4106: University of Manchester

Beyer Building: Proposed Replacement Fire Escape Stair

DESIGN AND ACCESS STATEMENT

Incorporating information in response to NPPF

(National Planning Policy Framework)

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Introduction

This application relates specifically to the proposed replacement of the existing, external fire escape stair to the south elevation of the Beyer 'link' building and associated works, both internally and externally, to the Beyer Building, as part of a revised fire escape strategy. It is intended that this proposal will form part of the University's overall external envelope repair package, for which Lloyd Evans Prichard have successfully submitted a series of applications for Listed Building Consent. The practice is now acting as contract administrator for the works on site. The current phase of these works commenced on site in August 2012 and the package as a whole is due for completion in 2016.

This Design and Access Statement has been prepared and submitted in support of applications for both Planning Permission and Listed Building Consent, in accordance with good practice guidance, and considers the design and access issues relevant to the proposals. It also refers to National Planning Policy Framework Section 12: Conserving and enhancing the historic environment.

The Application Site: Location & History



The application site forms an integral part of the main Quadrangle at the heart of the University of Manchester's campus on Oxford Road (easting 384615 northing 396824) approximately 1.25 miles South East of Manchester City Centre, in the suburb of Chorlton-on-Medlock. The Beyer Building is a Grade II* listed heritage asset, one of the group of buildings which forms the historic core of the former 'Victoria University of Manchester', originally constructed between the 1870s and early 1900s in the free, gothic style favoured by the architect, Alfred Waterhouse and later his son, Paul .The buildings which form this group and are affected by these proposals are described in the listing description as follows:

A. SJ 8496 698-1/21/614 VICTORIA UNIVERSITY OF MANCHESTER
including Christie Library, Whitworth Hall: Grade II*

Formerly known as: Owens College, Oxford Street, Chorlton-on-Medlock.

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University. 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 fishscale bands. 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 clock face 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.

The EAST RANGE (the main façade to Oxford Street) is monumental in scale and style, asymmetrical, with a very large rectangular tower at the south end, a 2-storeyed entrance archway to the left of this and a tall 4-storey 7-bay range to the right. The entrance archway has a wide 2-centred moulded arch, and above this a stepped triple lancet in a gable flanked by pinnacles. The tower, with pilastered corners and an octagonal stair-turret at the north-east corner, has a very large 2-centred arched doorway with splayed reveal including foliated niches, 4 orders of moulding, and hoodmould with apex carried up to form a pedestal to a 1st floor niche with a statue; arcaded windows on 6 stages (successively 5, 5, 3, 3, 5 and 5 lights), all different and those at the top stage with a colonnaded screen; and a steep saddle-back roof with banded cladding of lead and tiles. In the angle with the main range to the right is a tall 2-bay canted staircase which has buttresses, tall 2-light windows with geometrical tracery, and an arcaded parapet. The main range itself, 4 storeys diminishing in height and 7 bays with buttresses square at ground floor and chamfered above, terminating in pinnacles, has arcaded windows filling each bay, those at ground floor segmental-headed with transoms and arched lights, those at 1st and 2nd floors with shafts and 3 square-headed lights and those at 3rd floor with 4 arched lights; and a corbel table and blind arcaded parapet to each bay.

WHITWORTH HALL (to the left of the entrance archway), of 2 unequal storeys and 8 bays plus a corner tower at the south end, has buttresses, coupled segmental-headed windows at ground floor, bands of blind arcading between floors, and tall 2-light transomed windows with cinquefoil lights at 1st floor; an elaborate 2-storey gabled porch to the 1st bay with pinnacles, blind-arcading in the gable and open arcading linking the gable to the pinnacles on either side, and a 2-centred doorway moulded in 3 orders; and a 3-stage corner tower with a tiered segmental oriel, corner pinnacles, octagonal belfry and short spire, all in elaborate Gothic style.

The Beyer ‘link’ Building, which the fire escape stair serves, was constructed in the 1950s as an extension over, and adjacent to, the existing nineteenth century Beyer Building. It was built to a fairly rudimentary design when compared to its illustrious neighbours and, as a result of post war austerity, is limited in detail and inevitably used materials of lesser quality. Despite this it manages not to detract from the quality of the adjacent buildings due to being set

sufficiently far back from the primary courtyard elevations to be relatively inconspicuous. In form, it serves a useful purpose in completing the north side of the historic Quadrangle.



