

THE BRITISH MUSEUM
BUILDING FABRIC PHASE 6

REPAIRS TO WEST AND EAST RESIDENCES EXTERNAL STAIRS

DESIGN AND ACCESS STATEMENT INCORPORATING HERITAGE STATEMENT
FEBRUARY 2023 REV_P04

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1.0 INTRODUCTION

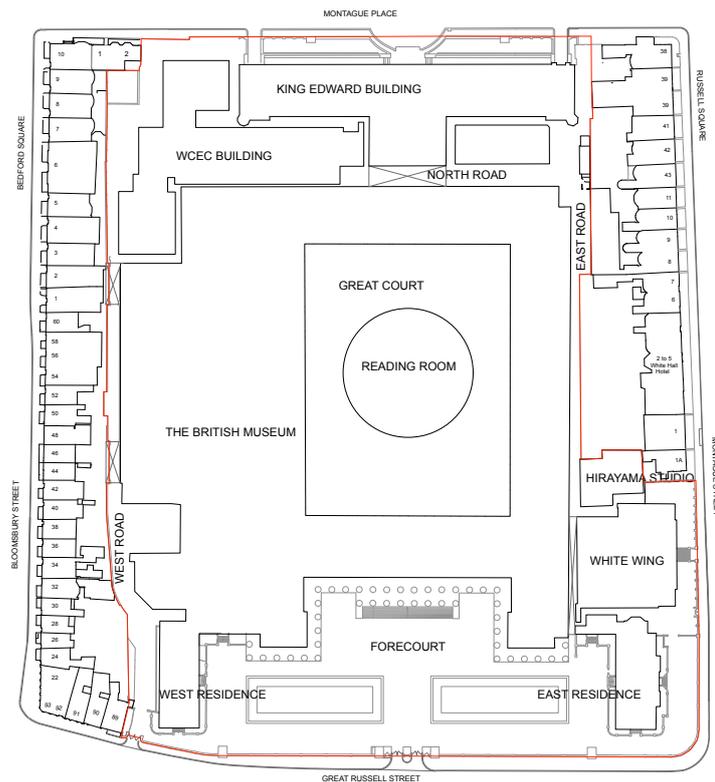
1.1 BUILDING AND USE: THE BRITISH MUSEUM

The British Museum was founded in 1753, and is located in Bloomsbury, London. The Museum holds one of the world's greatest anthropology collections of human history, culture, and art with approximately 8 million objects in the permanent collection. The Museum is the United Kingdom's most visited cultural attraction with circa 6 million visitors per year.

The 100,000 square-metre site in Bloomsbury houses the Museum's key activities of curating, displaying and caring for the collection: work spanning many different periods over 250 years. The Museum is constantly adapting, and since its inception, building work in the form of alterations, extension, reordering the collection and fabric repairs have been undertaken on an almost continuous basis.

The British Museum Bloomsbury site occupies a site bounded by Montague Place to the North, Montague Street to the East, Great Russell Street to the South and Bloomsbury Street to the West. The main entrance to the site is from Great Russell Street.

The Museum building is Grade I listed and embedded within the Bloomsbury Conservation area in a very busy area of Central London.



Plan of the British Museum

1.2 BACKGROUND AND NEED

The British Museum is hoping to carry out urgent repair, conservation and maintenance works to nine external staircases at the West and East Residences. All of the staircases are in view of the public from within the entrance court to the Museum.

Five of the nine staircases (Stairs 02, 04, 06, 08, 09) lead to the principal building entrances of the Residences. Although these stairs appear to be in reasonable condition when viewed from the outside, water ingress to these stairs is currently causing damage to the stone fabric of the stairs and eroding their structural support which left unaddressed will ultimately result in the premature loss of this historical fabric and the need for replacement with modern work.

The remaining four staircases (Stairs 01, 03, 05, 07) are also suffering from ongoing and in some cases severe damage to both masonry and ironwork caused by weather exposure and this is causing safety issues with steps, landings and railings: one set of stairs has had to be taken out of use and propped, and the others are at risk of future structural failure unless repair and conservation work is carried out.

This design and access statement incorporating heritage statement has been prepared by Dannatt Johnson Architects on behalf of the British Museum to support an application for Listed Building Consent for these essential works. The application will be submitted by the Planning Lab, with Dannatt Johnson Architects acting as the British Museum's agents for architecture and historic building conservation. Proposals have been prepared by Dannatt Johnson Architects and Alan Baxter Associates structural engineers.

