



Historic England



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Paints and coatings for conservation: Understanding the properties and performance of historic paints and coatings and identifying appropriate contemporary options for Conservation.

CALL FOR CASE STUDIES

Paints and coatings are ubiquitous. Historically, these have been applied to building surfaces for a range of reasons – to protect them from weathering or from wear and tear, to give cheaper materials the veneer of more pricey ones, for sterilisation or sanitation, as a deterrent against biological attack, or simply for decoration.

Historic England and Historic Environment Scotland regularly receive casework queries requesting guidance on selecting appropriate paints and coatings to apply over building substrates including timber, stone, brick, plaster, metal or concrete, whether previously painted or not. Much existing research and guidance focuses on the durability of the coating itself, without considering how its performance affects the condition of the substrate (including any pre-existing coatings), its impact on the building environment, the aesthetic requirements, or its impact on significance.

To learn more about the properties and performance of traditional paints and coatings and to develop guidance on selecting appropriate contemporary options for conservation, we are jointly working on a multi-year research programme. To help inform our next steps, we are seeking case studies related to timber, external lime plaster and ferrous metals substrates. A selection of case studies will be included in the research pilot aimed at:

- Developing methodologies for assessing the behaviour, effectiveness, durability and failure modes of paints and coatings intended to protect exposed ferrous metal, timber and lime plaster from rain
- Developing *in situ* recording techniques to monitor the effectiveness of paints and coatings over time, assess their durability, and monitor substrate condition

- Developing protocols to replicate in the lab a range of paint systems applied to substrates with different conditions and evaluate their performance

The results of the pilot study will inform the design of detailed research on paints and coatings for different substrates.

We are interested in case studies located in any part of England or Scotland, including successful examples as well as cases of failure, and related to:

- Timber: hardwood or softwood external joinery, cladding and timber framing treated with oil, tar, varnish, paint or limewash
- External lime plaster: traditional lime-based substrates painted with limewash (including those with additives such as linseed oil or tallow), mineral paint or modern paints
- Ferrous metal substrates such as architectural structures (for example bridges) or features (for example window frames, gates and railings)

For each substrate, we will select a few case studies and arrange *in situ* testing using non-destructive techniques or sampling in inconspicuous areas. As the pilot progresses, we will share findings with participants. We will also consider entering into collaborative research partnerships as the research develops and, for suitable cases, we will offer site trials and monitoring.

To submit a case study expression of interest, please complete this [online form](#) by 26th July 2024. We are happy to consider cases that have been completed over the past 10 years or are at project development stage.

If you have any queries, please contact conservation@historicengland.org.uk or appliedconservation@hes.scot.