APPLICATION FOR LISTED BUILDING CONSENT 2023/2434

5, THE MOUNT SQUARE, LONDON NW3 6SY

DESIGN NOTE 1

20th July, 2023

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CONTENTS

INTRODUCTION

1. This application is for the renewal of two mid-20th Century, steel, Crittall bathroom casement windows set in the rear elevation of 5, The Mount Square, London NW3 6SY.

2. This Design Note supplements the Design and Heritage Statement accompanying the application for Listed Building Consent, and is intended to assist planning and conservation officers by providing further details of the glazing bars proposed for the two replacement windows.

3. 5, The Mount Square is a small terraced house listed with Grade II status, lying within the Hampstead Conservation Area.

4. The two bathroom windows, listed “Bathroom 1” and “Bathroom 2” in Figure 1 are set in a small light well at the rear of the building, constructed circa 1931. One further Crittall attic window will remain in situ.

5. Each bathroom window currently employs a side-opening casement, comprising eight, clear, single-glazed panes, divided by thin, flat, fixed glazing bars between 18-20mm in width, which are welded into the casement’s rails and stiles.

6. It is proposed to replace the two existing widows with aluminium casement windows to equivalent designs. using “Alitherm Heritage 47”, a design manufactured by Smart Architectural Aluminium of Yatton, Bristol, and used in heritage environments to replace steel Crittall windows. The replacement windows will have eight, clear, panes, matching the original windows, but will be double-glazed, with panes separated by thin, flat astragal bars, similar in appearance to the existing fixed glazing bars, which are 25mm in width.

Figure 1 – Bathroom Light well

7. As a general rule, Camden Council do not support the use of astragal glazing bars on metal replacement windows for listed buildings, particularly where buildings are in sensitive locations, although this policy is applied in a discriminating way, with each case considered on its merits[1].

8. Further consultation has therefore taken place with the installer and manufacturer to consider what options are available.

9. This Design Note sets out the results of this investigation and the most appropriate technical solution, having regard to the requirement of the Planning (Listed Buildings and Conservation Areas) Act 1990 ("the Act") to consider the desirability of preserving the building[2]. It is structured to answer the following questions:
    1. What is the desirability of preserving the existing Crittall windows or their setting?
    2. What features of the existing Crittall windows will be preserved, and what altered because of the use of astragal bars in the replacement windows?
    3. What alternatives have been considered?
    4. What evidence demonstrates the successful use of the astragal bars proposed to replace Crittall windows of the same style?
    5. What is the overall balance of benefits and harms, taking into account alternative options available?

DESIRABILITY OF PRESERVING THE EXISTING CRITTALL WINDOWS

Evidence from the Design and Heritage Statement

10. The Design and Heritage Statement sets out the heritage significance of 5, The Mount Square, its fabric and its setting.

11. It concludes that the existing windows make little contribution to the overall significance of the building and their replacement would cause no harm to its fabric and setting, for the following reasons:

[1] Camden policy confirmed in emails from Camden Councils' Conservation Officer dated 28th June and 6th July, 2023

[2] Planning (Listed Buildings and Conservation Areas) Act 1990, Section 16(2) as amended.

1. The listing relates to the historic front of the building and not to its rear elevation, constructed circa 1931, which does not have special architectural or historic interest on its own account. It is not connected with, nor contributes to an understanding of the front elevation of the building that was the subject of the listing. The internal fittings, walls and floors within the building are largely of 20th century origin.
2. The two Crittall bathroom windows are not integral to the appearance of the rear elevation, which has other windows of different types, or to other parts of the building.
3. The two windows are of an unremarkable type still found in thousands of factories, offices and homes built in the mid-20th century.
4. The rear of the building comprises a private light-well, approximately 1 metre in width and 4 metres in depth, between the building and the property behind, which cannot be seen from the street, and which is visible to only one other property, in a private view.
5. The private view is from some distance and the two bathroom windows, being along the side of the light well at first and second floor level, rather than at the end, can only be seen with any clarity by that property when fully opened. Below the light well is a ground floor mid-20th century extension, meaning that even when open, both windows can only be viewed from some distance away.

Evidence from Previous Decision (2002)

12. The rear elevation of the building was considered in detail at the time of a previous appeal decision issued on 29th November 2002[3] in respect of a retrospective application for listed building consent. That decision related to the replacement of a Crittall landing window at the end of the light well with a new, window of a different design. This window is marked "Upper Landing Window" in Figure 1 above.

