THE INSTITUTE OF CONSERVATION

The Control of Lead at Work Regulations (2002) – review of lead in blood levels and associated guidance

Icon Consultation Response, 18 May 2026

Question 1: To what extent do you agree or disagree that the blood-lead levels within CLAW 2002 should be reduced?

Response: Agree

Question 1a: If you answered 'Don't know / unsure', please go to the next question. If you answered, 'Strongly disagree / Disagree', please briefly explain the reason(s) for your response.

We fully recognise and support the need to review, and where necessary, to reduce the levels of lead in blood to improve the protection of workers. We do not object to the principle of reviewing CLAW 2022. However, we are concerned with the proposed limits and timelines for implementation.

As the professional body for the conservation-restoration sector we are strongly concerned about the unintended consequences of the proposed changes on our ability to effectively protect and preserve our nation's collective cultural heritage as a result of the exclusion of skilled workers and reduced capacity to undertake essential conservation work.

We would support a revised approach that maintains the objective of improved health protection while ensuring that proposals are practicable, proportionate, and responsive to the constraints related to the care of heritage assets.

Question 2: To what extent do you agree or disagree with lowering the general employee category blood-lead levels from October 2027? (action level to 20 µg/dL and the suspension level to 30 µg/dL)

Response: Strongly disagree

Question 2a: If you answered 'Don't know / unsure', please go to the next question. If you answered 'Strongly disagree / Disagree', please briefly explain the reason(s) for your response. In particular, please indicate:

- **Whether it is the new action or the suspension level you disagree with, the time frame for the implementation of these levels (from October 2027)? Or both?**
- **What blood lead levels do you think would be appropriate? And within what time frame?**

We strongly disagree with both the proposed action and suspension levels and the implementation timeframe (October 2027).

The proposals do not effectively consider the full range of job roles that expose individuals to lead. Within the heritage sector, particularly within stained glass conservation, the use of lead is essential and unavoidable. Key activities, such as dismantling, soldering, and working with lead cames inevitably involve

lead exposure. However, in many cases there are no suitable alternatives that would preserve the physical structure or historic integrity of stained glass.

Alternatives (such as copper, brass, zinc, or lead-free solders) are inappropriate due to differences in appearance, performance, durability, or the risk they pose to historic materials. As a result, exposure cannot be eliminated without compromising conservation outcomes.

A single, uniform approach to exposure limits does not work for the heritage sector.

Evidence from our 2025 survey of the stained glass conservation workforce shows a mean blood lead level of 13.9 µg/dL, with a range of 8.2 to 18 µg/dL. Exposure varies according to the type of work undertaken, with higher levels typically associated with hands-on conservation activities.

Even where robust control measures and good practice are already in place, a significant proportion of the workforce would be close to or exceed the proposed action level of 20 µg/dL.

We therefore recommend:

- A more proportionate, sector-specific approach that recognises the constraints of heritage work.
- Retention of higher interim action levels aligned with what is currently achievable in practice
- A longer transition period to allow for incremental improvements and further evidence gathering

Without these adjustments, the proposed 2027 levels risk being unachievable, even when implementing high quality health and safety protocols.

Question 3: To what extent do you agree or disagree with lowering the general employee category blood-lead levels further from October 2029? (action level to 10 µg/dL and the suspension level to 15 µg/dL)

Response: Strongly disagree

Question 3a: If you answered 'Don't know / unsure', please go to the next question. If you answered 'Strongly disagree / Disagree', please briefly explain the reason(s) for your response. In particular, please indicate:

- **Whether it is the new action or the suspension level you disagree with, the time frame for the implementation of these levels (from October 2029)? Or both?**
- **What blood lead levels do you think would be appropriate? And within what time frame?**

We strongly disagree with both the proposed action and suspension levels and the proposed implementation date of October 2029.

We do not believe these levels are achievable within the stained glass conservation sector, where lead exposure is linked to essential conservation processes which cannot be fully eliminated. A clear distinction should be recognised between heritage conservation and other industrial uses of lead.

Even with well-established control measures, including ventilation, PPR, hygiene and regular monitoring; average exposure levels would result in a large proportion of the workforce exceeding the proposed 2029 action level.

Our 2025 survey shows a mean exposure level of 13.9 µg/dL, with many workers - particularly those undertaking practical conservation work - falling within a range that would exceed the proposed action level. This is reflective of the unavoidable use of lead rather than poor control measures.

Imposing these thresholds would lead to widespread non-compliance despite good practice, preventing skilled professionals to continue working, and ultimately reduce the sector's capacity to protect and preserve historic stained glass and by extensions the collective heritage of the country.

Instead, we would propose that action and suspension levels are aligned with the existing achievable levels. We believe that the action level should be 20 µg/dL with a suspension level of 25 µg/dL.