Site Plan - red line denotes application site, blue line denotes adjacent land under ownership of applicant

The fire escape stair under discussion here serves the second, third and fourth floors of the Beyer 'link' Building. Installed at the time of the building's construction, the escape stair was needed to provide an essential means of escape from the west end of the long floor plates which resulted from the extension. Of painted steel construction, the stair effectively protrudes from the south side of the Beyer 'link' Building and travels down three stories before continuing at right angles along an internal light well. The stair then passes into the Beyer Building via means of a further staircase enclosed in an asbestos box-type construction directly below the Light Well. This 'box' then unsympathetically lands in an internal corridor at ground floor level, where access to the outside can be achieved, although not easily.

Having been installed in the 1950s, the staircase is now reaching the end of its usable life. The steelwork is corroded to such an extent that the structure is becoming unsafe. Its utilitarian design is aesthetically unappealing and both its narrow width and steep pitch mean that it fails to meet current Building Regulations. In addition, the University's ongoing commitment to

removing asbestos from its estate means that having an asbestos-clad stair enclosure at the heart of one of its buildings is untenable. In short, its replacement with an entirely new stair is the only long-term, sustainable solution. The fact that the current stair appears to have been installed with little regard to the design of the grade II* listed heritage asset further supports the argument for its removal as it provides the opportunity for the design of a more sensitive, better considered replacement.



Existing escape stair is narrow, steep and in a deteriorating condition.

Pre-Application Discussions

Pre-application advice was sought during a meeting held between Duncan Sanderson of Lloyd Evans Prichard and Tony Mitchell of Manchester City Council Planning Department on 9th May 2013, during which the principle of the proposed replacement fire escape stair was explained in some detail, together with the necessary alterations to the interior and exterior of the Beyer Building. The information required by the planning authority was also discussed and the outcome of these discussions has subsequently informed the design of the new stair which forms the basis of this application.

Options Appraisal

Prior to selection of the most suitable design for the replacement escape stair, a number of alternative options were considered, as follows:

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Option 01: Rather than utilising the existing exit route, an alternative option under consideration was for building users to exit the Beyer Link Building through its end elevation onto the Coupland Street side of the building and descend an external escape stair sited in the zone above the existing Plantroom light well, located in the angle between the Beyer Link west elevation and the neighbouring John Owens north elevation. This option would permit a relatively straightforward stair design which could potentially be accessed through doors located within enlarged, existing window openings. However, a stair positioned here would have a negative visual impact on what is, at present, an uncluttered, clean elevation to Coupland Street and in particular detract from the composition of the John Owens Building. In addition, a number of windows from this elevation would likely be obscured and adversely affect the views currently enjoyed of Coupland Street.

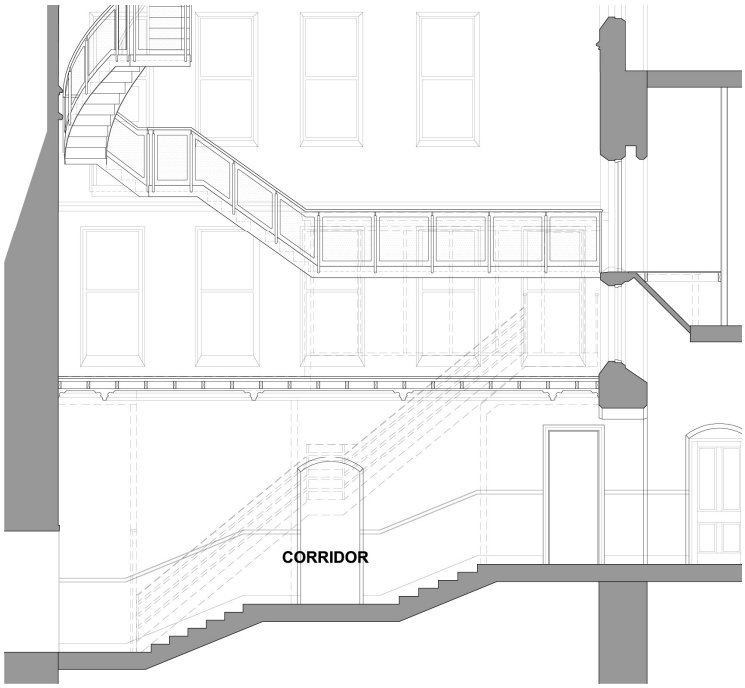
Option 02: Another option would be to retain the main fire escape stair in its current location to the west end of the light well on the Quadrangle side of the Beyer Link, but instead of requiring an exit route along the length of the light well into the Beyer Building, it would be feasible to access the John Owens Building by breaking through into the adjacent, gabled 'Ken Kitchen' elevation. This would work from a purely practical perspective in that the John Owens Building is a separate fire compartment. However, it would require a new door opening to be cut into this elevation between its centrally positioned, bay window and the adjoining Beyer Link Building. Although this would hardly be viewed from street level it would still be detrimental to the symmetry of this elevation and represent a loss of historic fabric. Furthermore, due to a level difference whereby the lowest point of escape from the Beyer Link is lower than the internal floor level of the adjacent John Owens Building, stair users would need to climb a number of steps in order to continue on their passage of escape. This could be considered confusing in an emergency and directly contravenes the University's own policies with regard to safe means of escape.