13. The original Crittall window that was replaced and its replacement are shown in Figure 2 below.

[3] Planning Appeal Decision Notice APP/X5210/E/02/1094937

Figure 2 – Landing Window

Original Crittall landing window.

Replacement landing window.

14. Having viewed the light well, the inspector noted that a number of options existed for the replacement of this window given *"the position of the window opening and the absence of any obvious need to match an original feature or preserve any formal elevational composition"*[4]. Addressing the heritage significance of the Crittall window, he concluded:

    "It is not a feature that I consider is likely to have contributed to the special interest of the listed building. To the extent that it provided evidence of a previous phase of development, that evidence remains available in documentary form and might also be deduced from a study of the building's plan."

    "It is questionable whether any fabric contemporary with the 1930s alterations or otherwise important to the special interest of the listed building has been removed."

    "The appeal building makes a positive contribution to the character and appearance of the conservation area, but the appeal window is in a position where it is likely to be visible from only one or two other private dwellings nearby. In the circumstances, I do not consider that the works that have been undertaken can be said to have had any material effect on the character or appearance of the conservation area. "

15. The Crittall window that was removed in 2002 was both larger and more prominent than the two bathroom windows, whose renewal is now proposed. The Historic England guidance which formed the basis of the inspector's decision has remained largely unaltered since this time. In the circumstances, is is reasonable to conclude that the inspector's findings in respect of the Crittall window serving the landing would also apply to two Crittall bathroom windows which are the subject of the current application.

Conclusion

16. The evidence presented by the Design and Heritage Statement and the previous appeal decision points to the conclusion that some flexibility is

[4] Decision Notice APP/ APP/X5216/E/02/1094937

justified regarding the replacement of the two existing bathroom windows, which do not play a role in the building or its setting. They do not contribute to any features of special architectural or historic interest that it possesses, nor does their retention enhance or conserve the Hampstead Conservation Area.

17. The key design requirements do not therefore appear to be retention of historic fabric, the use of specific materials, or the application of specified designs. Instead, the priority appears to be that the replacement windows are of appropriate quality, that their installation will serve to preserve and sustain the historic fabric of the building as a whole and that their appearance will not be intrusive or disruptive to their setting in the rear wall of the building.

FEATURES OF THE EXISTING WINDOWS THAT WILL BE PRESERVED

18. Whilst the existing windows are not considered to contribute to the listed building, the replacement windows have nevertheless been specified using a heritage design, with features as close as possible to the original Crittall windows, reflecting designs current at the time of their installation.

The Existing Windows

19. Details of the two existing Crittall windows are provided in Figures 3 and 4 below. The key features noted are:
    - steel frames and windows with eight clear-glass single-glazed panes, putty beading
    - welded 18mm-20mm wide flat glazing bars
    - brass handles
    - brass stays
    - all painted over in white
    - overall frame depth – 28mm

Figure 3 – Bathroom 1 Window

SECOND FLOOR BATHROOM

External Dimensions (Reveal)

Height : 122.5 cm

Width : 51.3 cm

Pictures

Frame Fixing

Figure 4 – Bathroom 2 Window

FIRST FLOOR BATHROOM

External Dimensions (Reveal)

