. Lead compounds, particularly white lead (lead carbonate) and red lead (lead oxide), were added to paint formulations as pigments and drying agents. Whilst restrictions began in the 1960s, lead paint was not fully banned for domestic use until 1992.

When was lead paint used in the UK? High lead content paints (often exceeding 50% by dry weight) were standard before 1960. Lower concentrations continued through the 1960s and 1970s, with paints containing lead still marketed until 1992. Building construction dates are only half the picture as it must be appreciated that refurbishments, redecorations and re-developments can introduce paints of differing lead content through time.

Why Lead Paint Remains a Risk

During refurbishment, lead paint becomes hazardous when disturbed through:

- **Dry sanding or scraping** – generates fine inhalable dust
- **Heat stripping or burning** – creates toxic lead fumes
- **Demolition activities** – releases dust into the environment
- **Water jetting** – produces contaminated debris

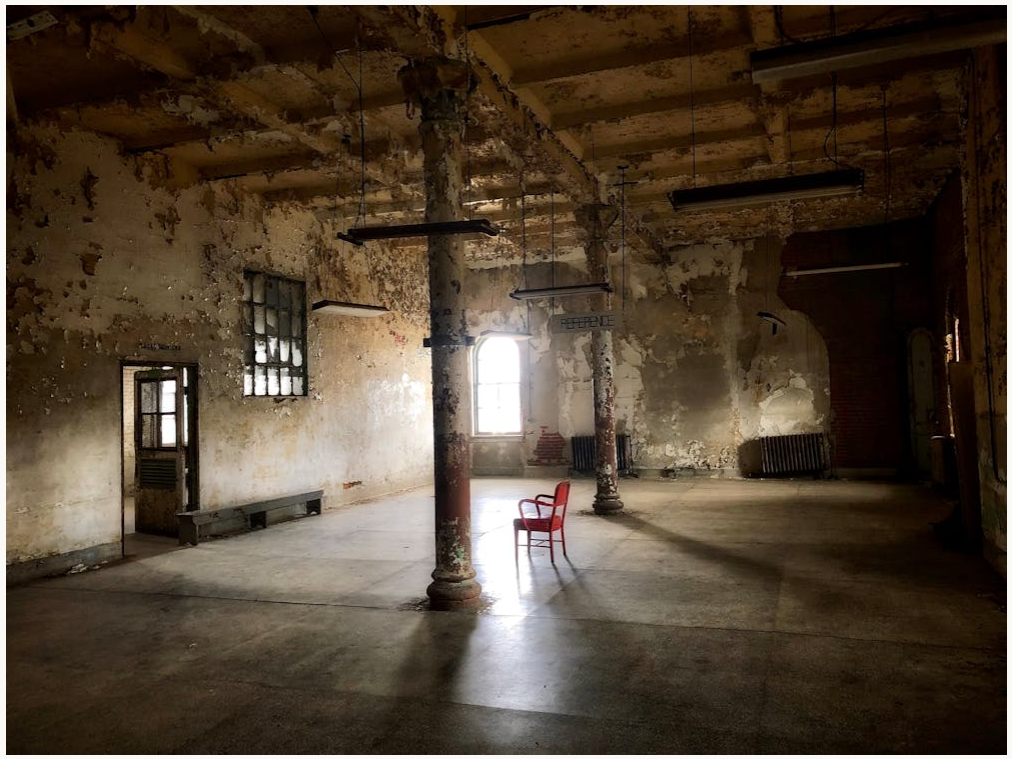
Did You Know?

Lead particles as small as 10 micrometres can remain airborne for hours and travel considerable distances. Once inhaled or ingested, lead accumulates in bones and organs, causing long-term health damage even at low exposure levels.

Lead can also migrate through paint layers over time, meaning that surface coatings may contain lead even if they were originally lead-free. This makes visual assessment unreliable – testing is essential.

Where Lead Paint is Commonly Found

In buildings constructed before 1992, and particularly those from the pre-1980 era, lead paint is most commonly encountered on both internal and external components. Understanding typical locations helps surveyors and contractors plan appropriate testing and control measures.



High-Risk Building Elements

- **Windows and doors** – frames, sills, sashes and architraves
- **Staircases** – balustrades, handrails and newel posts
- **Skirting boards** – especially original timber features
- **Decorative woodwork** – panelling, picture rails, dado rails
- **External cladding** – weatherboarding and painted render
- **Metal components** – railings, gutters, downpipes, window frames
- **Exterior trim** – fascias, soffits, bargeboards

Pre-1960 Stock

Assume lead paint is present on all painted surfaces unless proven otherwise. Multiple layers often exceed 50% lead content.