Option 03: This option again involves retaining the escape stairs in their existing position and having an exit route which leads back into the Beyer Building. However, the main difference between this proposal and the existing stair is that this exit route would be achieved via means of a new doorway (sited within an existing window opening) which, in turn, would access an existing, internal escape stair. This rationalises what is, at present, a convoluted escape route and would permit the removal of the asbestos 'box' from the lightwell and the associated escape stair which currently lands in the ground floor corridor. As this solution effectively maintains the position of the existing stair, its visual impact will be limited. Other alterations required as part of this option would involve only minor changes to the historic fabric, such as the modification of a window opening to form a new access door. This minimal loss of historic fabric can arguably be justified in that it is also intended to return the ground floor corridor to its original configuration, a positive change.

Proposal: Design & Justification

Having considered the above options in some detail, option 03 has been selected as the most appropriate solution. As already described, the principle of the proposed stair is similar to the existing in that it will be attached to the south elevation of the Beyer 'link' Building and provide means of escape for building occupants on the second, third and fourth floors of that building. However, the new stair will be wider than the existing and have a shallower pitch. Once the proposed stair reaches the light well, a new, level walkway will travel its length and provide access to a new doorway into the Beyer Building at the east end. Once through this door, some minor internal alterations will permit access into an existing internal escape stair, where building users can safely access the ground floor corridor. Importantly, these changes will permit the complete removal of the unsightly and potentially unsafe asbestos-clad stair enclosure which currently provides access to ground floor level.

The replacement of the existing stair with an entirely new design is arguably beneficial and any alterations required to the listed building will have a minimal impact on its historic fabric. The removal of the utilitarian 1950s stair does not represent a loss of any great value and all proposed alterations are designed to be reversible, in line with conservation good practice.



Extract Section through the Light Well showing new escape stair and walkway. Note the reinstatement of the ground floor corridor and ceiling.

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The new stair itself will be of steel construction with open mesh treads, landings and associated walkways. The main structure including support posts, strings and handrails etc will be galvanised steel, which will be powder coated. Transparent polycarbonate will be used to form the balustrade infill panels which will reduce the stair's visual impact. The colour of the powder coating is to be agreed with the planning officer in due course however it is intended to select a dark colour to further lessen its impact against the elevations of the Beyer Building.

Broadly speaking, the new stair will be located in place of the existing, although due to the need to adhere to current Building Regulations for the design of stairs, it will inevitably have a larger footprint than the existing. In so-doing, the new stair will be far easier to use and better fulfil its purpose as a safe means of escape. It has been carefully designed to fit as closely as possible into the corner between the Beyer 'Link' Building and the splayed bay window to the northern-most gable of the adjacent John Owens Building. The design of the structure is such that connections to the building are no more than is absolutely necessary to support the weight of the staircase and, as far as possible, its arrangement will follow the design principles of the existing stair. The new steelwork will be bolted to the face of the existing stonework or sit atop the parapet wall at the edge of the existing Light well. This will involve fixing into the fabric of the listed building but the workmanship will be closely supervised by the main contractor and monitored by the Architect to ensure the minimum of masonry is disturbed. Any damage to stonework is to be sensitively repaired with either stone indents or full stone repairs.

