

**Structural Report – LBC application for Maintenance Repair to front
Porch and internal wall removals to non-original section of property.**



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Hallam Consulting Project Number: 1534

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07.11.25		LBC Application Issue
20.11.25		Format amended
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1.0 Introduction & LBC Commentary

This report has been prepared in support of an application for **Listed Building Consent** for minor alterations, repair and maintenance works to Mill Cottage, a Grade II listed property located in Purwell, Hitchin, Hertfordshire.

A **site inspection was undertaken on 22 October 2025**, with the purpose of assessing structural and material conditions affecting the front porch and a section of non-original internal walls. This report summarises the findings and provides professional recommendations for sensitive structural interventions which preserve the building's historic integrity while addressing localised defects.

All works proposed are minimal, necessary for conservation of the fabric and minimal with regard to the internal wall removals. They will use appropriate materials and methods in accordance with Historic England Advice Note 10: Practical Building Conservation – Structural Repairs and Timber Conservation (2017) and BS EN 1995 (Eurocode 5) principles for timber structures where relevant.

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2.0 Front Porch



Quarter side and Front elevations of Porch, noting deflection at eaves level

Existing Condition

The front porch exhibits a combination of historic and later fabric. The **vertical timber posts** appear to be of historic origin, hand-finished and painted. In contrast, the **knee braces and front fascia** are later insertions, crudely fixed with nails rather than traditional mortise-and-tenon joints. The front of the porch is now set significantly lower than the front, perhaps by 100mms, meaning the gutters won't drain.

The **brick plinth** consists of six stretcher courses plus a soldier course, clearly a 20th-century intervention. The brickwork has been built tight around the base of the timber posts, forming a recess which retains moisture. This, combined with **ivy growth** and **poorly graded gutters**, has led to softening and decay of the lower 300–400mm of both front posts, most significantly on the left hand side which also has a much reduced cross sectional area at the base, down to perhaps only 50% or the cross sectional area above.

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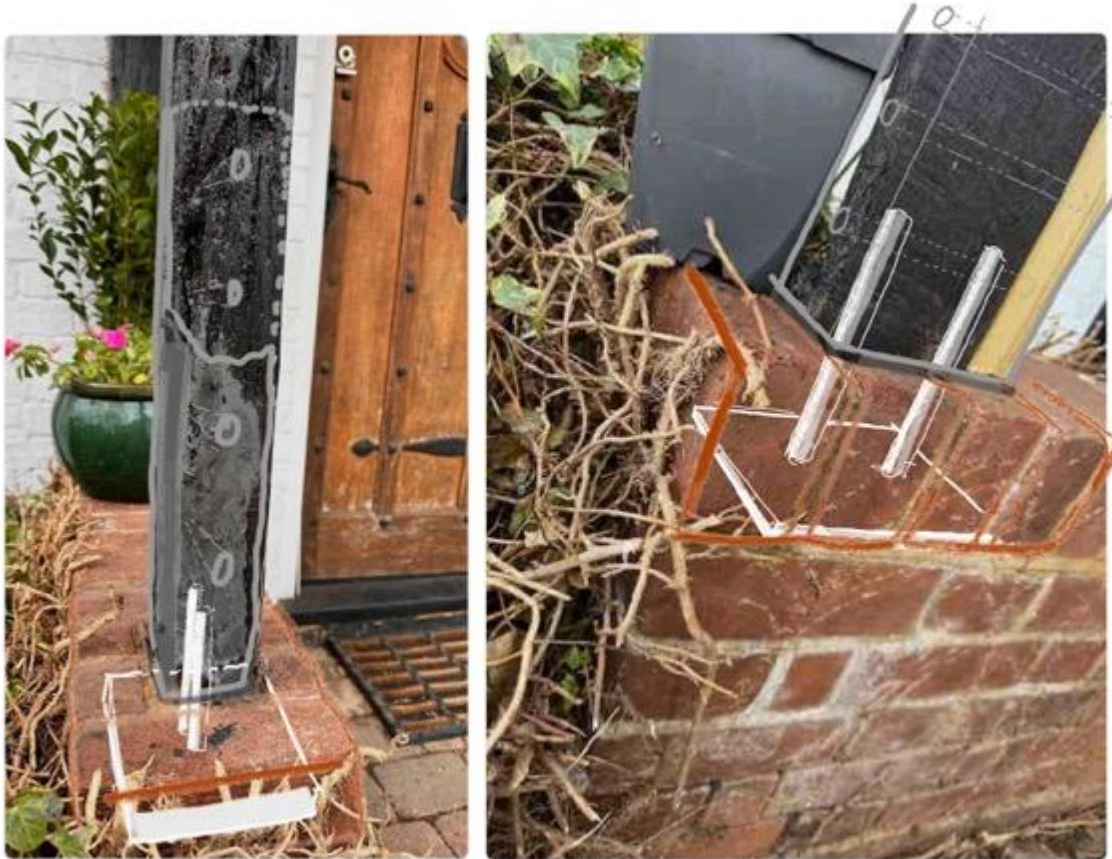
Detail photos