The 2007 Conservation Plan (CMP), produced by Purcell Architects, Final Revision 2008 has been used a primary source of reference in preparing this statement.

2.0 DESIGN PROPOSALS SUMMARY AND SCOPE

2.1 SCOPE OF WORKS

There are five staircases, (Stairs 02, 04, 06, 08, 09) leading to principal building entrances at Level 2: two of these are to the West Residence and the remaining three are to the East Residence.

The proposals have been drawn up after a full and detailed visual inspection of all of the stairs both externally from above and internally from below. The findings are captured in the Schedule of Repair Works appended to this document.

All of these stairs are constructed of stone, but they have been re-surfaced at some point in recent decades with a cementitious exposed aggregate topping. This topping in some locations has minor cracking and open joints and water is able to penetrate into the stone below. The cementitious topping locks the moisture into the stone, which is thereby only able to dry out from the underside. However, this drying process is further impaired by impervious paint and plaster finishes to the soffits. Therefore the stone stairs are in a poor state and in need of conservation works to prevent further deterioration.

The other four staircases (Stairs 01, 03, 05, 07) are secondary stairs giving access down into basement level lightwells either side of the principal entrance stairs to the West and East residences.

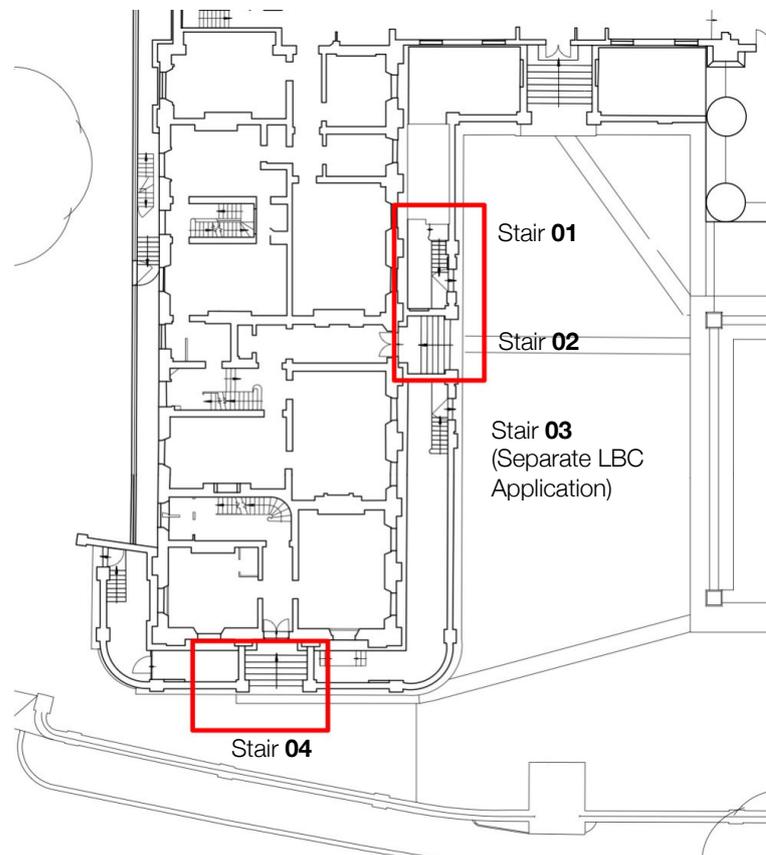
In three cases, (Stairs 01, 05, 07) the original stone steps and landings have been replaced by twentieth century reinforced concrete (although the original wrought iron railings have been retained, cast into the concrete.) The concrete is now deteriorating due to moisture penetration into the slabs causing reinforcement to corrode and expand. In one of these staircases (Stair 05), concrete has spalled off the soffit exposing corroding reinforcement. This stair has been taken out of use and propped. Without remedial conservation work, these stairs will become progressively more unsafe.

The remaining secondary stair (Stair 03) at the West Residence is the only secondary stair remaining with its original stone construction. The stone steps and landing have been topped in recent decades with a cementitious mortar/render material which is now failing and uneven. The wrought iron handrail is becoming detached from the stone and the feet of several of the railings are proud of the surface and severely corroded, leaving it unsafe. There are also concerns about the safety of the cantilevered stone landing which degraded, cracked and in extremely poor condition. Conservation repair work is being planned for this stair in order to conserve and retain as much of the original stone material as possible. However, in relation to the existing landing slab, the full extent of existing stone that it will be possible to retain will not be clear until further exploratory works have been carried out.