Height : 122.5 cm

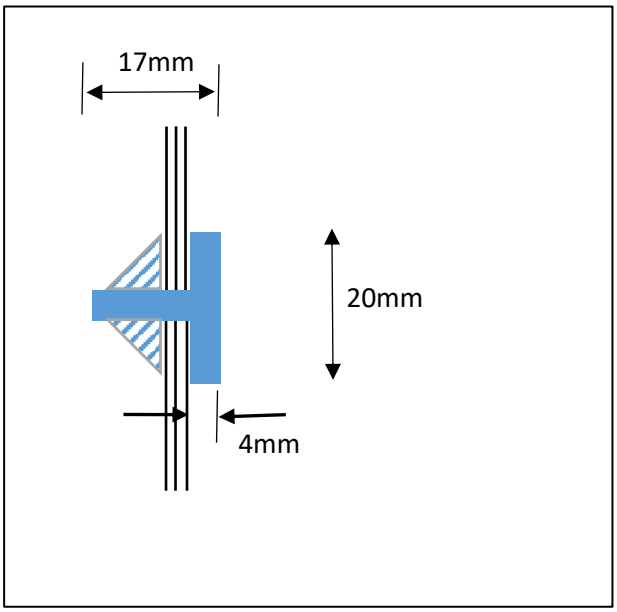
Width : 51.0 cm

Pictures

The Existing Glazing Bars

20. The existing glazing bars are formed of steel bars welded into the rails and stiles of each casement window to form a grid, into which eight glass panes are fitted. A cross sectional drawing of the glazing bar is shown in Figure 5 below. The total cross sectional depth is 17mm, with the glazing bars protruding 4mm on the inside and 9mm on the outside of each window, with 4mm glass.

Figure 5 – Cross section of glazing bar - existing



The Replacement Windows

21. The replacement windows employ Alitherm Heritage 47, a conservation design by Smart Architectural Aluminium that involves a slim metal frame and glazing bars designed to replace 1930s metal Crittall windows of the type employed at 5, The Mount Square.

22. Each window will be divided into 8 panels, matching the design of the existing windows and will open in the same direction as the existing casements. As a result, they will be virtually indistinguishable from the existing windows when viewed externally.

23. Code W20165 25mm flat, aluminium, astragal glazing bars have been selected as shown on page 17 of the Alitherm Heritage product specification annexed to the listed building consent application. An example of an Alitherm window, reproduced from the Smart brochure is shown in Figure 6 below.

Figure 6 – Alitherm Heritage Window

24. The specification for Alitherm Heritage 47 windows and the design drawings provided the installer, both of which are annexed to the application for listed building consent, give more information about the thermal properties of the new windows, which meet current building standards as set out in Part F.

25. Alitherm Heritage windows have been specifically designed with a light, narrow frame to give a sense of air and space as close as possible to the Crittall-style windows along with flat glazing bars. Whilst the frame inevitably requires more depth to accommodate 24mm double-glazed units, compared with the existing Crittall single-glazed windows, the entire window frame is only 47mm thick, compared with 28mm at present. Critically the width of the frame when viewed externally is equivalent to the width of the Crittall window frame, meaning that the exterior appearance is very similar.

The Replacement Glazing Bars

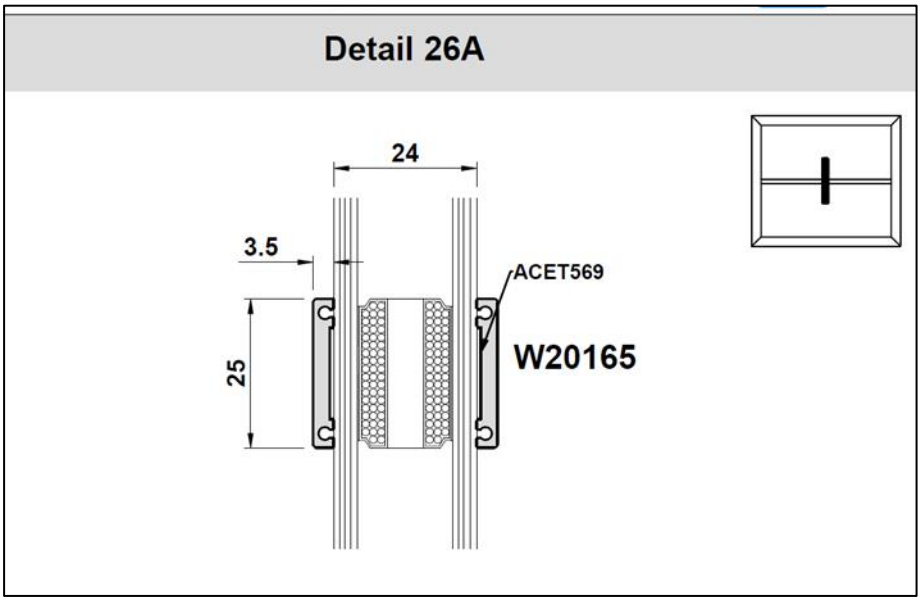
26. The replacement W20165 astragal glazing bars proposed are designed to maintain the light and airy feel of the existing Crittall glazing bars, being 25mm in width and protruding 3.5mm from the glass surface internally, compared with equivalents of 18-20mm and 4mm for the existing windows.

