

5.13 Interior design approach

5.13.1 Flooring

5.13.1.1 Archive research and investigations suggests that terrazzo and mosaic was used within the existing circulation areas. Woodblock and tile is seen in the corner Tourelle rooms.

5.13.1.2 Depending on the condition of the existing floors, the proposals allow for uncovering of the original terrazzo and mosaic floors and their refurbishment and repair. The woodblock and tile will be refurbished in the old Commissioner's Office, to be re-purposed as a conference room in the proposals. The aim is to reveal as much of the original surface as possible

5.13.1.3 A new broadloom carpet runner is proposed for the principle staircase.

5.13.1.4 Carpet tiles with a contrasting border are proposed within the offices, to provide a more comfortable working environment.

5.13.2 New risers and ceilings

5.13.2.1 New raft ceilings have been designed to leave clear views of the historic windows by stepping back from the perimeter walls. Lay-in grid ceilings have been avoided to reduce clashes with historic internal features. A shadow gap between the ceiling and the existing wall allows for separation between new and original elements.

5.13.3 Corridors and fire doors

5.13.3.1 Existing timber framed fire screens will be replaced with metal slim frame doors on hold open devices to reinstate the original 'open' feel of Shaw's circulation corridors. Refer to Section 5.15.

5.13.4 Paint analysis

5.13.4.1 Hirst Conservation are commissioned to undertake paint sampling and analysis in Norman Shaw North. The primary aims of the paint analysis are to:

- Understand the original or earliest surviving finishes.
- Inform the conservation and maintenance of the internal elements.
- Produce a record of research findings.
- Inform the interior design strategy.

5.13.4.2 Samples are taken across a number of interior spaces and features, including but not limited to upper walls, dado wall face, dado rail, joinery, doors, windows and architraves, skirting, cornices and ceilings in order to establish any variations in the decorative schemes.

5.13.4.3 The colour reference provided will be based on the results of cross section analysis and experience of pigment and media types, as well as localised uncovering of the original scheme. A detailed methodology will be employed including the microscopic assessment of samples. Where appropriate, further investigation of key layers will be carried out by stain tests and simple chemical techniques followed by on-site investigations such as opening-up of paint layers to an agreed / less visible location to confirm the findings.

5.13.4.4 The findings will inform the methodology for redecoration and the final decorative scheme to be implemented. It will also inform the approach to working safely with extents of pre-existing lead paint.

5.13.4.5 The proposed palette of colours will take the tones of the existing historic fabric into account where possible.

5.13.5 Lighting

5.13.5.1 The lighting strategy is a combination of both functional and modern lighting techniques, with a contemporary aesthetic and an element of more decorative lighting, which reflects and respects the heritage.

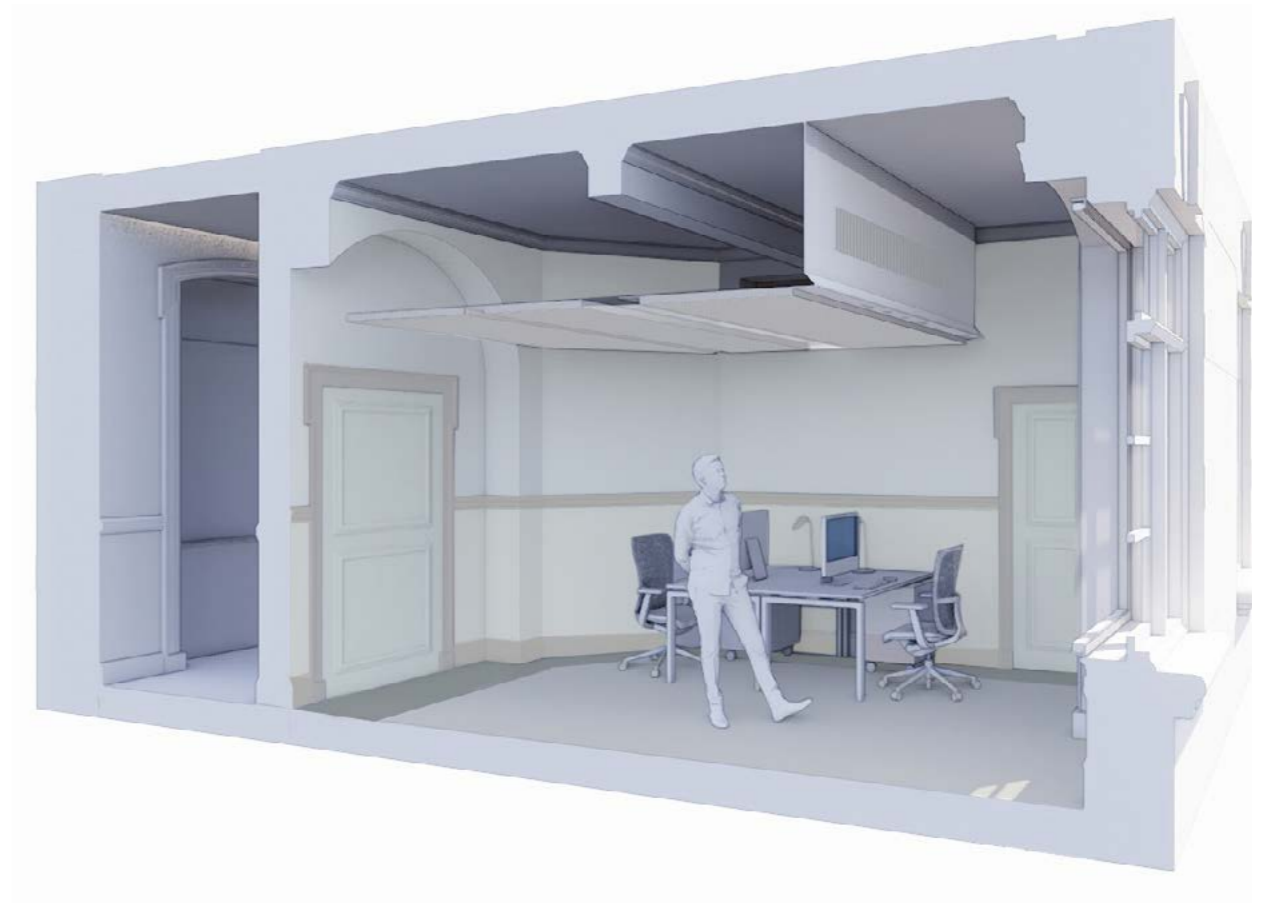
5.13.5.2 There will be a consistency in approach to the lighting strategy, within the more typical areas, for example offices and new entrances. This will create continuity while navigating and using the building.

