WOLFSON COLLEGE OXFORD

HERITAGE IMPACT STATEMENT
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WORLLEDGE ASSOCIATES

Worlledge Associates is an Oxford-based heritage consultancy, committed to the effective management of the historic environment. Established in 2014 by Nicholas and Alison Worlledge, Nicholas came to private practice with over 35 years' experience working in heritage management for local authorities. This intimate knowledge and understanding of council processes, and planning policy and practice, helps us to work collaboratively with owners and decision-makers to manage change to the historic environment.

Our team of dedicated researchers and specialists believe in the capacity of the historic environment to contribute to society's collective economic, social, and cultural well-being. We aim to identify what is significant about places and spaces in order to support their effective management and sustain their heritage value. We have worked with a wide range of property-owners and developers including universities and colleges, museums and libraries, large country estates, manor house, farmsteads, cottages, town houses and new housing sites.

INTRODUCTION

The intelligent management of change is a key principle necessary to sustain the historic environment for present and future generations to enjoy. Historic England and successive government agencies have published policy and advice that extend our understanding of the historic environment and develop our competency in making decisions about how to manage it.

Paragraphs 4-10 of Historic England's Good Practice Advice Note 2 (Managing Significance in Decision-Taking in the Historic Environment) explains that applications (for planning permission and listed building consent) have a greater likelihood of success and better decisions will be made when applicants and local planning authorities assess and understand the particular nature of the significance of an asset, the extent of the asset's fabric to which the significance relates and the level of importance of that significance.

The National Planning Policy Framework (Feb 2019) provides a very similar message in paragraphs 189 and 190 expecting both applicant and local planning authority to take responsibility for understanding the significance of a heritage asset and the impact of a development proposal, seeking to avoid unacceptable conflict between the asset's conservation and any aspect of the proposal.

It has never been the intention of government to prevent change or freeze frame local communities and current policy and good practice suggests that change, if managed intelligently would not be harmful.

This brief report has been prepared to accompany a listed building application seeking the removal and replacement of the black anodized aluminium windows used at Wolfson College, 1969-74, designed by Powell and Moya. It is included in the National Heritage List for England grade II. It also lies within the boundary of the North Oxford Victorian Suburb Conservation Area. It provides a very brief history of Wolfson College and the building and a description, taken from the comprehensive entry in the NHLE.
It should be read with the first part of the heritage report, which plots the history of the College and the history of aluminium windows

To assist the consideration of the proposal, some limited research has been undertaken of the history of the use of aluminium in architecture, with a focus on the use of aluminium windows, which began in the 1930s, with the windows being produced by long-established companies that produced steel windows from the early 20th century. While slow adoption occurred pre-WWII, with the use usually in high-quality buildings, mass-production required for the war effort, and low cost set the industry up to expand in the 1950s and 60s, to become a common-place product in the 1970s and beyond.

Anodizing aluminium to provide a protective coat was developed in the 1920s, and was widely used post WWII, with examples of black anodised aluminium windows occurring from the mid-1950s onwards, with use in high-quality designed buildings in the 1960s.

SUMMARY OF SIGNIFICANCE AND CONTRIBUTION TO THE CONSERVATION AREA

A brief history of the College and a discussion on its significance is covered in the first part of this heritage report. To summarise the buildings' significance:

Architectural interest: a single-phase, post-graduate college in Oxford designed by a foremost post-war practice, in collaboration with Sir Isaiah Berlin President of the College, and laid out on the egalitarian principles which governed the college.

Plan: a fluid, informal composition of open and enclosed spaces connected by covered walkways, overlooking the River Cherwell; while echoing the bay at Portofino, Italy, the college has a powerful affinity with its setting, a strength for which the practice was acclaimed.

Materials: to complement the relative informality and fluidity within the plan, carefully measured materials and finishes in muted colours provide an even finish to the elevations which are set out on a rigid grid, within a common aesthetic of white and grey concrete.

Historical interest: one of two Oxford University Colleges founded in 1965 in response to the rise in graduate student numbers; set up on egalitarian principles, it provided for families, single students and staff; the influence of Sir Isaiah Berlin on the ethos and design of the College is apparent in the building.

Successful interaction with the landscape on one side and the North Oxford suburb on the other is managed by the orientation of the buildings, to enclose courtyards reminiscent of a traditional College and by stretching fingers of buildings out towards the River Cherwell.

This informal arrangement, and the selection of materials are in contrast to much of the surrounding suburb and conservation area. It does though represent an important part of the story of the North Oxford Suburb and the growth of 'new' colleges within it. The College buildings are clearly visible from the River Cherwell as a dramatic intervention and act as a foil to the otherwise treed riverbanks and pastures that line the river. From Linton Road the more recent extensions to Wolfson provide an important marker for the College and a visual stop to the end of the road.