All stonework will be repaired with stone to match the existing as closely as possible and samples of the proposed stone, together with trial mortar mixes, will be submitted to the planning officer prior to works commencing on site. Aside from making good stonework where the existing stair is removed and the new stair installed, other alterations to the external fabric of the listed building concern the creation of a new doorway within an existing window opening and the making good / replacement of the flat roof at the base of the light well once the asbestos stair enclosure is removed.

The new doorway at the east end of the light well into the Beyer Building is necessary as part of the rationalisation of the fire escape route from the Beyer Link. It will involve the modification of an existing, original window opening (already partially obscured and blocked-up by the asbestos stair enclosure) by removing its central stone mullion and cutting out a section of the existing cill to provide sufficient height and width for a new glazed door with glazed panels to either side. These modifications are inherently reversible and the re-use of an existing window opening will have minimal impact on the historic fabric of the heritage asset. As this window opening cannot be seen from ground level, the new door will also have limited visual impact on the building. The new glazed door and screen are designed to sit behind the existing stone

window reveal. Glazing will be slimline double glazed units, to provide the appropriate level of thermal comfort without compromising the appearance. The frames will be painted to match the adjacent windows. It is also intended to reinstate the currently obscured section of the window below (effectively a clerestorey window into the ground floor corridor of the Beyer Building), returning this window to its original arrangement and, as a result, considerably enhancing the experience of the corridor. The new glazing will sit behind the existing stonework reveal and match the original detail.



The existing, partially blocked up window opening at the east end of the Light Well is to be modified to form a new glazed door and screen.

The window below, which provides clerestorey light into the ground floor corridor and is currently partially obscured by the asbestos stair enclosure will be fully reinstated to its original configuration.

Following removal of the existing asbestos stair enclosure at the base of the light well, the existing flat roof construction will be made good and a new, felt roof covering laid over a layer of insulation. This is a positive intervention in that not only does it 'tidy-up' the existing light well, it improves the thermal performance of the building and, internally, allows the ground floor corridor of the Grade II* Beyer Building to be returned to its original, 19th century configuration. This will significantly enhance the usability and overall feel of the circulation at ground floor level. It will also enable the ceiling to this area to be reinstated to resemble the original 19th century layout as far as possible. The ceiling will either be repaired or renewed entirely depending on the condition of the existing flat roof structure, with new lime plasterwork and timber mouldings to be carefully designed to take reference from the remains of the original ceiling (which can still be seen in part from inside the asbestos stair enclosure). These alterations do not involve the loss of any historic fabric.

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Detailed mouldings to be replicated to ground floor corridor ceiling where reinstated.

Other changes internally are all necessary as part of the rationalisation of the internal fire escape route. Upon entering the Beyer Building from the external walkway through the new doorway, it is proposed to form a new opening in the existing internal wall to the right of this door to permit access to the existing, internal escape stair running between ground and first floor level. The finishes in this area are very plain and the creation of this new opening will not, arguably, involve the loss of any significant historic fabric. Wall finishes will be made good with plaster.

As part of these proposals, it will also be necessary to install a new, glazed fire door and screen across the ground floor corridor of the Beyer Building as part of the revised fire escape strategy. This new screen will be constructed from timber with a varnished finish and is designed with reference to the original interior doors on this floor. Its location within an existing arched opening will have limited visual impact on its surroundings and its installation will not result in the loss of any historic fabric. It is designed to be a reversible alteration.

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New fire rated screen to ground floor corridor designed to reflect that of typical interior door (shown).

Access

Since this application concerns a new stair, access is an inherent consideration. The existing stair, as previously discussed, fails to meet modern requirements or expectations in its design and, as a result, is not at all satisfactory. The proposed arrangement rationalises what is, presently, a circuitous layout which, at present, fails to acknowledge the value of the Grade II* listed heritage asset.

In all, the design of the new stair, whilst effectively maintaining the principle of the existing stair, will bring about great improvements in usability and provide a more direct route to the final exit. The removal of the stair from the ground floor corridor will provide significant benefits to the function and feel of the existing circulation at ground floor level.