5.13.5.3 This combination of lighting treatments will be in keeping with the wider approach to refurbishment and modernisation proposed across the Northern Estate Site, while still allowing enough flexibility to react to the particularities of the different buildings.

5.13.5.4 As an example, lighting to the primary corridors and lift lobbies, with their classical vaulted ceilings will be illuminated by the use of suspended globe pendants. Wiring is exposed as vaulted arches cannot be chased due to structural limitations.

5.13.5.5 The new lighting scheme has been designed to take inspiration from original layouts. Corridor light fittings will be chosen to match the existing circular pendant as much as possible.

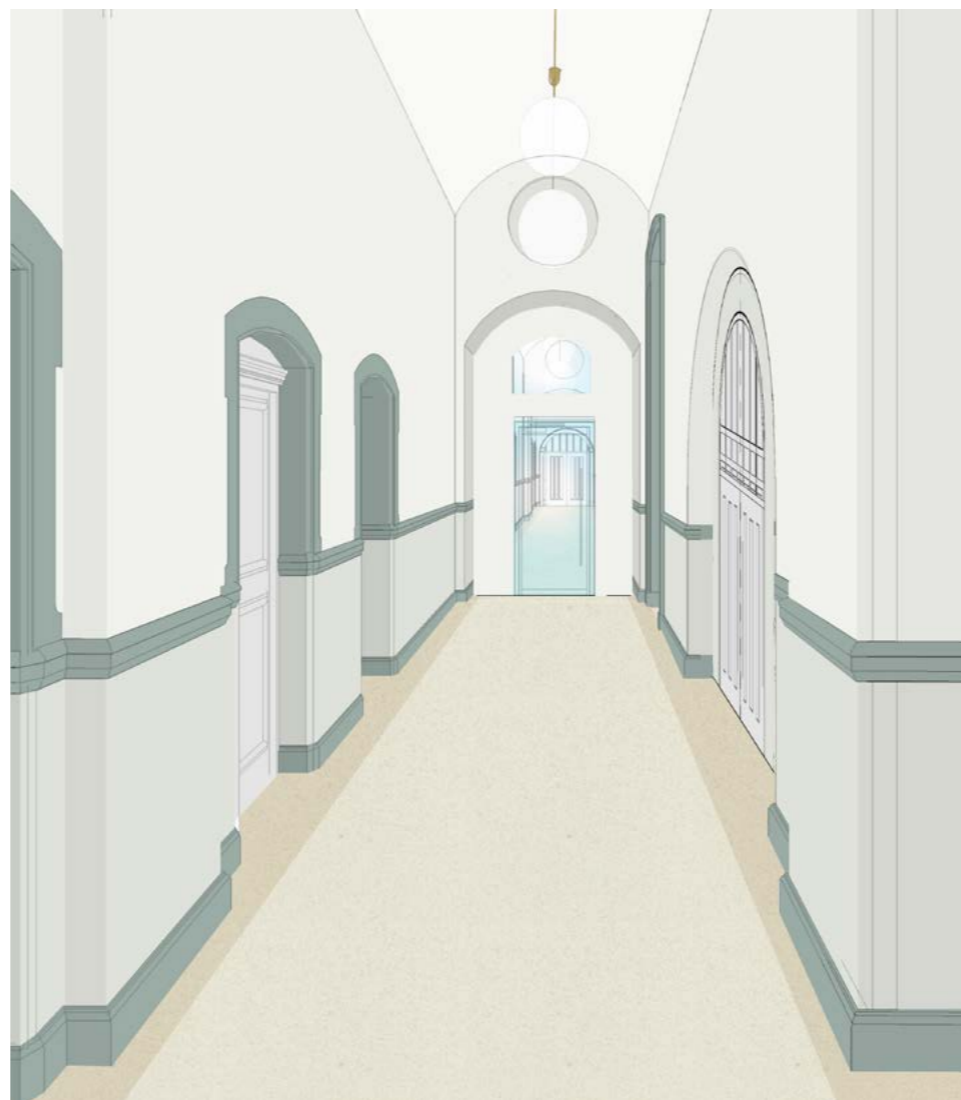
5.13.5.6 External lighting proposals are limited to the restoration and refurbishment of original lantern fittings, fixed to the building and new fittings to provide the requisite levels of illumination around building exits to meet safety requirements.



Typical Office (note: services not shown above raft ceiling)



Principal staircase



Primary corridors vaulted ceiling lighting strategy



Existing floor finish to be refurbished in circulation areas

5.14 Cross corridor doors

5.14.1 The proposals intend to recover (in the areas of highest heritage significance) the perception of the corridors' full length, as per Shaw's original parti, whilst performing in line with modern fire safety standards and regulations.

5.14.2 Alongside the condition and performance of the existing timber and glass cross corridor doors, many of which are not compliant, the proportion and density of framing both vertically and horizontally currently blocks the majority of the view along the corridors in many locations. This undermines the viewer's understanding and experience of these key historic spaces.