Question 5: To what extent do you agree or disagree with lowering the blood-lead action and suspension levels for women of reproductive capacity within CLAW 2002 from October 2027? (action level to 5 µg/dL and the suspension level to 7.5 µg/dL)

Response: Strongly disagree

Question 5a: If you answered 'Don't know / unsure', please go to the next question. If you answered 'Strongly disagree / Disagree', please briefly explain the reason(s) for your response. In particular, please indicate:

- **Whether it is the new action or the suspension level you disagree with (5 µg/dL [action level] / 7.5 µg/dL [suspension level])? Or the time frame for the implementation of these levels (from October 2027)? Or both?**
- **What blood lead levels do you think would be appropriate? And within what time frame?**

We strongly disagree with both the proposed action level (5 µg/dL) and suspension level (7.5 µg/dL), as well as the proposed implementation timeframe (October 2027).

Icon's 2025 survey shows that women of childbearing capacity have a mean blood lead level of 8.74 µg/dL, with a range of approximately 6.5 to 12 µg/dL. This indicates that a significant majority of workers in this category would exceed both the proposed action and suspension levels under current working conditions.

Importantly, these exposure levels occur despite the sector following established best practice, including robust risk assessment, use of PPE and ventilation, strict hygiene controls, and regular health monitoring. The results therefore reflect the inherent nature of the material and processes involved, rather than inadequate control.

Lead is integral to stained glass conservation, and in many cases cannot be substituted without compromising the integrity and authenticity of historic work. As such, exposure cannot be reduced to the proposed levels without effectively excluding this group from core conservation activities.

This is particularly concerning given the high proportion of women within the conservation workforce, with Icon's membership indicating that approximately 70% of stained glass conservation professionals are female.

The proposed thresholds would disproportionately affect women of reproductive capacity, effectively preventing many from continuing in hands-on conservation roles and limiting the sector's ability to carry out conservation work on nationally important collections. We believe the imposition of such a significant reduction in the levels for WRC would contradict the Equalities Act (2010)

While we support the need for additional protection for this group, this should be achieved through enhanced risk management, monitoring, and informed choice, rather than fixed thresholds that are not achievable in practice; this would include setting action and suspension levels that more closely reflect current achievable exposure ranges, retaining flexibility to manage risk through task allocation, enhanced monitoring, and individual risk assessment, and allowing a longer timeframe to review evidence and develop proportionate, sector-appropriate controls.

Question 7: Do you agree or disagree that the long-service employee concession level should be ended by 1st October 2034?

Response: Strongly disagree

Question 7a

- **If you answered 'Strongly agree / Agree', please briefly explain the reason(s) for your response. In particular, please indicate when should the concession be removed as proposed in para 5.19 e.g. 'from 1st October 2034 the long-service employee non-regulatory concession should no longer be used, and workers would then have to be suspended if they hit the new threshold levels')?**
- **If you Disagree/Strongly please briefly explain reason for this response?**

We do not support the removal of the long-service concession.

Many longstanding members of the stained glass conservation workforce have been working within the existing HSE guidelines since their introduction; however under the proposed changes they would be operating in excess of the proposed action and suspension levels.

Removing the long-service concession would lead to the exclusion of highly skilled and experienced practitioners from the workforce, despite their continued ability to work safely under established control measures. This is particularly concerning in a sector with a small and specialised workforce, where the retention of expertise is critical to maintaining standards and ensuring the continued conservation of nationally important heritage assets.

We support the need to review existing provisions in light of improved understanding of health risks; however, any changes should be proportionate and evidence-based and should take account of the cumulative nature of exposure and the limited opportunities for substitution in this sector.

We advocate for retaining some form of flexibility or concession for long-service workers, recognising cumulative exposure, as well as ensuring decisions are supported by occupational health advice and individual risk assessment, rather than fixed limits alone.

Question 8: Are there any unintended consequences which you think may result from reducing the blood-lead levels in CLAW 2002?

Response: Yes

Question 8a: If 'yes', please briefly explain what these unintended consequences might be.

The proposed reductions are likely to result in several significant unintended consequences.

The proposed thresholds would effectively exclude a substantial proportion of the existing workforce, particularly women within the heritage sector, and areas of practice such as stained glass conservation, where exposure to lead cannot be eliminated due to nature of the materials and processes involved.

Even where robust control measures and established good practice are in place, many workers would be unable to meet the proposed limits.

This is especially significant for women of reproductive capacity, who would be disproportionately affected under the proposed framework and, in many cases, prevented from undertaking hands-on conservation work.

Given the high number of women working within the conservation sector, the proposed changes in exposure levels will likely result in a significant loss of skilled practitioners from the workforce, despite operating well within existing health and safety standards. In turn this will risk the reduction in the few training programmes that already exist within the sector.

The proposed changes will have further consequences to stained glass conservation studios themselves. The sector is largely composed of sole traders, freelances and microbusinesses with less than 10 employees. These businesses typically rely on a small number of highly skilled professionals working across a wide range of roles, and as such lack the organisational flexibility or resources to redistribute work. As a result, any requirements that restrict individuals from carrying out core tasks, such as working with lead, have a disproportionate impact, directly affecting business viability, continuity of work, and the overall resilience of the sector.

