

13th June 2025

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For the attention of Nirad V. Solanki

RE: LONDON MILL, LEEK – STRUCUTRAL CONDITION OF EXISITNG TIMBER FLOORS

C2C Consulting Engineers Ltd were appointed to inspect the condition of the existing timber floor construction at London Mill, Ashbourne Road, Leek. A site inspection took place on Tuesday 10th June 2025 where all four storeys of the building were accessed and visually inspected by a structural engineer. Generally, the timber floor structure was easily accessed at each floor level, although some areas adjacent to the western elevation were avoided following conclusions that were made in a previous survey report and our concerns over structural safety. The report by 'cheshire structural design services' suggested that water ingress towards the west end of the building had caused significant water damage to the timber elements of the floor structure.

The purpose of the investigation completed by C2C was to determine whether the damaged floor structure adjacent to the western elevation could be temporarily propped and made safe to allow building surveyors to inspect and record the historic interior features of the building at each floor level. The existing floor structure is supported via a series of central cast-iron posts which support a central beam which is scarfed at intervals along its length. This beam then supports timber joists which span from the perimeter walls. During the inspection, it became apparent that the extent of wood rot was significant. At each floor level, the floor structure (timber beams, joists and floorboards) has dropped on the western end of the building. Some of the primary timber beams in this zone appear to have sheared at the support location, others have dropped due to failure of the inner leaf timber lintels. Photographic evidence of the damage described above is provided in Appendix A.

Due to the extent of the current floor deformation and structural damage, a safe method of temporary propping the existing timber floors is not considered feasible. We therefore recommend that the impacted floor area shown in Appendix B is demolished and reinstated in a bottom up approach. With the first floor structure reinstated, remediation works at upper levels may then be completed safely as access can be made via the reinstated floor below. To account for potential instability and disturbance of the damaged floors above, we advise that a crash deck is provided to ensure that any debris from the floors above does not fall on the contractors when completing the construction work at lower levels.

During the inspection, the first central column from the western elevation appeared to have dropped slightly at each floor level (for column location, see Appendix B). Prior to completing any reinstatement works, this defect should be investigated further. As part of the floor replacement work, this central support member may need to be removed and reinstated back to its original position.

A historic cast iron staircase is fixed to the external brickwork on the western elevation of the building with landings supported via a gallows bracket arrangement. Currently, it is not clear whether the existing timber floor construction provides any back span support to the external staircase. Therefore, to account for this uncertainty, we recommend that the external staircase is propped on external scaffolding during the floor removal at each floor level. Note, floor reinstatement works should be completed on a floor-by-floor basis. Removal of all floors at once could result in overall instability of the western elevation and the cast iron external staircase.

Prior to commencing the work, we expect that the proposals outlined above will need to be discussed with the Local Authority to ensure that the work will be coherent with conclusions provided in the Heritage Impact Assessment.

Yours sincerely,

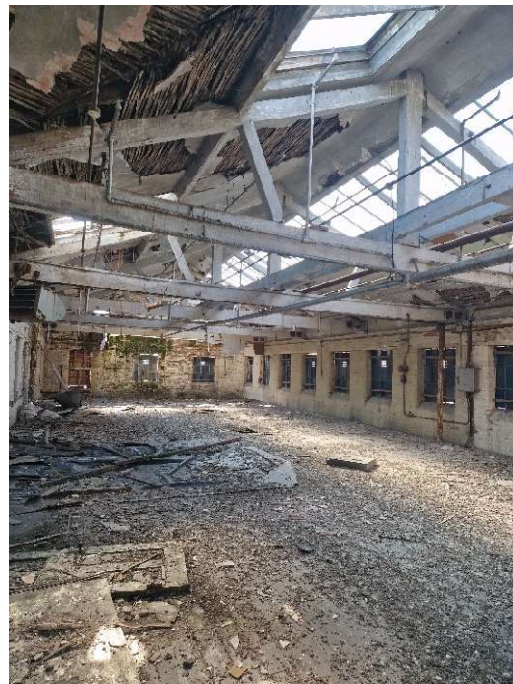


Sam Walker
MEng. (Hons) GIStructE

For and on behalf of C2C Consulting Engineers Ltd

APPENDIX A





APPENDIX B