5.14.3 The fire strategy across the building relies on a variety of fire ratings being achieved to internal doors and zones. Because of this, section sizes for new (metal framed) doors and screens may vary from zone to zone.

5.14.4 The proposal is to deploy fully glazed, cross corridor doors with slim metal frames that can meet the required performance. These will be on 'hold open' mechanisms which will help reinstate the original uninterrupted views. These will be set within a solid fire screen, that can manage the change in geometry between the doorset, the overpanel and the corridor. The overpanel will be glazed or solid, depending on the corridor condition and presence of ceilings.

5.14.5 The proposed door and screen illustration overleaf describes this approach. The new screens would be detailed with a 'shadow gap' at the wall interface to receive original dado and skirting features and help identify the screens as non-original interventions within the space.



Existing timber cross corridor screen



Existing 1970s timber glazed doors and glazed overhead

- 01 Painted solid over panel in original barrel vault
- 02 Timber glazed overhead
- 03 Thick timber sections to door leaf and frame
- 04 Lower glazed panels set out to original dado height
- 05 Brass push plate
- 06 Partially glazed door leaf
- 07 Existing dado rail



Design intent for glazed fire doors and screens typically to be used in areas of highest heritage significance

- 01 Glazed or solid over panel in original barrel vault - depending on corridor
- 02 Full height glazed doors (generally held open)
- 03 Slim metal frames support fire rated glazing
- 04 Solid surround to mediate vault and door geometry
- 05 Pull handles
- 06 Shadow gap detail to receive skirting and dado
- 07 Existing dado rail and skirting board

Note: final design subject to detail development and technical review to optimise framing and glass unit sizes

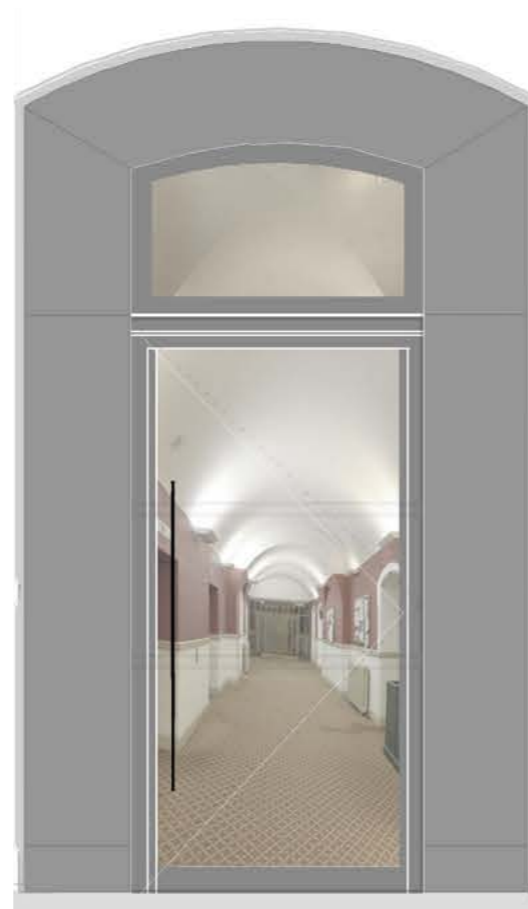
5.14.6 The final design will be subject to detail development and technical review to optimise framing and glass unit size, and specific interfaces with historic fabric.

5.14.7 In arches with sufficiently tall springing points, the screens abut the existing masonry walls and are set into solid, fire rated downstands which allow for the large number of sizes and arched geometries.

5.14.8 In areas where the springing point is low, the interface with the door is managed by the solid frame, allowing the head of the doors to extend upwards therefore revealing more of the corridors ahead by increasing the size of glazed elements.

5.14.9 The layout of glazing panes including the geometry and dimensions of a top light above the doors will vary across floors and depending on the specific door location, along each corridor. A family of details will be developed to respond to different locations so that there is continuity in the overall format. In several areas, there are existing sections of downstand ceiling above the doors that conceal crossing services. In light of this, and to maintain a consistent approach within the building interior, our proposal is for these to be back-painted or solid panels. The effect of this will be a simple 'family' of screens which vary in their abutment and height but maintain the same aesthetic and format.

5.14.10 Subtle variations in design could be used to distinguish historically prestigious floors like the second floor with the original Commissioner's office location.



Proposal for narrow corridor condition



Proposal for large cross corridor screen in south east corner, adjacent to main stair

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5.15 New passenger lifts

5.15.1 Introduction

5.15.1.1 The proposed refurbishment includes two new cores, centred within the east and west building wings. The existing lift provision (three in the east wing and one, non wheelchair compliant, in the south west corner) is unsuitable and unevenly distributed. The new lift arrangement balances the vertical access between east and west wing which will improve step-free access provision within the building and mean compliance with Part M of the Building Regulations.

5.15.1.2 The existing lifts do not service the basement level. Access to the basement level constitutes a crucial part of the proposals as it will include accommodate and facilities for building users.

5.15.1.3 The case has been made that this work, albeit intrusive, will greatly extend the life-span of the building, safeguarding future use and also providing important fire and access upgrades as well as maintenance and operational advantages.

5.15.1.4 Lift passenger analysis has been undertaken to inform lift size and speed to provide a suitable level of service based on the building occupancy. The east core has 13 person and 17 person lifts, the west core has 2no 10 person lifts.

5.15.1.5 Each new core allows for the installation of two new accessible passenger lifts; one as a fire fighting and another as an evacuation standard lift. The incorporation of new lifts provides the opportunity to remodel the area around them to also provide toilets, tea point and service risers.