1960–1992 Properties

Lead paint likely on metal and external joinery. Internal woodwork may contain lower concentrations but still requires testing.

Post 1992 Buildings

Specialist or industrial paints may contain lead. Metal primers and heritage restoration products particularly suspect. Lead Acetate still available to purchase

Historic decorative finishes including stencilled patterns, gilding and faux finishes almost certainly contain lead. Conservation areas and listed buildings require particular attention, as original paint layers are often preserved beneath modern coatings.

Health Effects & Risk Statistics

Acute vs Chronic Exposure

Acute exposure occurs during intensive disturbance activities such as sanding, burning or demolition. Symptoms can include abdominal pain, headaches, fatigue and irritability. High-level exposure may cause seizures, coma or death, though such cases are rare in modern UK construction.

Chronic exposure results from repeated low-level contact over weeks, months or years. This is the more common scenario in refurbishment work and causes cumulative health damage even when exposure levels seem insignificant day-to-day.

Vulnerable Groups

Children are particularly susceptible because their developing nervous systems absorb lead more readily. Blood lead levels as low as 5 µg/dL can impair cognitive development and learning ability.

Pregnant workers face additional risks as lead crosses the placental barrier, potentially causing developmental problems, premature birth and reduced birth weight. Lead stored in maternal bones can be mobilised during pregnancy, creating exposure even years after direct contact ceases.

Neurological Impacts

- Reduced IQ and cognitive function
- Behavioural changes and aggression
- Memory and concentration problems
- Peripheral neuropathy in severe cases

Renal Effects

- Chronic kidney disease
- Impaired kidney function
- Increased blood pressure
- Gout and joint problems

Cardiovascular Consequences

- Hypertension
- Increased risk of heart disease
- Stroke risk elevation
- Vascular damage

Reproductive Harm

- Reduced fertility in men and women
- Miscarriage and stillbirth
- Developmental delays in children
- Premature birth

Public Health England data indicates that construction workers remain one of the highest-risk occupational groups for lead exposure in the UK. Blood lead surveillance shows that refurbishment activities consistently produce elevated readings, highlighting the critical importance of proper assessment and control measures.

Legal Framework

Multiple pieces of legislation govern the management of lead paint in the UK. Understanding these overlapping duties is essential for compliance and effective risk management during refurbishment projects.

Control of Lead at Work Regulations 2002 (CLAW)	Assess risk of exposure; prevent or adequately control exposure; maintain controls; provide information, instruction and training; undertake health surveillance where necessary	Employers whose workers may be exposed to lead; self-employed persons
Construction (Design and Management) Regulations 2015 (CDM)	Identify hazards during design; provide pre-construction information; plan and manage work safely; coordinate activities; maintain health and safety file	Clients, Principal Designers, Principal Contractors, Designers, Contractors
REACH Regulations (Registration, Evaluation, Authorisation of Chemicals)	Restrictions on placing lead-containing products on market (max 0.009%/90ppm lead by weight in new paints since 2009); supply chain communication duties	Manufacturers, importers and suppliers of chemical products
Control of Substances Hazardous to Health Regulations 2002 (COSHH)/WM3	General duties to assess and control exposure to hazardous substances (lead falls under CLAW specifically, but COSHH principles apply)/WM3	Employers and self-employed persons
Management of Health and Safety at Work Regulations 1999	Risk assessment; health surveillance; provision of information to employees; cooperation and coordination between employers	All employers and self-employed persons

Core Legal Principle

All dutyholders have an explicit obligation to assess whether lead is present and, if so, to implement appropriate controls to prevent or adequately control worker and public exposure. Ignorance is not a defence – reasonable enquiries must be made before work begins.

Dutyholder Responsibilities

Compliance for regular or ordinary occupation will drive a different set of procedures and requirements than Construction projects. Both may involve multiple parties, each with specific responsibilities for managing lead paint risks. Clear allocation of duties is essential for effective compliance and safe project delivery.