Ultimately the implementation of the proposed recommendations could put our nation's cultural heritage at risk, by significantly reducing the number of skilled practitioners to care for important collections. If a substantial proportion of this workforce is prevented from carrying out essential tasks due to unachievable exposure thresholds, the sector's capacity to maintain, repair, and safeguard our nations heritage will be severely diminished. Over time, this could lead to a decline in the condition of nationally significant heritage assets, delays in addressing urgent conservation needs, and, in some cases, the irreversible loss of historic material.

Question 9: Are there any workers with particular characteristics (age, disability, gender reassignment, race, religion or belief, sex, sexual orientation, etc.) you believe will be disproportionately impacted by the proposed changes in CLAW 2002?

Response: Yes

Question 9a: If 'yes', please briefly explain who will be disproportionately impacted by the CLAW 2002 changes? And why?

Yes - women, particularly women of reproductive capacity, would be disproportionately impacted by the proposed changes.

The significantly lower action and suspension levels proposed for this group are not achievable within sectors such as stained glass conservation, where exposure to lead is inherent to essential working processes and cannot be fully eliminated. As a result, many women would be unable to continue in hands-on roles despite working in accordance with established good practice.

This would create a disproportionate barrier to participation and progression, effectively restricting access to certain areas of the profession. It also risks reducing workforce diversity and inclusivity, limiting career development opportunities for women, and ultimately contributing to loss of skilled professionals from the sector

While we recognise the need for additional protections, these should be delivered through risk-based approaches, enhanced monitoring, and informed choice, rather than fixed thresholds that result in exclusion from employment.

Question 10: Provide any further final comments on the CLAW 2002 proposals below – many thanks.

We fully recognise and support the objective of improving the protection of workers from the harmful effects of lead exposure. However, the proposed changes do not adequately account for the specific characteristics of the heritage conservation sector, where the use of lead remains essential and cannot be substituted without compromising the integrity of historic assets.

The evidence we have gathered from across the stained glass conservation workforce indicates that current exposure levels - while managed through established good practice - are unlikely to be compatible with the proposed thresholds. We believe the issue is not one of inadequate control, but of the constraints of the work itself.

As currently drafted, the proposals risk creating a situation in which workers are unable to continue in their roles despite following recognised best practice

The sector is already committed to effective risk management, including ventilation, PPE, hygiene controls, training, and regular health monitoring. We therefore believe that a proportionate, risk-based approach - rather than fixed thresholds alone - would provide a more effective and practical means of protecting workers.

We would encourage HSE to consider sector-specific application or flexibility within the regulations.

While we support the principle of reducing exposure, the current proposals require further review to ensure they are achievable and do not result in unintended consequences for workforce sustainability and the preservation of our nation's cultural heritage.

Question 11: Would you agree this applies to some employees in your business?

Response: Don't know / unsure

Question 11A: If you answered Yes or Don't know/unsure what could your business AND/OR HSE do to help resolve poor hygiene behaviours

Response: Other

The stained glass conservation sector is strongly committed safeguarding its workforce by adhering to well-established principles of good practice in controlling lead exposure. Common control measures include:

Risk assessment – lead work is routinely managed through a robust, regularly reviewed risk assessment process covering all conservation activities, including dismantling, soldering, and cleaning. Assessments are updated when processes or equipment change, and staff actively contribute to identifying risks.

Control measures – exposure is minimised through wet working methods, local exhaust ventilation, and the elimination of dry sweeping. HEPA-filtered vacuum systems are used, and work areas are segregated into clean and contaminated zones to prevent cross-contamination.

Respiratory Protective Equipment – fit-tested FFP3 or higher-level respiratory protection is used for tasks likely to generate dust or fumes, including soldering and dismantling. Equipment is properly maintained, cleaned, and monitored.

Induction and ongoing training – workers receive comprehensive training on lead hazards and safe working practices at induction, supported by regular refresher training, toolbox talks, and clear written guidance.

Housekeeping and cleaning – work areas, tools, and equipment are cleaned frequently using wet methods or HEPA filtration. Lead waste is disposed of through controlled systems, and extraction equipment is maintained to ensure effectiveness.

Personal hygiene – strict hygiene rules apply, including mandatory handwashing and the prohibition of eating or drinking in work areas. Clean break facilities are provided to prevent ingestion risks.

Protective clothing – protective clothing is worn and removed before entering clean areas. Workwear is laundered through controlled systems to prevent off-site contamination.

Regular monitoring and retesting – structured health surveillance programmes monitor blood lead levels at intervals appropriate to exposure risk. Results are reviewed by occupational health professionals, with trends triggering further controls where necessary.

Additional protocols are typically applied for women of childbearing capacity to significantly lower potential exposure to ensure that low exposure levels are maintained. This typically includes enhanced risk assessment, increased frequency of monitoring and reviewing task allocation.