5.15.1.6 The original fabric of the east core area was subject to demolition during the 1970's refurbishment works. The proposal is to reconstruct these shafts within the current footprint to minimise any additional loss of fabric, but re-new the lift cars/mechanisms and extend the lift shaft to basement level, including piling to the lift pit.

5.15.1.7 The west core, the only core serving the mezzanine level is to be extended in plan and section to allow for upgraded lift service. The plan diagram shows the area of original stair to be adapted to make space for the upgraded lift services, as well as the shaft extension at the top and bottom.

5.15.2 East core

5.15.2.1 The proposal is to replace the three existing lifts with two new ones, serving from basement to fifth floor. To achieve this, the existing lift shaft is to be demolished, remodelled and extended down to basement level.

5.15.2.2 The proposed lift overrun area is concealed within the existing fabric and therefore it does not impact the roof's visual appearance. Minor alterations are required to the existing wall linings to provide sufficient maintenance space in the sixth floor.

5.15.2.3 The proposed lift shaft and surrounding area will be framed using steel beams, supported on the existing masonry walls at all floors from lower ground to level six. Block work walls will be constructed and supported on the steel beams at every floor to form the lift shaft. The floor plates will be constructed using a timber joist and ply solution built off the steel beams. The fifth and sixth floors require a different structural arrangement due to the location of the staircase to the north of the lift shaft.

5.15.3 West core

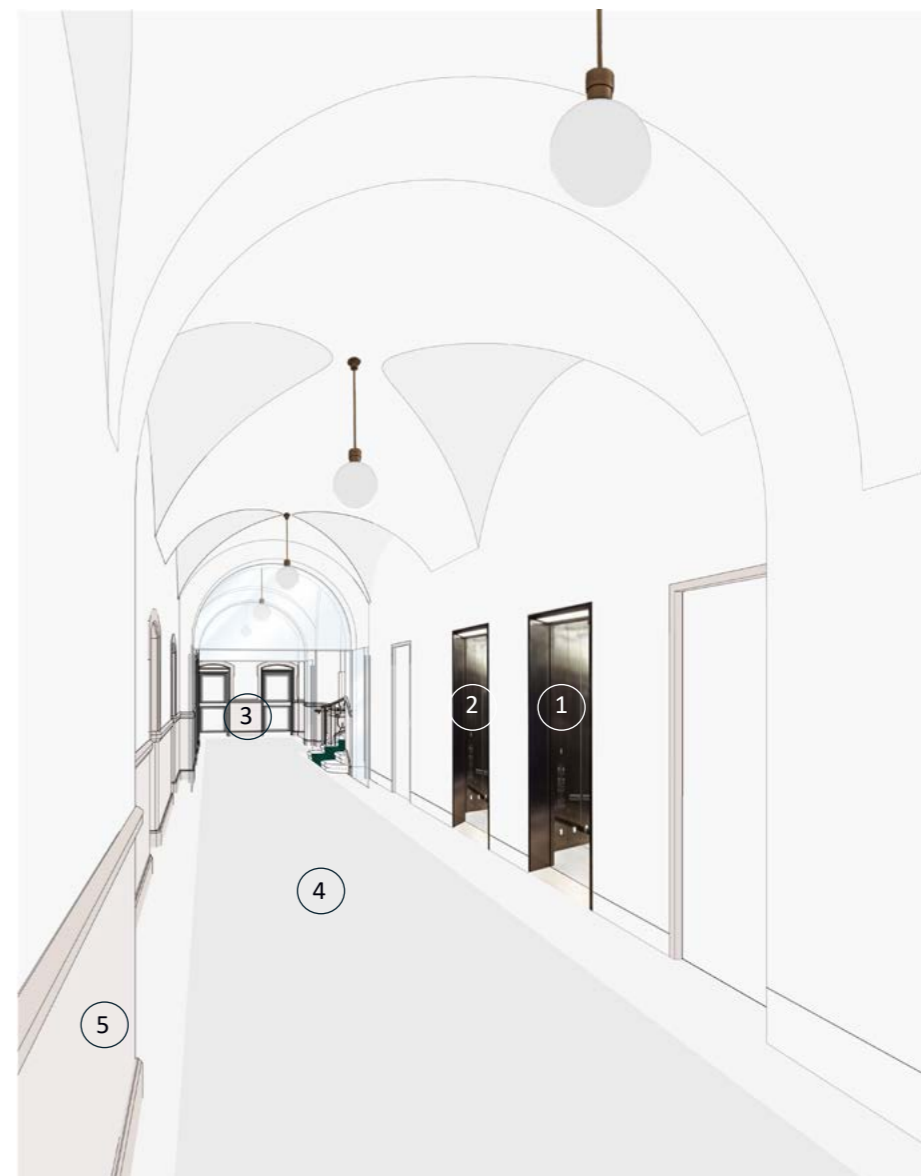
5.15.3.1 A new lift is proposed for the west quadrant of the building. The lift core will replace an existing toilet block and run from basement level up to sixth floor. A new accessible WC cubicle is proposed at its rear. Given the constraints imposed on the west wing, the proposed lifts in this area are machine room less type (MRL). This will enable access to the sixth floor without impacting on the existing roof line, as over-runs are limited.

5.15.3.2 To aid buildability, the structural floor solution is the same as adopted for the east lift core, i.e. timber joist and ply framed on asymmetric steel

beams. The lift core itself is built from block work walls which span on to the adjacent masonry walls via the steel beam system at each storey. This is to mitigate the overall vertical load bearing on the foundations below.

5.15.3.3 Lift lobbies

5.15.3.4 The new entrance areas to lifts will be designed as contemporary insertions into Shaw's original corridor settings. Datum levels of ceiling arches, dado rails and skirtings have been reflected in the design. The corridor lighting has been designed to emphasize the continuous view along the corridor axis.