Shows the mixed historic and later components. Note ivy damage and pockets for moisture retention at the base. Demonstrates the need for localised repair rather than replacement. Confirms the need for lifting and bracket support detail.

Right hand photo reveals mortice and tenon pegged jointing typical of 18th/19th-century construction, confirming heritage value and informing the proposed minimal intervention strategy.

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Proposed Works



1. **Temporary propping** of the porch structure to relieve the front posts of vertical load.
2. **Careful lifting** of the front frame as far as feasible without causing damage, sufficient to remove any deformation without inducing cracking to the junction with the main façade.
3. **Removal of upper brick corners** of each plinth to install **galvanised steel plate** recessed below the existing timber posts. Each plate will include dowel pins to secure into the sound timber above the decayed section.
4. The **decayed timber bases** will be trimmed and spliced with **seasoned oak sections**, treated with natural linseed oil preservative.
5. The original front posts will be visually retained; any additional strengthening will take the form of a **concealed secondary oak post**, black-painted and set behind the existing member to carry residual load.
6. **Gutters** to be re-graded to fall correctly to downpipes to avoid further water discharge onto the brickwork below.

All proposed works are **minimal, visually unobtrusive**, and maintain the porch's original aesthetic while ensuring long-term structural integrity.

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3.0 Internal Wall removals

Existing Condition

The internal walls proposed for removal are located between the **kitchen** and **corridor**, in an area clearly constructed as a **modern extension or later subdivision**, likely dating from the mid-20th century. The walls are of straight, plumb brick/block construction, not consistent with the irregular geometry of the original timber-framed building.

Existing openings already exist in the kitchen wall with evidence of modern plastered finishes. The ceiling joists above are likely to be modern softwood joists spanning independently across the space.



Kitchen & corridor walls to be removed



Depicts flat plasterboard walling of modern type. Confirms non-original construction. Understood to be modern timber joists running parallel to the kitchen opening; load transfer is minimal and can be retained safely. Demonstrates spatial improvement potential from proposed minor alterations. Historic elements remain untouched. The installation of beams would sit beneath the existing floor joists and affect only the internal walls. The profile of previous cellular spaces would remain evident through the downstands.

Proposed Works

- Removal of lightweight non-original walls achieve improved internal layout.
- Retention of existing structural piers (~300mm on lhs and ~600mm on rhs) at each end of openings to maintain load paths.
- Installation of a small **steel beams** expressed beneath the ceilings, bearing on **padstones** discretely formed within existing walls.
- Positioning the steels beneath the floors minimises and fabric intrusion.
- All structural supports to be **reversible** and **non-invasive to historic fabric**.

No historic timber or masonry is affected. Works are confined to modern fabric and will **not alter the character or significance** of the listed building.

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