Client

- Commission compliance surveys for regular occupation and commission pre-construction surveysto identify lead paint
- Provide information to those on-site who manage the building for compliance & provide information to Principal Designer and contractors
- Ensure adequate time and resources for safe working
- Verify competence of appointed parties
  Retain health and safety file with lead paint records

Principal Designer

- Coordinate pre-construction information including lead surveys
- Identify and eliminate/reduce lead paint risks through design
- Ensure residual risks are communicated to contractors
- Prepare health and safety file documenting lead locations
- Liaise with surveyors and assessors

Principal Contractor / Contractor

- Review lead paint information before work starts
- Conduct CLAW risk assessments
- Implement hierarchy of control measures
- Provide appropriate training, PPE and RPE
- Arrange health surveillance if exposure exceeds action levels
- Manage waste in accordance with hazardous waste regulations
- Monitor and maintain control measures throughout project

Surveyor / Lead Paint Assessor

- Conduct systematic surveys using XRF or laboratory analysis
- Identify and map lead paint locations
- Assess likely lead content and condition
- Provide clear reports to inform risk assessment
- Advise on suitable control measures and waste classification
- Hold appropriate lead paint training & experience; FOLPA membership or certificates may be used as one means of supporting this

Effective communication between all parties is critical. Lead paint information must flow from client to designer to contractor, with feedback loops ensuring that new discoveries during work are properly documented and managed. Written records of decisions, assessments and control measures should be maintained throughout the project lifecycle.

Lead Paint Surveying, Testing & Analysis

When Testing/Surveying is likely to be required

Lead paint surveys are now increasingly being compiled for regular occupational purposes by way of a lead paint register of a given building in a similar sense to an asbestos register. This aids duty holders in managing lead paint coatings they have on-site. Surveys are typically necessary to support compliance before works as part of the pre-construction phase for any buildings constructed before 1992. Surveys are typically necessary to support compliance for:

- Refurbishment or Renovations
- Demolition & Facilitating activities/softstrip
- Coatings in poor condition/Maintenance involving surface preparation
- Change of use affecting existing finishes

Early surveying and testing enables accurate project planning, waste cost forecasting and specification of appropriate control measures. Delaying surveys until work has started creates significant health and safety risks and can result in project delays, cost overruns and potential enforcement action.

Swab, pen and dropper-type lead tests are widely recognised as unreliable. They are prone to both false positives and false negatives, are highly sensitive to surface condition and user technique, and provide no meaningful quantitative result. Outcomes rely on subjective colour-change interpretation against a chart, which varies with lighting, eyesight and judgement. As such, these kits cannot reliably determine lead concentration, exposure risk, or compliance and should not be relied upon for professional assessment or decision-making.

Suitable Sampling Methods & Presentation

XRF Testing

X-ray fluorescence analysers provide instant, non-destructive readings of lead content in ppm or % or mg/cm². Ideal for rapid assessment of multiple locations.

Paint Sampling

Physical samples are extracted through paint layers and sent to UKAS or MCERTS-accredited laboratories for acid digestion and analysis.

Data Anaysis with Register

Data can be captured and presented alongside several other specifics to provide results in a Lead Paint Re-gister

XRF Testing Explained

Portable XRF analysers emit X-rays that cause lead atoms in paint to fluoresce at characteristic energy levels. The device measures this fluorescence and calculates lead concentration. Modern XRF devices can detect lead through several paint layers, though readings may be affected by thick coatings or metallic substrates.

Advantages: Accurate & immediate results; non-destruct-ive; can test hundreds of locations per day; suitable for heritage structures where sampling would cause damage.

Limitations: Requires RPS training and a license; initial equipment cost.

Laboratory Analysis

Paint samples are removed using sharp blades or corers to capture all layers through to substrate. Samples are digested in acid and analysed using atomic absorption spectroscopy or ICP-MS or similar to determine precise lead content by weight percentage.

Advantages: Highly accurate; provides percentage by weight; can analyse specific paint layers separately; definitive for waste classification.

Limitations: Destructive; requires laboratory turnaround time (typically 5–7 working days); labour intensive from a physical sampling point POV, sampling must be methodical.