Proposed core lifts internal view

- ① Metal cladding to lift surround
- ② Integrated diffuse lighting
- ③ Slim frame glass partition
- ④ New carpet on existing terrazzo
- ⑤ New colour scheme

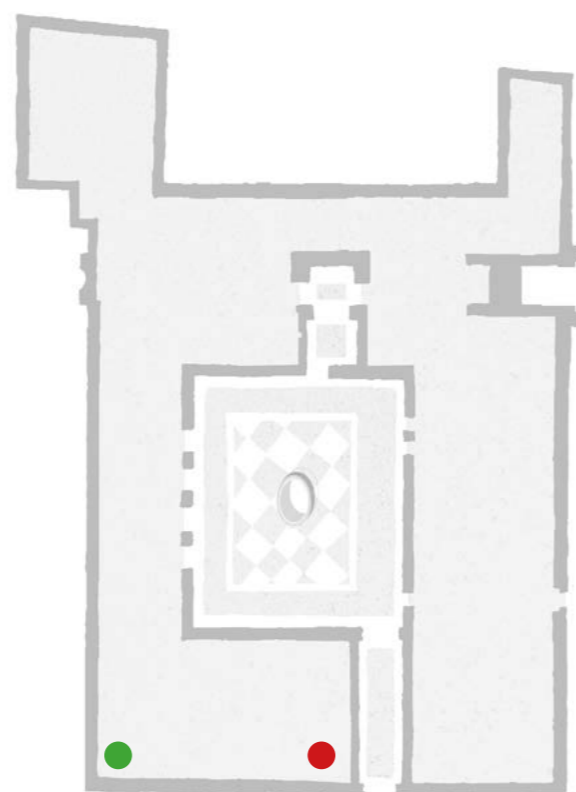
5.15.4 West core stair railing

5.15.4.1 A utilitarian stair between the basement and lower ground in the west wing was noted as being of interest during a site walk around with Westminster City Council and Historic England on 7 March '19, and it was suggested that the design team consider re-using the railings and handrail of the utilitarian stair elsewhere. A study was carried out to test the feasibility of this and the findings are as follows.

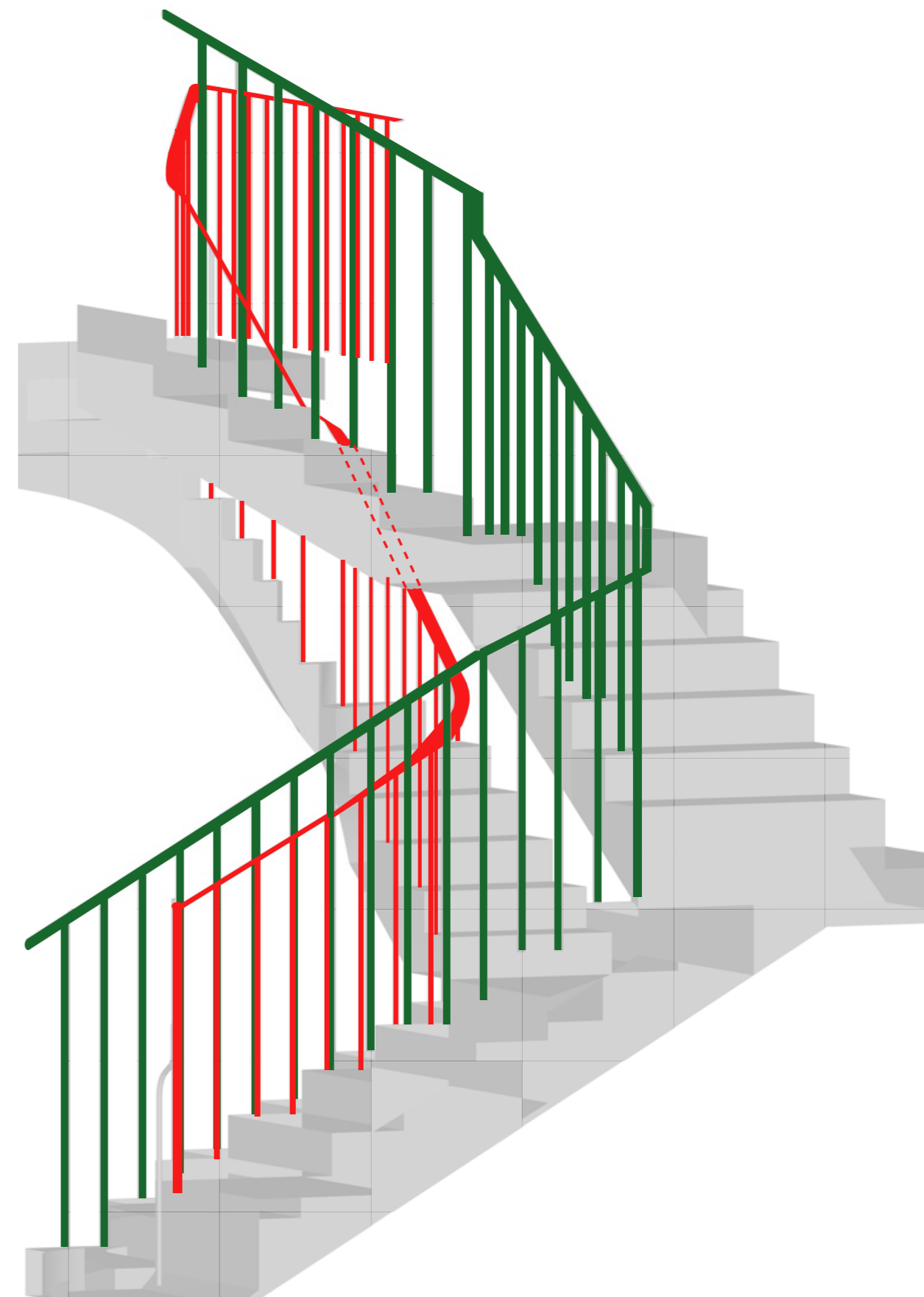
5.15.4.2 The existing railing is used for a staircase of 22 steps with risers varying from 142 to 152mm. The gradient of the existing staircase varies from 28 to 54 degrees and the railing height varies between 815 to 900mm. The existing railing would require drastic modifications in order to achieve a successful relocation to the proposed stair and comply with regulations.