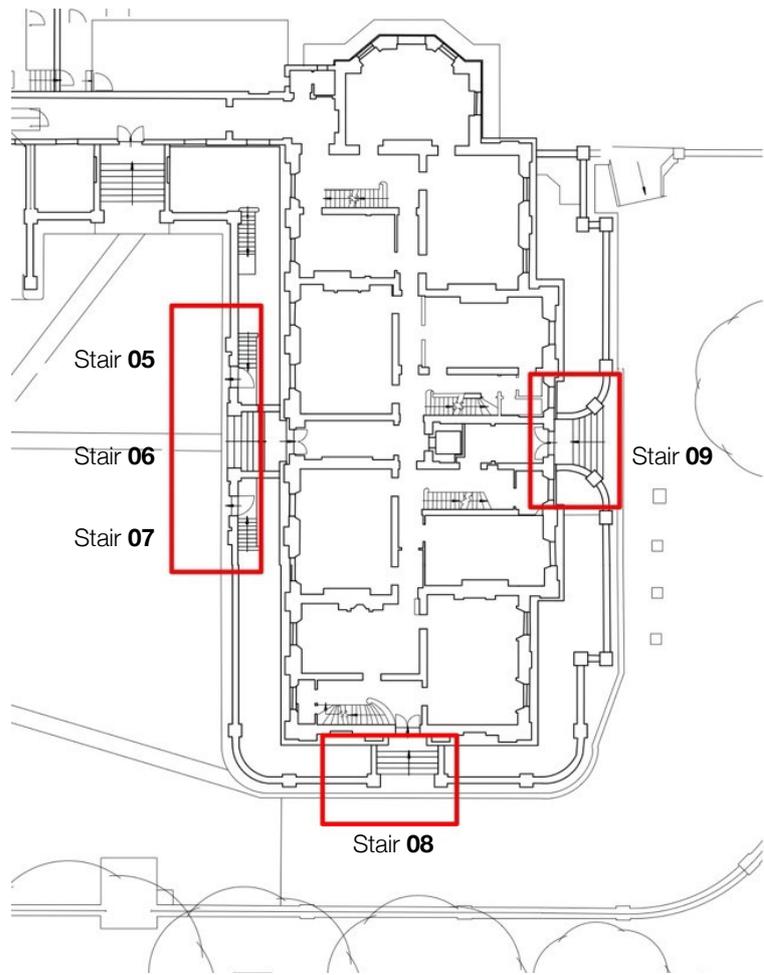
Therefore, proposals for works to Stair 03 **do not form part of this LBC application** and a separate application for listed building consent will be made for these works in due course.

2.2 LOCATION, SITE AND CONTEXT

Please refer to Location Plan drawing number **649-DJA-DR-A-01001** showing the location of the works in relation to the wider BM site. Drawing number **649-DJA-DR-A-01010** Summarises the proposed Scope of Work for each staircase.



Stairs 01-04, West Residences



Stairs 05-09, East Residences

2.3 PHOTOGRAPHS

The following photographs illustrate some of the issues described in Section 2.1.



Stair 06: External entrance stair with cementitious topping and cracking (Left) Underside of external entrance stair showing signs of corrosion to support beams and damp, weathered and degraded stone soffit (Right)