27. Externally, the astragal bars are also 3.5mm x 25mm, compensating for the additional thickness resulting from the glass, to avoid the windows appearing unduly bulky.

28. Duplex spacer bars are also used inside the double-glazed units to give the appearance of fixed glazing.

29. A cross-sectional drawing of the proposed astragal bars is shown in Figure 7 below:

Figure 7 – Cross section of glazing bar – proposed



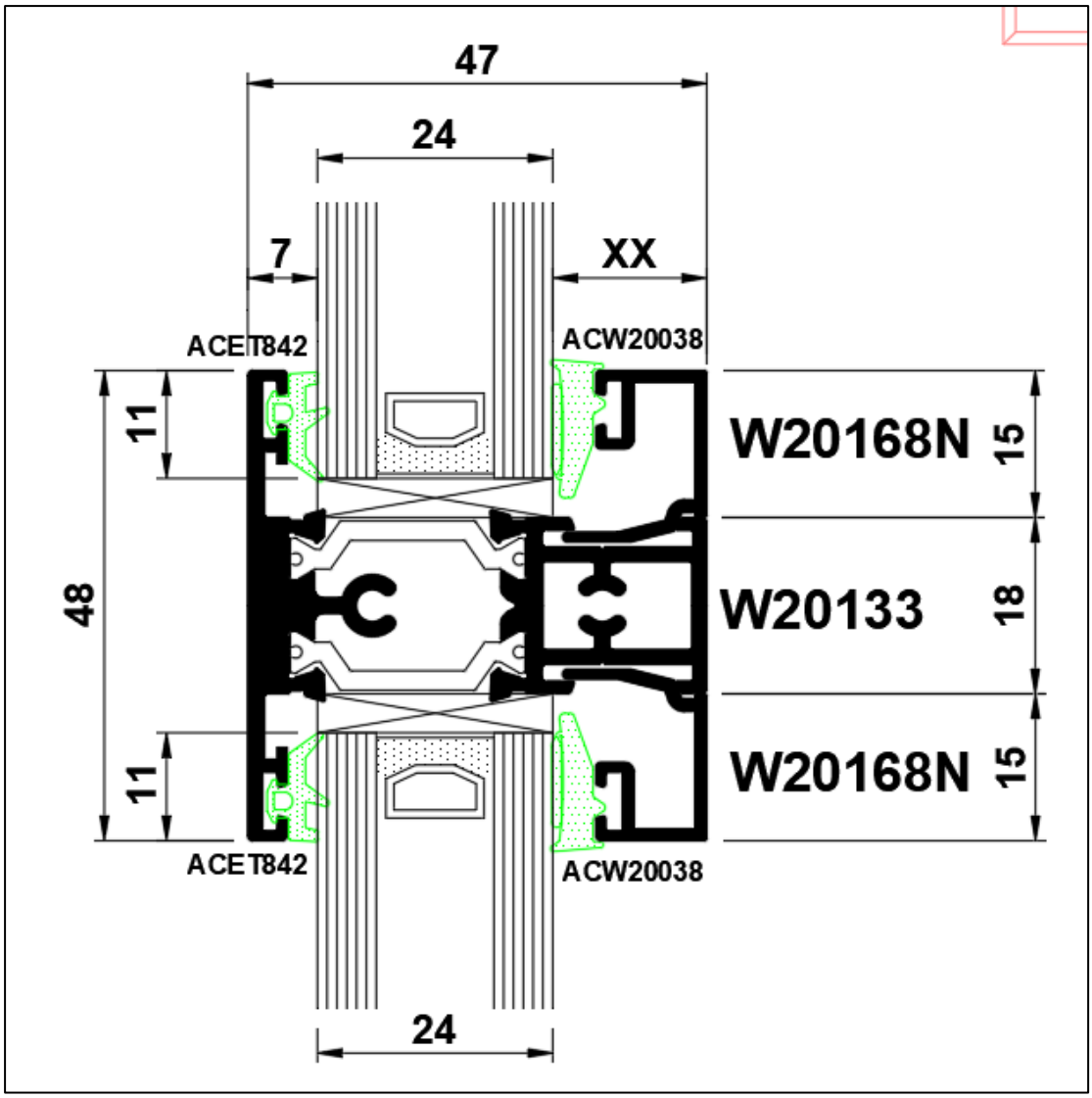
30. As a result of this approach, and despite the use of 24mm double-glazed units in place of 4mm single-glazed panes, the total thickness of the window at each glazing bar is kept to 31mm compared with a total thickness of 17mm for the existing Crittall windows.