5.15.4.3 The proposed railing is already regulations compliant. The staircase has 20 steps at a gradient of 29 degrees. The top railing is 1m in height and riser height is constant at 170mm.

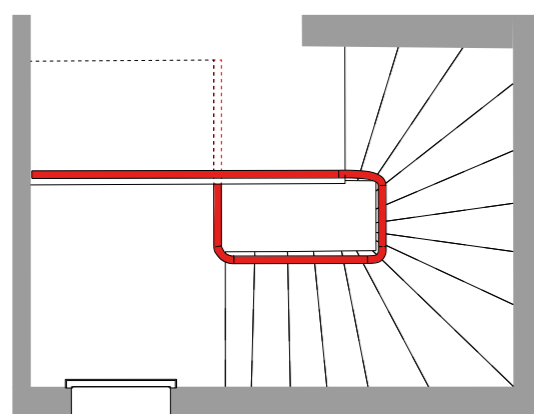
5.15.4.4 The study shows that the existing railing would not be compliant in the proposed location and therefore cannot be reused.



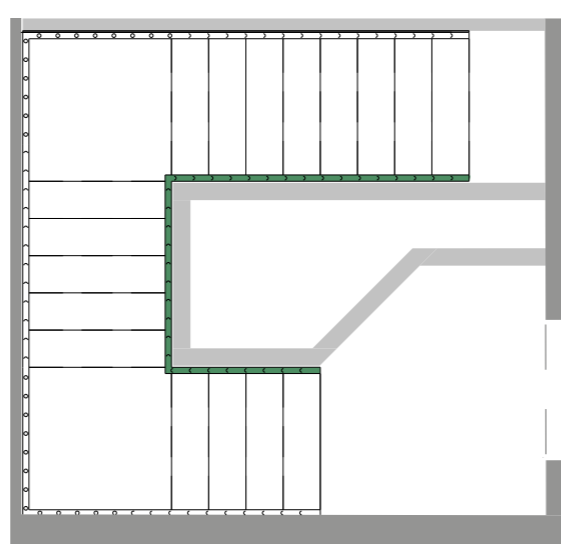
Location plan showing existing and proposed railings



Overlay of existing and proposed staircases showing differences in railing geometry



Existing non-compliant railing plan



Proposed compliant railing plan

5.16 Services within Norman Shaw North

5.16.1 Historic servicing

5.16.1.1 Richard Norman Shaw was known for employing the latest developments in modern sanitary installations and when completed in 1890, Norman Shaw North was serviced by radiators as well as individual fireplaces; and so marked the transition to centralised heating.

5.16.1.2 The low pressure system, which was designed to equalise temperature throughout the building, comprised flow and return pipe work connecting radiators, served by a boiler on the north-west side.

5.16.1.3 Ventilation was provided by sash windows in combination with high level extract ducts placed over corridors.

5.16.1.4 Chimney stacks collected flues, routed within the corridor wall thicknesses, from all floors and the large chimneys form key elements in the articulated roofscape and silhouette of the building. Further minor-

scale vertical distribution was provided in combination with hydraulic lifts, dumb waiters and rising mains. The building also benefited from 'clean' electric lighting (supplementing a relatively small number of gas lamps, together with day lighting) with power generated from a dedicated engine house.

5.16.1.5 Vertical distribution for cabling and telecommunications was concealed by joinery encasements located within the corridors. At the time of the completion of the project, the anticipated increased running cost was justified to the Secretary of State in terms of providing more efficient and comfortable working conditions, in comparison with other buildings of the time.

5.16.2 Twentieth century refurbishments

5.16.2.1 A significant programme of refurbishment was carried out between 1973-1975. This refurbishment included adaptations to the fourth floor and the installation of new passenger lifts to the east wing.

5.16.2.2 The rooms were equipped with new desks, telephones, voice alarms and emergency lighting systems.

5.16.2.3 The most significant change to the building resulted from the insertion of suspended ceiling in most rooms and corridors, altering their proportions, and fire compartmentalised screens across what were originally free-flowing corridors [in line with attitudes at the time in relation to modern servicing expectations and working patterns associated with passholders and Commons' use - the Metropolitan Police having moved-out of the building in the 1960s]. In the 1990s, further repairs and refurbishments were undertaken to address disabled access and fire precautions and means of escape, as well as new mechanical and electrical services throughout. In both the 1970s refurbishment and 1990s upgrade works, the decision to surface mount power and data services in dado trunking has resulted in the removal of sections of existing dado and skirting.

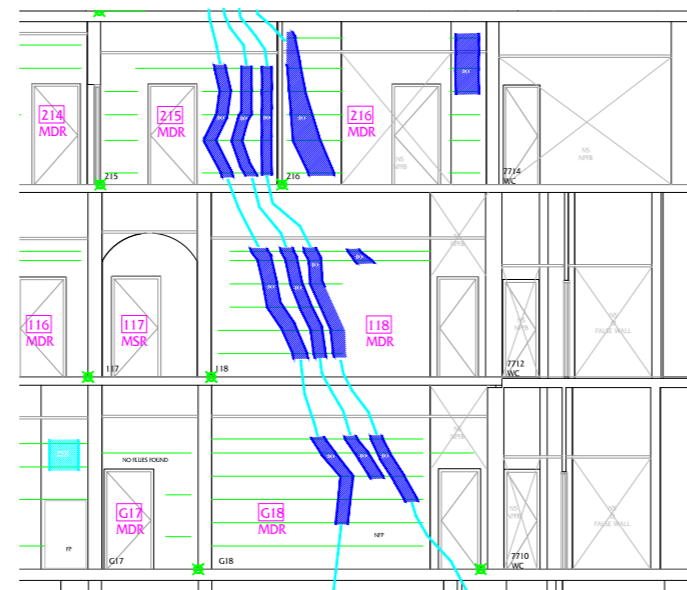
5.16.2.4 Whilst fireplaces still exist in most rooms, chimneys are capped and they serve a purely decorative function. Non-intrusive surveys of the chimney flue network have been carried out as part of the current proposals. These initial surveys demonstrate a complex and irregular system of limited sized flues within the building and as such it is not practical to use individual flues for new services routes.



