



University of Manchester

Roof Edge Protection Scheme - John Owens Building

Design & Access Statement

24th March 2017

Currie & Brown

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1. Introduction

The University of Manchester has identified a lack of edge protection to areas of roof at the John Ownes Building, which is Grade II* Listed.

The works are necessary to meet the requirements of the Work at Height Regulations 2007 and Section 7 of the Work Place (Health, Safety and Welfare) Regulations 1992.

Selection of work equipment for work at height

7.—(1) Every employer, in selecting work equipment for use in work at height, shall—

(a) give collective protection measures priority over personal protection measures; and

(b) take account of—

(i) the working conditions and the risks to the safety of persons at the place where the work equipment is to be used;

(ii) in the case of work equipment for access and egress, the distance to be negotiated;

(iii) the distance and consequences of a potential fall;

IN addition to the above, the Workplace Regulations state the following:-

Falls or falling objects

(1) So far as is reasonably practicable, suitable and effective measures shall be taken to prevent any event specified in paragraph (3).

(2) So far as is reasonably practicable, the measures required by paragraph

(1) shall be measures other than the provision of personal protective equipment, information, instruction, training or supervision

(3) The events specified in this paragraph are:

(a) any person falling a distance likely to cause personal injury;

(b) any person being struck by a falling object likely to cause personal injury.

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2. Options Appraisal

2.1 Option 1- Mansafe System

The fall arrest mansafe system has the advantage that it has a low visible impact, but is far outweighed by the negative impacts in that:-

- Users must be trained and equipped to use the system.
- Severely restricts areas of access across the roof to that adjacent to the mansafe cables.
- The system must be regularly maintained and tested.
- High risk of suspension trauma, harness induced injury and even death.

For this reason the University of Manchester has adopted a policy of removing singular fall protection systems and replacing with collective fall arrest and prevention solutions.

2.2 Option 2- Collapsible Guardrail System

A collapsible guardrail system also has the advantage that it has a low visible impact, but has been discounted for the majority of areas due to issues of risk of falls prior to the system being erected. Additionally operatives often leave the system erected nullifying advantage of the low visual impact.

For this reason we have discounted the use of this system.

2.3 Option 3- Free-Standing Guardrail System

This permanent solution has a greater visual impact than the previous two options but provides a significantly safer solution. The visual impact will be reduced by setting back the guardrail from the edge of the building, it has a galvanised steel finish which helps the guardrail blend in with the building.

2.4 Option 4- Parapet Mounted Guardrail System

This system is similar to the system described above however the guardrail is mechanically fixed to the inside face of the parapet wall. This system has a greater visual impact therefore its use is restricted to areas where access is required for the maintenance of gulleys, hoppers & downpipes etc.

2.5 Chosen Option

Given that the Building is Grade II* Listed we have limited our intervention to areas of the roof where the works are essential and where the visual impact is minimal. The proposals will be fully reversible.

The guardrails when viewed from street level can only be seen from the Burlington Street Elevation. The free standing guardrail system is 1100mm high but given the height of the existing parapet, only approximately the top 600mm will be visible.

We have specified a free standing guardrail system which is set back from the edge to minimise the visual impact.

Access the roof is currently by external doors and this will remain the same.

Access to the roof is restricted and subject to a permit to work system.

3. Heritage Statement & Justification

The John Owens Building is located on Burlington Street, off Oxford Road in Manchester and is a Grade II* Listed Building.

3.1 Listing Description

"University. West range begun 1870, east range 1883-7 and north range 1888, all by Alfred Waterhouse; with Whitworth Hall added to south end of east range c.1895-1902 by Paul Waterhouse. Sandstone ashlar, red tiled roofs with fishscalebands. Large and irregular plan round a courtyard which is open at the south-west corner. Gothic style.

The WEST RANGE (Main Building), the first on the site, in domestic scale and style, of 2 storeys plus basements and attics, has a projected gabled wing in the centre flanked by large canted entrance bays which have gabled porches with moulded 2-centred doorways and large 2-centred arched windows of 3 stepped lancet lights rising into steep gables, and tall coupled arched windows in the flanks (some with stepped sills); the central wing has a canted 2-storey bay at the gable end with a niche at ground floor containing a carved shield, a large 5-light window at 1st floor and a tiled hipped roof, a clockface in the apex of the gable, side walls with gables, and a fleche on the roof. The outer wings differ in plan and elevation; all parts have various mullioned, arched and arcaded windows, and small gabled dormers and tall stone chimneys."

Listing NGR: SJ8457496590.

3.2 Justification

Currently there are Health & Safety Access Issues at roof level at the university's building. The proposals outlined in our application seek to address this by providing safe access for University Staff and Contractors working in these areas.

The proposals outlined above have been designed to achieve the following for both university staff and contractors undertaking works on the roof.

- Compliance with HSE guidance and the University's own Health & Safety Policies
- Avoid damage to the historic fabric of the building
- The works are fully reversible
- The works do not significantly alter the historic fabric and character of the building
- The guardrail is viewable from street level from the Burlington Street Elevation only.
- The plan of the building remains unchanged
- The intervention is considered to be minimal
- Compliance with the terms of warranties and structural requirements
- Reduce Maintenance costs
- Provide a fool proof solution which is not reliant on individuals and their equipment

The installation of the guardrails and ladder system aids the future maintenance of the asset and makes the property safer for people working on the roof



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