Structured Sampling Strategy (whether for regular compliance or works)

Effective surveys follow a systematic approach based on building age, construction type and intended works/scope. A typical strategy includes:

1. **Desktop review** – examine building records, previous surveys, construction date, agree scope
2. **Visual inspection** – identify painted elements, assess condition, prioritise approach
3. **XRF Testing** – test representative locations across building elements internally/externally for register submission

or **Targeted sampling** – take laboratory samples from building elements internally/externally for register submission

4. **Documentation** – produce clear reports & register with plans showing tested locations, results- interpretations & recommendations

The level of survey detail should be proportionate to project scope and risk. For regular occupation and compliance to assist in minor maintenance may require limited targeted testing, whilst major refurbishment demands comprehensive assessment of all painted surfaces. Professional judgement, informed by experience and FOLPA guidance, is essential in designing appropriate survey specifications.

Control Measures & Safe Working

"How can you manage what you have yet to identify?". This is an important question for those that have no pre-existing information on lead paint for the buildings they manage. Once lead paint has been identified, duty holders must implement appropriate control measures following the hierarchy of control principle. The goal is to eliminate or minimise worker exposure whilst allowing project work to proceed safely.

Plan & Elimination

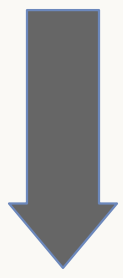
Remove the hazard entirely by designing out lead paint disturbance, for example by replacing rather than refurbishing painted elements or specifying alternative construction methods

Substitution & Mechanism

Replace high-risk processes with lower-risk alternatives, such as controlled removal techniques - Chemical Stripping, Dry-Ice Blasting, Media Blasting, IR removal, Heat removal

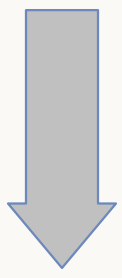
Engineering Control Measures

Use physical controls like on-tool dust extraction, containment enclosures, negative pressure systems and HEPA(13/14) filtration to capture lead at source



Administrative Controls

Implement safe systems of work, restricted access, work rotation, hygiene facilities, training and health surveillance to manage residual risks



Personal Protective Equipment

Provide appropriate RPE (typically FFP3 or powered respirators), disposable coveralls, gloves and welfare facilities as the last line of defence

Encapsulation/Enclosing vs Removal

Encapsulation involves covering lead paint with new coatings or boarding systems to prevent exposure. This is often the preferred option for residential settings where removal is not practicable and coatings are already beginning to deteriorate. This eliminates worker & occupant exposure to lead dust. Specialist encapsulants are available but these are not always practicable or necessary. Enclosing often involves timber or plasterboard overlays or replacement cladding systems. Encapsulation must be maintained throughout the building's life, and records should document encapsulated lead locations.

Removal will be necessary where the wider remit or scope of works necessitates or requires it. Removal can generates significant lead dust depending on approach and requires stringent controls including containment, extraction, personal protection and correct waste disposal.

Prohibited Methods

Never Use These Methods on Lead Paint

- Dry sanding or grinding
- Uncontrolled heat stripping above 450°C
- Abrasive blasting without containment
- High-pressure water jetting without extraction/containment
- Burning off with a blowtorch

These methods generally generate very high levels of lead dust or fume and are normally incompatible with the Control of Lead at Work Regulations 2002. They should not be used except in exceptional circumstances where specialist controls can demonstrably achieve adequate control of exposure.

Safe Systems of Work

Documented safe systems must address:

- **Work method selection** – choose lowest-risk practicable method based on CLAW assessment
- **Containment** – isolate work areas using polythene sheeting, airlocks and warning signage
- **Dust suppression** – use water sprays, wet methods and on-tool extraction
- **Air monitoring** – conduct baseline and ongoing air sampling to verify control effectiveness (depending on removal method)
- **Hygiene facilities** – provide dedicated welfare units with showering and separate clean/dirty areas
- **Waste management** – segregate, bag and label lead waste at point of generation
- **Decontamination** – HEPA vacuum & wet-wipe work areas before removing containment (Not just any HEPA)
- **Emergency procedures** – define response to control failure or unexpected lead discovery

Personal Protective Equipment

Respiratory Protective Equipment (RPE) is mandatory when lead dust or fume exposure cannot be adequately controlled by other means. Minimum standard is FFP3 disposable respirators for low-level short-duration work. Powered air purifying respirators (PAPRs) or supplied air systems are required for prolonged exposure or high lead levels. All RPE must be face-fit tested to the individual wearer.

Protective clothing should be disposable Type 5/6 coveralls to prevent contamination of personal clothing and skin. Gloves should be disposable nitrile with frequent changes. Contaminated PPE must be treated as hazardous waste. Workers must not leave site wearing contaminated clothing or bring lead dust home to families.

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