Alternative Fixed Glazing Bars

31. In the light of Camden Council's general preference against the use of astragal glazing bars, Smart Architectural Aluminium has been consulted to confirm whether any fixed glazing bar alternatives are available which would maintain the look and feel of the existing Crittall windows as far as possible.

32. The only alternative design using fixed glazing bars is a transom-style design, using a W20168 profile. A cross sectional diagram of this profile is shown in Figure 8 below. An email from the technical department at Smart Architectural Aluminium setting out the limitations of this type of glazing bar is included at Appendix A below.

Figure 8 – Alternative Fixed Transom-style Glazing



33. The use of a transom-style glazing bar of this type would have a number of significant disadvantages. First, the system is only compatible with top-hung windows and cannot be used with normal casement windows. This is because the greater bulk of the fixed transom-style bars interferes with the window's locking mechanism.[5] Top-hung windows would be inappropriate for use in bathrooms, as they would not offer the necessary levels of ventilation at times of high humidity. Top-hung windows are also inconsistent with the almost universal use of side-opening metal casement windows at the time the rear light well was constructed.

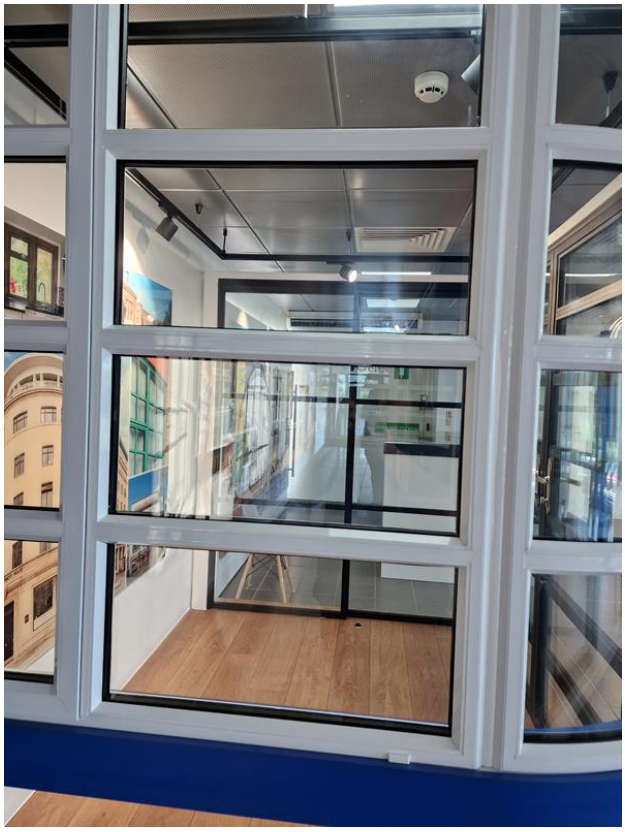
[5] Please refer to the email from Smart Architectural Aluminium dated 11th July and reproduced at Appendix A

34. Second, the transom-style glazing bars are significantly more bulky and intrusive than other options. The total thickness is 47mm, the thickness of the entire window frame, compared with 31mm in the case of the proposed astragal bars. More seriously the transom-style bars are 48mm wide when viewed externally, compared with 25mm wide astragal bars and 18-20mm wide glazing bars in the existing Crittall windows.

35. The overall appearance of the transom-style bars would create windows of an entirely different and much bulkier character, neither consistent with the look and feel of the existing windows, nor appropriate for the two small bathrooms that they serve (both around 3 square metres square).

36. Figure 9 provides a picture of the transom-style fixed glazing bars, provided by Smart Architectural Aluminium, although it should be noted that the glazing bars in this picture have been fitted with beading, which further increases their bulk.

Figure 9 – picture of transom-style fixed glazing bars



37. As a further check, documentation from another manufacturer in the heritage market, Crittall Windows Ltd., was consulted. This indicated that the use of fixed glazing bars for double-glazed windows could only be achieved at the cost of a significant increase in size. For 24mm double-glazed units, the width of the fixed glazing bar was 53mm[6].