In relation to the existing windows within the college, which is a main focus of this application, it is clear from the research that while the black anodised aluminium windows form part of the original design and fabric of Wolfson College, they are not in themselves a rare or unusual feature, with the evidence indicating their use from the mid-1950s onwards in a number of buildings. The relationship between the horizontal strata of glazing and the masonry finishes is clearly an important component of and contributor to its aesthetic. The window sizes, proportions and designs also helps to distinguish the various functions within the buildings – giving a common language to the academic, residential and service parts of the individual buildings. The technology also permitted the architects to make the most of the windows to afford a view out, unimpeded by any heavy structural elements. For Powell and Moya, the use of large format glazing also allowed them to generate a particular response to the landscape setting, reflecting the verdant surrounding in the glazing and creating a more seamless boundary between inside and outside.

Not all the original windows survive, and some have been replaced or their openings adjusted. Some of the windows also incorporate opening mechanisms integral to the design – such as grip handles for the horizontally and vertically sliding sashes, though these remain part of a standard manufacturer's product. The windows and the detailing are not unique to Wolfson. Given that the windows are a 'standard product' it is reasonable to conclude that they have not been specially designed to minimise the extent and visibility of framing. It is part of a product that more probably on grounds of cost sought to reduce the use the amount of aluminium to the tolerable minimum. It is perhaps this drive for economy that is part of the cause for failure and poor performance. There are also elements where the window design exhibits some unresolved or arguably crude details, with screw fixings visible and vulnerable to failure.

PROPOSALS

As explained in the Design and Access statement (Original Field of Architecture) there are some fundamental flaws in the design of the windows that have led to localised failure.

The windows are difficult to operate and as single glazed units thermally very inefficient. Heat loss and solar gain compromise comfort for the end users and result in high energy bills for heating and cooling. Associated with the need to attend to the condition and performance of the windows is the failure of the waterproofing systems to roofs and terraces and the absence of insulation and weatherstripping. Taking a holistic approach, the College has examined ways in which it can reduce heat loss and heat gain and introduce some renewable energy sources to further reduce its carbon footprint and energy costs. In summary the works involve:

a. The roof waterproofing has been failing for many years and endless leaks have been repaired. The time has come for the waterproofing to be totally replaced, removed down to slab level and the current low levels of insulation, where this exists, to be replaced with more efficient insulation and where perimeter detailing and falls allow, at an increased depth. This was successfully completed on D Block roof in 2019 as part of the approved submission referred to already.

b. Complete replacement of all windows adding triple glazed units where possible. All fixed windows are either single or double (although with very slim cavities, not to modern standards) and all opening windows are single glazed. There are some exceptions to this across the site.

c. Replacement and upgrading by weather stripping of all external doors.

d. Installing insulation to external walls where possible to reduce thermal bridging.

e. Replacement of gas fired boilers in the central plant room with air source heat pumps.

f. Electrification of the heat will require a larger electricity supply and the submission also includes possible enlarging of the existing substation.

(Original Field of Architecture, Design and Access Statement, 2021)

ASSESSMENT OF IMPACTS

It is a design challenge to introduce replacement windows that are double, or triple glazed without altering the size and profile of meeting rails, casements and frames. It is because of the existing design that there has been a failure in performance.

With a better understanding of a building technologies and performance than existed in the 1970s, the changes now proposed should possess inherent greater durability and significantly improved performance. With modern requirements for buildings to perform much more efficiently (both existing and new buildings) doing nothing is not an option. Indeed, it is almost without exception that the failed window systems in Oxford's modern historic buildings have had to be replaced. Replacing like for like is not an option; there have to be some design changes, as without that the performance cannot be improved.

The architects and window manufacturers have focussed on producing windows that match as closely as possible to the originals, making adjustments only where necessary to accommodate additional thickness of glazing and to ensure efficient operation. This results in a thicker meeting rail and casement stiles and thicker frames to accommodate insulation around the window openings. When compared to the existing windows the difference will be apparent, but not intrusively so. This effect (of being able to compare old with new) will be far less apparent if all the windows are replaced. This will ensure a uniform and consistent aesthetic and detailing to all the elevations, maintaining the unity of approach. The proposals involve the preparation of a sample window to test the visual effect in situ. This not only allows a robust analysis of the impact of the window design on the appearance of the elevations, but it also allows opportunity to explore how the design, if required, could be fined tuned, to minimise any differences.

This designed visual effect, derives from the relationship of the horizontal strata of glazing, set within a rigid grid of concrete and granite, the glazing set back within reveals or recessed in balconies, the frames coloured black to create a monochromatic effect overall. Balcony glazing is tilted to reflect the sky, mirroring nature within the buildings. The proposed replaced glazing system will achieve this same overall effect. It should be noted that balcony glazing and other glazing screens to external corridors will remain, retaining evidence of the original detailing.

As a part of the composition of the elevations, the window framing, where it is noticeable against the lighter tones of blinds and curtains forms a secondary complimentary structural grid to the masonry finishes. The replacement window system, whilst having slighter thicker frames would still maintain this finer structural grid.