Example of joinery encasement in corridor containing rising electrical services.



Interior photograph from the Collage London picture archive taken prior to the 1970s refurbishment and illustrating fireplace and utilitarian suspended electrical light fittings.



Extract taken from initial chimney flue survey demonstrating inconsistent flue routes unsuitable to utilise as primary services risers.



Typical office post 1970s refurbishment illustrating new suspended fabric ceilings, low level surface mounted trunking and new decorative finishes throughout



Current office illustrating piecemeal modifications to services including suspended grid ceilings, mid level surface mounted trunking and renewed decoration. Note impact of trunking on dado rail.

5.16.3 Proposed refurbishment

5.16.3.1 There is an opportunity, as part of refurbishment works to renew all MEP services, rationalising and consolidating to provide a servicing strategy that is appropriate for the modern workplace and carefully integrated within the confines of the historic building fabric.

5.16.3.2 The existing MEP installations largely date from the 1970's when the last significant major refurbishment was undertaken. There have been on-going local refurbishment and maintenance works since. Whilst adaptations and additions have been made over the years, the installations are dated and at / beyond their economic life expectancy. As a result, all existing MEP services will be stripped out and replaced with new, designed to comply with current regulatory standards, provide comfortable internal working conditions (both at completion and considering climate change impacts over their future life expectancy) and provide for future adaptability for changing office use and foreseeable advances in technology.

5.16.3.3 As part of the parliamentary Strategic Vision for the Built Environment (SVBE), NSN will be provided with the facility to connect to future site wide heating and cooling networks when they become available.



Example of office space with suspended grid ceiling, radiators beneath windows and surface mounted services trunking on the walls. Windows currently restricted opening and single glazed.



Example of corridor space with suspended grid ceiling, radiators beneath windows and timber cross corridor screens.



Existing WC with minimal servicing and no heating.



Existing tea point with local extract fan mounted in courtyard facing window



Existing pipework exposed with insulation damaged and worn out

5.16.4 Services distribution

5.16.4.1 Options for varying vertical and horizontal MEP distribution strategies have been explored. The preferred solution involves air distribution to the spaces via ductwork routed vertically through risers and horizontally above office spaces above new suspended raft ceilings.

5.16.4.2 The approach to horizontal distribution has been informed by the decision to reinstate the architectural clarity of the main circulation shared corridor and stair spaces that are key to the experience of the building. Alongside these spaces are the main 'turret-room' offices and double-height, river-facing offices, which are identified as being of greater significance.

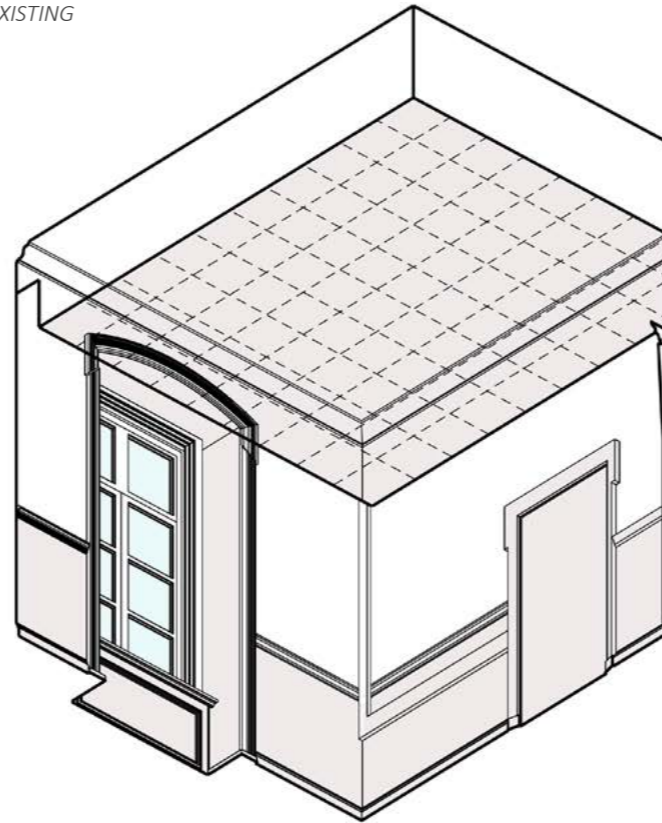
5.16.4.3 The horizontal distribution is therefore concentrated through the office spaces, requiring fabric penetrations as necessary. The distribution is to be concealed by a ceiling raft until reaching the corner rooms, at which point the strategy is to conceal floor standing services within new items of joinery. This approach limits horizontal distribution above corridor areas. Where necessary services containment may be concealed behind cornices or chased.

5.16.4.4 Horizontal distribution will need to be accommodated for by providing new builderswork openings through existing structure and partitions. Guidance on setting out and opening sizes have been provided to ensure the existing fabric is protected where possible.