Conclusion

38. The overall conclusion from this assessment is that the proposed astragal bars do provide a close match with the look and feel of the existing Crittall windows. Use of fixed glazing bars with double-glazed units would result in a bulk which would be noticeable externally and highly intrusive internally, out of keeping with the appearance of the existing Crittall windows and unsuitable for windows designed to serve very small bath and shower rooms.

39. The options therefore appear to be either to approve the current proposal or to insist that the existing Crittall windows are retained.

EVIDENCE OF SUCCESSFUL USE

Former West Herts College (Planning Consent APP 13/01134/FUL)

40. The Design and Heritage Statement pointed to the use of W20165 astragal bars at a major heritage project at the Lanchester Free School in Hertfordshire set out in pages 10/11 of the Alitherm Heritage product specification (Watford Borough Council, APP 13/01134/FUL).

41. This project involved the replacement of large numbers of Crittall windows at the former West Herts College, constructed in 1938, which is locally listed.

42. An excerpt from the Case Officer's Report at page 17 noted *"the front elevation is dominated by the windows so a wholesale replacement programme requires careful consideration of the window type to be used"*. Accordingly, the specification of the window designs was secured by

[6] Homelight Plus Window Frame Profiles, document reference HP 02/20, Crittall Windows Lt d.

condition and use of the Alitherm Heritage 47 system in white, as proposed by this application, was approved by Watford Borough Council on 14th July, 2014.

43. Following the guidance of Camden Council's Conservation Officer, further advice was sought from Smart Architectural Aluminium, who have confirmed that the renovation of this art deco building made use of the W20165 astragal bar, which was approved for this purpose by Watford Borough Council through the reserved matters process. A copy of the response is reproduced at Appendix B. Use of W20165 glazing bars maintained a light and airy appearance typical of this type of art deco window.

Conclusion

44. The Lanchester Free School planning consent involved a large heritage project involving all elevations of a locally listed, art deco building in a highly visible setting.

45. Based on this project, conservation officers can be assured that the use of the W20165 astragal bar has been considered in some detail and approved for a major project involving significantly greater heritage risk than that represented by the two windows at 5, The Mount Square.

Figure 9 –Case Study, Lanchester Free School, Hertfordshire

CONCLUSIONS

Benefits of the proposal.

The Design and Heritage Statement pointed to a number of benefits from the proposal, given the poor access available to the existing light well and the need for a solution that eliminated the need for regular maintenance.

It is lack of maintenance access, to support regular repainting and re-glazing, which has contributed to the deterioration of the existing Crittall windows over the years. As a consequence the existing windows are in a poor state with rust having eaten through the entire frame of the Bathroom 2 window at one place.

Difficulty achieving external access has meant that cracked panes of glass have simply not been replaced.

The replacement windows, being powder painted and of aluminium construction, will not require regular maintenance.

The replacement double-glazed windows, with frames manufactured from non-ferrous, powder-painted aluminium, whose panes can be replaced from inside the property, mean external maintenance can be eliminated. This in turn will contribute to the maintenance of the property as a whole.

Critically, the replacement windows will be Part F compliant, offering significantly greater insulation compared with the existing single-glazed windows. Sealed units have a centre pane U value of 1.2W/m²K and the overall frame U value is 1.8W/m²K.

The Design and Heritage Statement indicated that the option of secondary glazing had been considered, but is unsuitable given the small bathrooms that are served. Bathroom 1 dimensions are 0.9 metres x 3 metres (floor area 2.7 square metres) whilst Bathroom 2 dimensions are 1.5 metres x 2.1 metres (total floor area 3.15 square metres). Despite the small size of these bathrooms, the existing Crittall windows are over 1.2 metres in height and .5 metre width. The only practical form of secondary glazing that could be accommodated in such a small space would take the form of be secondary glazed sash windows, but these would be highly intrusive in such small spaces and would conflict with the casement style of the existing windows. The secondary glazing could not be fully opened to allow for ventilation at times when baths or showers are in use. Neither bathroom has mechanical ventilation.

Repairing the existing Crittall windows would be a costly process, as they would need to be removed and taken off-site. Window glass would need to be removed and replaced to allow the frames to be sandblasted, welded, rust-treated, painted, and re-glazed off-site. The windows would then need to be reinstated some weeks after. Temporary openings would be required whilst the windows were off-site. Both removal and reinstatement would require the erection and removal of scaffolding.