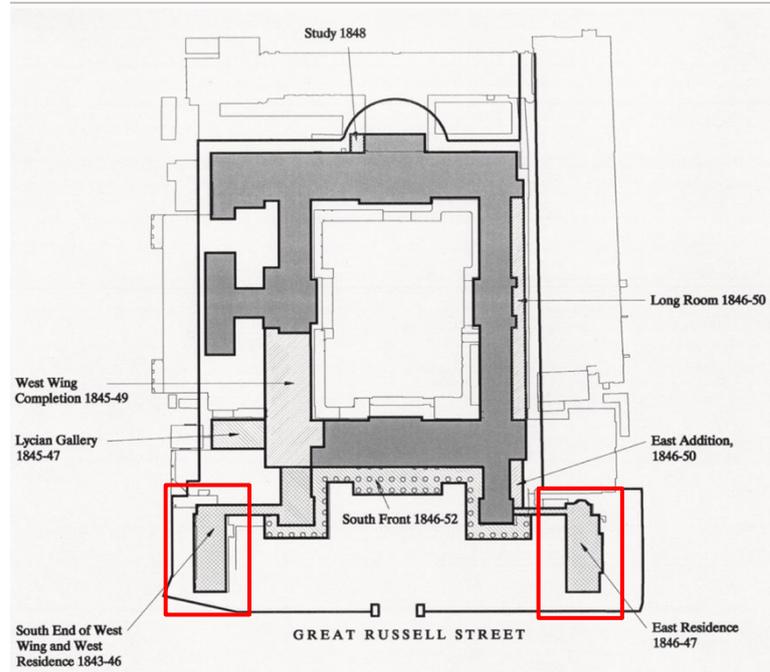


Stair 05 (Left): Soffit of reinforced concrete stair, spalled concrete, exposed reinforcement, stair has emergency propping.

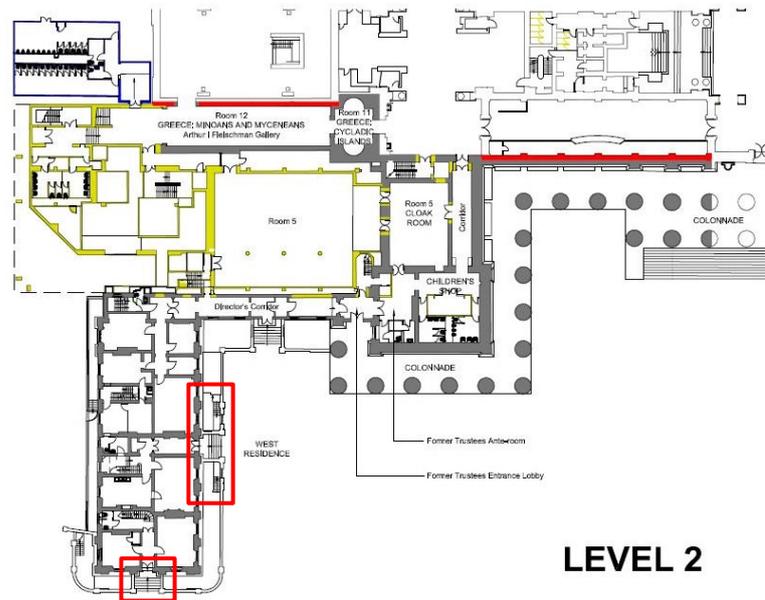
3.0 HISTORICAL STATEMENT

3.1 AGE OF FABRIC AND SIGNIFICANCE

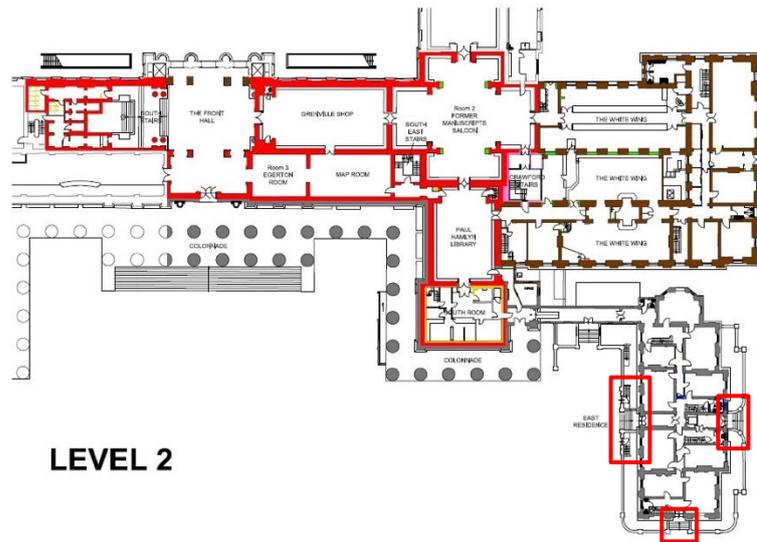
The West and East Residences were constructed in the 1840's to the designs of Robert Smirke but superintended over by Sydney Smirke after Robert Smirke's retirement in 1846.