Installing insulation to the window reveals is necessary to prevent cold bridging but has the effect of altering the thickness of the window stiles, which is needed to conceal the edge of the insulation. On the principal windows this thickening will be absorbed within the overall proportions of the windows, but on side lights the reduction in glazing width may be more noticeable. The sense of a narrow vision panel or margin pane though would remain.

Seen within the college building's landscape setting the replacement windows would not noticeably change the proportions of openings, the visual effect that is achieved by the window design or the shadowing and reflection that is a designed characteristic of the buildings.

The introduction of air source heat pumps requires the introduction of mechanical equipment. The basement parking areas, that are open to the air, but screened from view by external vertical louvres ensures that such equipment can be installed without visual intrusion. It may be that the equipment would still be visible but additional screening behind the existing vertical louvres could be secured by condition, if necessary, to combat this.

Replacing the flat roof systems began in 2019, following the grant of listed building consent that year. It is proposed that the same methodology and working details be employed to continue that work on remaining flat roof areas.

ASSESSMENT OF LEVEL OF HARM AND BENEFITS

The fact that the proposal involves the removal of the original windows, will result in some harm to the heritage significance of the listed building. That the windows are not fit for purpose and cannot be re-used makes this inevitable.

'Substantial harm' is a high test and would be represented by total or nearly complete loss in significance. This is not the case here and the report conclusion, having carried out an assessment of the significance of the designated heritage assets and the contribution of their settings to that significance, is that the harm is less than substantial. The harm derives from the loss of original fabric and from the design of replacement windows which cannot match exactly the originals.

There is no threat that the proposed works would undermine understanding and experience of the college's setting, or the overall appearance of the various building ranges, their relationship to each other and the spaces they enclose. There are opportunities to record the fabric to be removed and to retain some original glazing as evidence of the original detailing. The site's historical and associative interest relating to the development of post graduate facilities would not be affected. Thus, the harm does not amount to 'substantial harm'.

'Less than substantial harm, covers a wide range of impacts ranging in simple terms from 'limited' to 'significant'. Any harm should be given significant weight and importance, within the terms of the National Planning Policy Framework and because of the statutory significance attached to it, in any balancing act between that harm and public benefits. However, it may be helpful for this site to clarify where on this scale of less than substantial harm these proposals would sit.

Neither the NPPF or its accompanying Guidance offer any advice on determining the level of harm beyond the distinction between substantial and less than substantial. Historic England in its publication Seeing History in the View discusses the options

for identifying significance and magnitude of impacts, referring in particular to the methodology developed by the Landscape Institute for Landscape and Visual Impact Assessments. Briefly the steps are to:

- Identify the significance of the asset (high significance to low significance, with Grade II* listed building being categorised as high significance);

- Measure the magnitude of impacts from highly beneficial to highly adverse (it categorises development that erodes to a clearly discernible extent the heritage values of the heritage assets or the ability to appreciate those values as a moderate adverse impact);

- Take into account any cumulative impact – such as how the development would be seen with other existing or new development;

- Correlate the magnitude of impact with the level of significance to arrive at an overall level of harm. Historic England suggest that this assessment can either be presented in tabular form or as a narrative, explaining that both methods are legitimate, but that ultimately assessment is down to professional judgement.

Following this methodology, albeit a bit simplistic, and based on analysis of the nature and extent of the impacts, which would be discernible from close inspection, but less so from more casual or general observation, it is possible to conclude that the proposals would have a low level of magnitude of impact to the significance of the designated heritage assets and, allowing for the different mitigation strategies, would result in a negligible effect (i.e. that the development would erode to a negligible extent the heritage values of the site). This would place the level of harm at the lower end of the less than substantial scale.

National policy requires that there should be compensatory public benefits to justify any harm and the revised NPPF makes clear that even a low level of harm should be given considerable importance and weight in terms of delivering the duty to preserve or enhance designated heritage assets. Public benefits include heritage benefits, and it is clear from these proposals that there will be significant heritage benefits that would outweigh any identified harm including:

- Securing the viability and longevity of the listed building;

- Enhancing people's ability to enjoy and appreciate the special qualities of the listed building (including user comfort);

- Improving the performance of the listed building and reducing the impact of its use on climate change.

[redacted]

CONCLUSION

Intervention is necessary to ensure the continuing viability of the listed building. At present the buildings perform very poorly, making them uncomfortable for the users and expensive to run.

Taking a holistic approach to the buildings' performance involves improvements to weathertightness, improvements to thermal efficiency with reductions in energy use and the development of renewable energy sources.

Replacing the windows was never going to be an easy challenge but these proposed replacements, which are being tested by production of a sample window, follow the originals in form and design concept, adapted and altered only where necessary to accommodate sealed glazing systems. The result is a window that on casual observation appears the same as the originals but that will be different in some details. This is inevitable and results in some harm. The conclusion is that this harm is minor and compensated by the improvements that will be made to the buildings' energy performance, user comfort and reduction in carbon footprint.