Repairs would give a stay of execution only, because they would not deal with the underlying problem of poor access for maintenance. Repairs would not address the urgent need to improve the insulation capabilities of the windows.

By contrast, renewal of both windows would offer significant benefits, contributing to the sustainability of the building.

Impact of the proposal.

As set out above, the proposal involves the replacement of Crittall windows, whose retention at the rear of the building, only visible in one private view. The presence of Crittall windows at this location was assessed at the time of the previous planning decision and found not to be material for the purposes of Sections 16, 66 or Section 72 of the Act. The two bathroom windows, being set along the side of the light well at first and second floor level, are even less visible than the window that was the subject of the previous planning decision and can only be seen with any clarity in one private view when fully opened and from a distance.

Nevertheless, considerable effort has been taken to take the most conservative approach to renewal of the windows, even though this is not strictly necessary.

In particular:

1. Replacement casement windows opening the same way as the existing windows are proposed.
2. White art-deco style heritage metal windows are proposed as close as possible to the existing designs, whilst offering the necessary thermal resistance through the use of double-glazing.
3. One existing Crittall window is retained serving the attic to provide evidence of the 1930's works.

Overall, the proposal serves to preserve and sustain the historic fabric of the building as a whole. Even though the two windows concerned do not have significance to the fabric or to the Conservation Area, great efforts have been made to ensure that the appearance of their replacements will not be intrusive or disruptive to their setting in the rear wall of the building.

Application of Historic England Guidelines

Historic England recommend assessment of windows in four ways to assess their significance to a historic asset[7]. This assessment is made below:

1. ***Evidential Value*** – the presence of at least one Crittall window in the rear façade yields information about the alternations performed to the rear of the building in 1931 to create two bathrooms. The current proposals will leave one Crittall attic window in situ, meaning that evidence will remain relating to the 1930s works.
2. ***Historic Value*** – the replacement windows, being very similar to (and almost indistinguishable externally from) the existing Crittall design, will continue to illustrate the architectural taste of the period during which the light well was constructed and its function to provide bathrooms for the building.
3. ***Aesthetic Value*** – whilst the existing windows are not integral to the design of the building, nor contribute to its visual interest, their replacements recreate the aesthetic values of the originals.
4. ***Communal Value*** - the existing windows have no communal value

Prepared by Clyde Whittaker

20th July, 2023

[7] Traditional Windows, their Care, Repair and Upgrading, Historic England 2014, page 4 (internal pagination)

APPENDIX A

Advice from Smart Architectural Aluminium on the use of Transom-style glazing bars.

From: Brian Collins < >
Sent: 11 July 2023 12:02
To: Clyde Whittaker <Clyde.Whittaker@btopenworld.com>
Cc: Steve Fitzpatrick <SFitzpatrick@smartsystems.co.uk>
Subject: RE: Astragal Bars

Hi Clyde,

As discussed in our recent phone call, the "XX" dimension will range from 11mm to 29mm depending on the thickness of the glass within the unit.

As stated over the phone, these dummy transoms are only possible to use in a top hung unit, as they would interfere with the lock/hinge mechanism of a side hung unit.

With regards,

Brian Collins

Brian Collins | Technical Advisor | Smart Architectural Aluminium
Arnolds Way ▪ Yatton ▪ Bristol ▪ North Somerset ▪ BS49 4QN ▪ UK

www.smartsystems.co.uk

APPENDIX B

Advice from Smart Architectural Aluminium on the use of W20165 Astragal glazing bars

From: Brian Collins < >
Sent: 07 July 2023 12:40
To: Clyde.Whittaker@BTopenworld.com
Cc: Steve Fitzpatrick < >
Subject: Astragal Bars

Hi Clyde,

Further to our previous phone call, I've spoken with a colleague and I'm able to confirm that Lanchester Free School utilises the Astragal Bars from our Alitherm Heritage system.

As requested, I've attached sectional details of both our astragal bars and the "dummy transom" previously mentioned, as well as photos of said transom from our showroom. Unfortunately, I am not able to locate any similar photos of our astragal bars.

With regards,

Brian Collins

Brian Collins | Technical Advisor | Smart Architectural Aluminium
Arnolds Way ▪ Yatton ▪ Bristol ▪ North Somerset ▪ BS49 4QN ▪ UK

www.smartsystems.co.uk