West and East Residences



Extract from 2007 CMP -West Residence



LEVEL 2

Extract from 2007 CMP -East Residence

In terms of significance, the 2007 CMP includes the following commentary:

- 'The West Residence was built concurrently with the south end of the West Wing between 1843 and 1846 and the East Residence which was designed in 1844 and was built 1846-47.'
- 'The Residences are an integral element in the design of the Museum's south front composition and as such are highly significant, both historically and architecturally.'
- 'In common with Smirke's construction of the Museum the Residences are built to a very high standard of design, incorporating the latest constructional techniques such as cast iron beams and fireproof floors.'
- 'The exterior elevations are a restrained, almost severe, essay in Greek classical temple form with a giant order of shallow pilasters supporting a cornice and a low pediment facing Great Russell Street. These elevations provide an appropriately restrained counterpoint to the deeply modelled form of the main south front.'

The five external approach stairs (Stairs 02, 04, 06, 08, 09) leading up to the principal entrances of the Residences are therefore significant in terms of the overall composition and in the fact that they are the 'front doors' of the individual houses within each Residence.

The four secondary stairs (Stairs 01, 03, 05 and 07) are also carefully and symmetrically disposed elements within the overall composition of the principal elevations, lending architectural weight and importance to the central approach stairs which they flank on either side.

Further conservation guidance notes:

- Retain as far as possible all surviving finishes and features dating from the original construction of the Residence.
- Respect and retain where possible the early features relating to the area vaults such as doorways, windows, coal holes, and inter-connecting openings which each contribute to the surviving archaeology of the way in which the houses originally functioned.

3.2 RELEVANT PLANNING HISTORY

An exchange of letters was prepared and submitted to LB Camden on the 26/03/2021 for approval of early investigative works to the East Resident Stairs (Staircase 6) which have since been carried out. These investigative works and reports have then helped form the proposed structural repairs prepared by Alan Baxter Associates and help inform the conservation approach to repairs by Dannatt Johnson Architects.

A further exchange of letters was submitted by The Planning Lab in early January 2023 in relation to these proposed works and LB Camden responded by requesting that a Listed Building Consent Application be submitted covering all of the proposed works.

At a site meeting on 9th February 2023, Stair 03 was shown to representatives of London Borough of Camden and Historic England and the request was made by LBC that the BM submit proposals for Stair 03 under a separate listed building consent application after further investigative works have been carried out.

4.0 DESCRIPTION OF WORKS

Please refer to the following drawings and documents:

Dannatt Johnson Architects

649-DJA-DR-A-01001-E and W Residences Staircase Repairs Location Plan_P02
649-DJA-DR-A-01002-E and W Residences Staircase Repairs Block Plan_P02
649-DJA-DR-A-01010-Staircases Scope of Works Plan_P02

649-DJA-DR-A-10103-Basement Level Plan Staircases 1-3 as Existing_P01
649-DJA-DR-A-10104-Basement Level Plan Staircase 4 as Existing_P01
649-DJA-DR-A-10105-Basement Level Plan Staircases 5-7 as Existing_P01
649-DJA-DR-A-10108-Basement Level Plan Staircase 8 as Existing_P01
649-DJA-DR-A-10109-Basement Level Plan Staircase 9 as Existing_P01

649-DJA-DR-A-10203-Ground Floor Level Plan Staircases 1-3 as Existing_P01
649-DJA-DR-A-10204-Ground Floor Level Plan Staircase 4 as Existing_P01
649-DJA-DR-A-10205-Ground Floor Level Plan Staircases 5-7 as Existing_P01
649-DJA-DR-A-10208-Ground Floor Level Plan Staircase 8 as Existing_P01
649-DJA-DR-A-10209-Ground Floor Level Plan Staircase 9 as Existing_P01

649-DJA-DR-A-11103-Basement Level Plan Staircases 1-3 as Proposed_P01
649-DJA-DR-A-11104-Basement Level Plan Staircase 4 as Proposed_P01
649-DJA-DR-A-11105-Basement Level Plan Staircases 5-7 as Proposed_P01
649-DJA-DR-A-11108-Basement Level Plan Staircase 8 as Proposed_P01
649-DJA-DR-A-11109-Basement Level Plan Staircase 9 as Proposed_P01

649-DJA-DR-A-11203-Ground Floor Level Plan Staircases 1-3 as Proposed_P01
649-DJA-DR-A-11204-Ground Floor Level Plan Staircase 4 as Proposed_P01
649-DJA-DR-A-11205-Ground Floor Level Plan Staircases 5-7 as Proposed_P01
649-DJA-DR-A-11208-Ground Floor Level Plan Staircase 8 as Proposed_P01
649-DJA-DR-A-11209-Ground Floor Level Plan Staircase 9 as Proposed_P01

