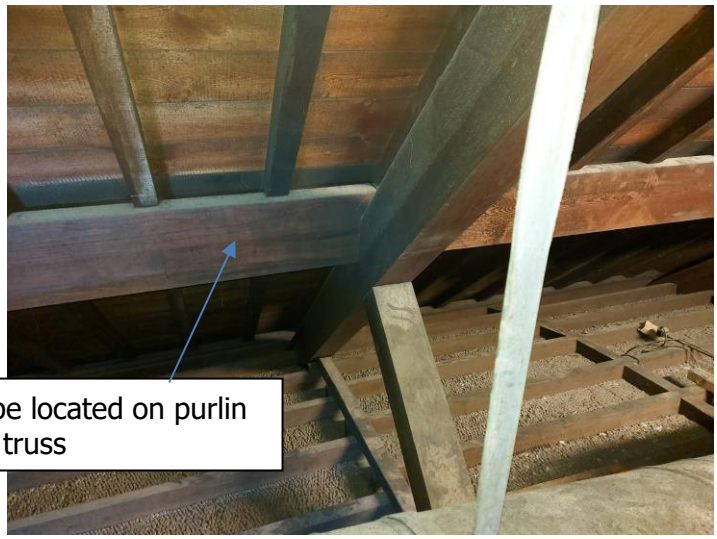
Project:	Whitworth Gallery Main Hall, University of Manchester	
WML reference number:	10834-WML-00-XX-RP-S0001	26th September 2024
Instruction confirmed by:	Joanne Wavish, Estates Dept, University of Manchester	
Date of survey:	5th September 2023	
Survey carried out by:	Stuart Ellis	





Address of Property:	Whitworth Gallery, University of Manchester, Oxford Road, Manchester M15
Survey Brief:	Site review with regard to proposed support of hanger motors from existing roof structure over Main Hall
Brief description of building:	Red brick masonry structure, generally 2 – 3 storeys, with traditional slated pitched roof off timber framework

Survey notes

- Our inspection was made on 5th September 2023, accompanied by Luke Gleadall, Buildings and Operations Manager for the Whitworth Art Gallery. The survey of the existing roof structure was requested by the Estates Dept. to establish the capacity of the members, in particular the purlins, to support 2No. new motors (one on each side) from which would hang a large textile

within the Main Hall below. Hanger cables would pass through the ceiling below, connected to a metal tube to suspend the artwork.

- Photographs were taken by WML and relevant photos have been shown above, with descriptions, to aid understanding. These and other photos taken have been kept on file for our records.
- Prior to this inspection we had previously recommended that the overall load from the proposed installation be set at 100kg, noting that the horizontal bar supporting the hanging textile will need to be of hollow aluminium tubing in order to restrict the self-weight to approx. 10kg. The 30kg self-weight of each of the motors would then leave a maximum allowable loading for the textile of 30kg.
- Following our inspection and dimensional survey of the existing roof members we were able to conduct a calculated check on the existing purlins and trusses, as requested to determine a larger allowable load for the motorised hangers.
- In general the section sizes measured on site for both purlins and truss provide a much larger capacity than the 30kg originally specified, which were based on the weight of the existing projector. From our calculations the overall load which can be hung from the proposed motors and pole would be approx. 730kg. However this requires various assumptions to be made regarding unquantifiable items, such as the nature and extent of notching and the existing truss connection details. As such we would recommend that the allowable load be restricted to 500kg, or 0.5 tonnes.
- Please note this requires that the motors are located as shown on the photograph proposals, i.e. within 0.5m of the truss, as shown on the above photograph. The new motors will each be attached to the inner face of the purlins by high-strength straps, each rated at 1000kg (motor weighs 30kg), avoiding any fixing penetrations.

General Notes

It is intended to address the terms of the specific Brief. This Report deals with this matter and it should not be considered as a comprehensive appraisal of the structure and fabric of the property as a whole.

No consideration has been given to the condition of the general fabric of the property, such as window frames, external joinery, internal finishes, rainwater, drainage and soil goods, underground drainage, outbuildings and the like.

No trial hole investigation, exploratory investigation or full measured survey was carried out, and the horizontal and vertical alignment was not assessed using optical instruments.

Consideration has not been given to damp-proofing aspects or building services.

Only items relevant to the Brief were examined. It is possible that defects may exist in other areas of the property which were not examined or which were concealed by finishes.

No analysis has been undertaken to verify the structural adequacy of the original construction.

No consideration has been given to potential contamination or asbestos aspects.

This Report has been prepared for the private and confidential use of the Client and their professional advisers, in accordance with the agreed Brief. The Report must not be reproduced in whole or in part, or relied upon by any other party for any purpose, without the express written authority of WML Consulting.

In particular, it should not be considered as an appraisal for purchase or investment purposes.