649-DJA-SH-A-00001-Schedule of Works Stairs Rev B

Alan Baxter Associates

1910-20-01-A
1910-20-02-A
1910-20-03-A
1910-20-05-A
1910-20-06-A
1910-20-07-A
1910-20-08-A
1910-20-09-A
1910-20-10-A

ABA Repairs to West and East Residences Structural Method Statement

4.1 PROPOSED WORKS, AMOUNT AND LAYOUT

- a) The proposed works to the five staircases (Stairs 02, 04, 06, 08, 09) leading to principal building entrances at Level 2 is as follows:

These are stone stairs re-surfaced with a cementitious exposed aggregate topping. This topping in some locations has minor cracking and open joints and water is able to penetrate into the stone below causing various kinds of water damage and deterioration to the stone treads below.

These stairs are each supported by a pair of cranked cast iron beams which in some locations is showing evidence of corrosion caused by the moisture present in the stone above.

The following works are proposed:

- Sampling of the composition of the 'granolithic' topping and of the stone steps for petrographical analysis. (The stairs are noted on Smirke's drawings as Portland stone but have the appearance of a sandstone.)
- Pointing and sealing of cracks and open joints in the topping.
- Removal of cement repairs and modern impervious paint from soffits, conservation stone repair easing back water traps which have formed.
- Consolidation of friable soffit surfaces by applying a breathable lime-based 'shelter coat' or breathable mineral paint.
- Cleaning back corrosion on the iron beams to bare metal, re-priming and redecorating
- In two cases, exposing the end bearings of the cast iron beams support beams to treat the corrosion as above, then rebuilding the brickwork around the beam ends.

The other three staircases (Stairs 01, 05, 07) are secondary stairs giving access down into basement level lightwells either side of the principal entrance stairs to the West and East residences.

- b) The proposed works to the three reinforced concrete secondary stairs (Stairs 01, 05, 07) is as follows:

These concrete stairs are now deteriorating due to moisture penetration into the slabs causing reinforcement to corrode and expand. At Stair 05, concrete has spalled off the soffit exposing the reinforcement bar. This stair has been taken out of use due to the possibility of structural failure and the landing has been propped.

The following works are proposed for these three stairs:

- Treat reinforcement with a proprietary corrosion inhibitor product
- Treat concrete with a proprietary protective coating product
- In the case of stair 05, the insertion of a new steel beam below the landing spanning along the long side to provide additional structural support to the landing. The new beam would be supported on angle brackets attached to existing brickwork and not built-in to the masonry. This new beam will not be visible from the Museum Forecourt.



Stair 05 (Left and Above) insertion of new beam not visible from Forecourt

- Remove rust from handrails and gates, treat metalwork, repair and redecorate.
- Below and adjacent to these stairs, to remove all existing loose and flaking masonry material and paint, and redundant services clips and conduits, to assist with drying out of these structures as far as possible and consolidate them with breathable finishes.

4.2 HERITAGE IMPACT

The CMP identifies the front composition of the Residences as highly significant – this will include the stairs that form part of the frontages. Where possible, the CMP recommends surviving features should be retained and conserved.

Therefore the approach to these works has been to ensure as much surviving original construction is retained and conserved as possible. Original ironwork railings and gates are retained, repaired and redecorated.

The new steel beam at stair 05 has been proposed for structural stability and safety. This beam will not be visible by members of the public from the Forecourt as it is located underneath the stair landing and facing onto the back of the Level 1 lightwell. The steel is being offered up from below to support the existing concrete landing and this installation is substantially reversible without significant damage to adjacent construction.

In the case of the principal entrance staircases, there will be no change to the external appearance or arrangement of these elements.

The works will affect high significance areas of the BM but we do not consider that the works will cause harm to the significance of these areas. The works are primarily conservation repairs and treatments to existing fabric which retain original fabric wherever possible and aim to ensure the continuity of existing appearance together with longevity and safety of the existing structure and fabric.

5.0 ACCESS

5.1 ACCESS STATEMENT

The proposals do not entail any change to the existing access arrangements.

6.0 APPENDICES

DJA Schedule of Repair Works Rev B (separate document)

ABA Repairs to West and East Residences Structural Method Statement (separate document)