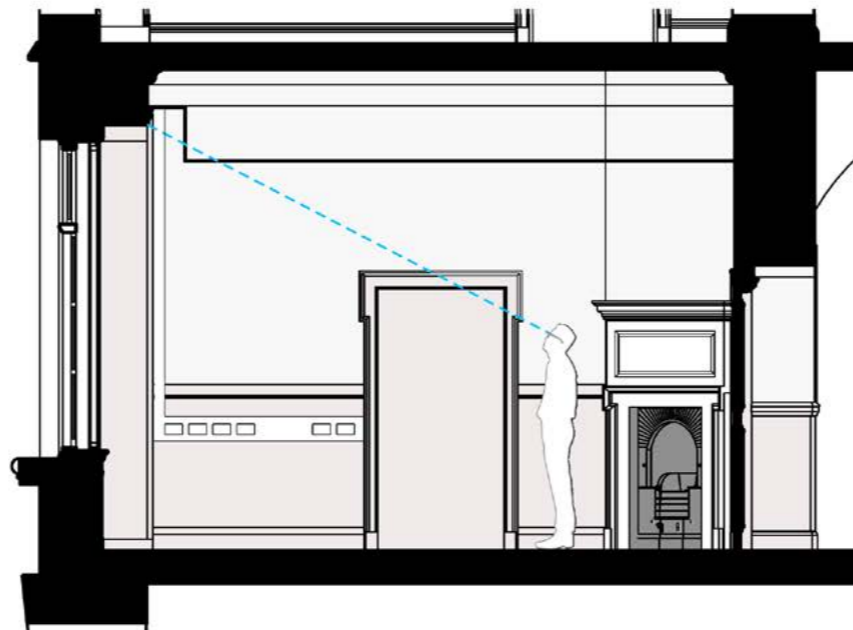
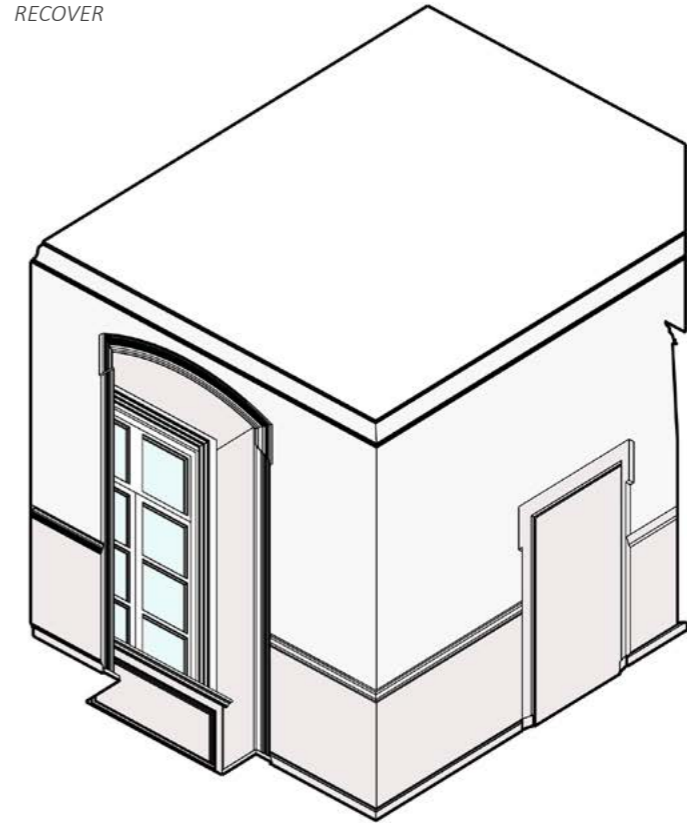
5.16.4.5 Secondary distribution and containment is achieved by chasing in to walls to maintain a fully flush finish. This will allow the existing surface-mounted trunking to be removed and the historic mouldings and wall detailing to be reinstated.

5.16.4.6 The diagrams adjacent illustrate the sequence of refurbishment of a typical office.

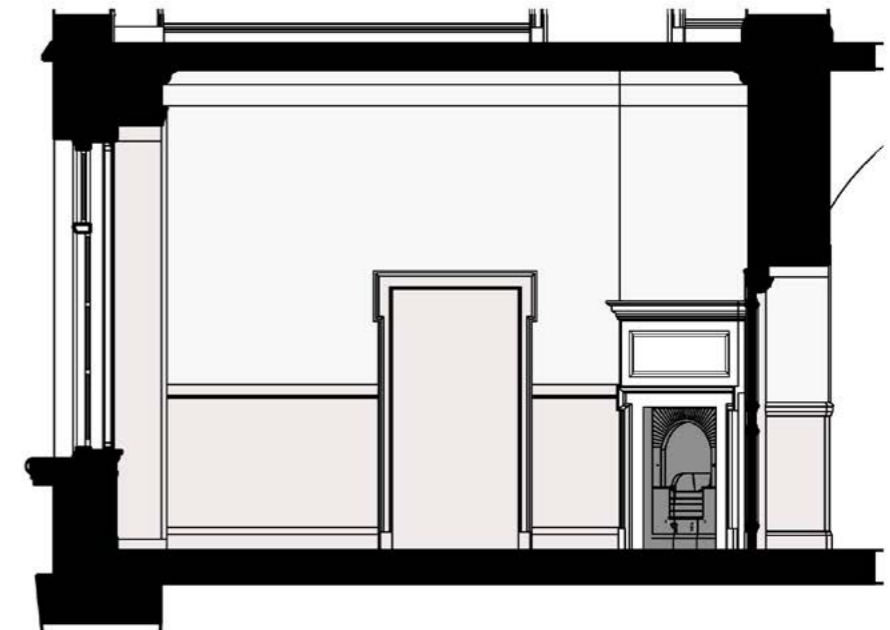
EXISTING



RECOVER

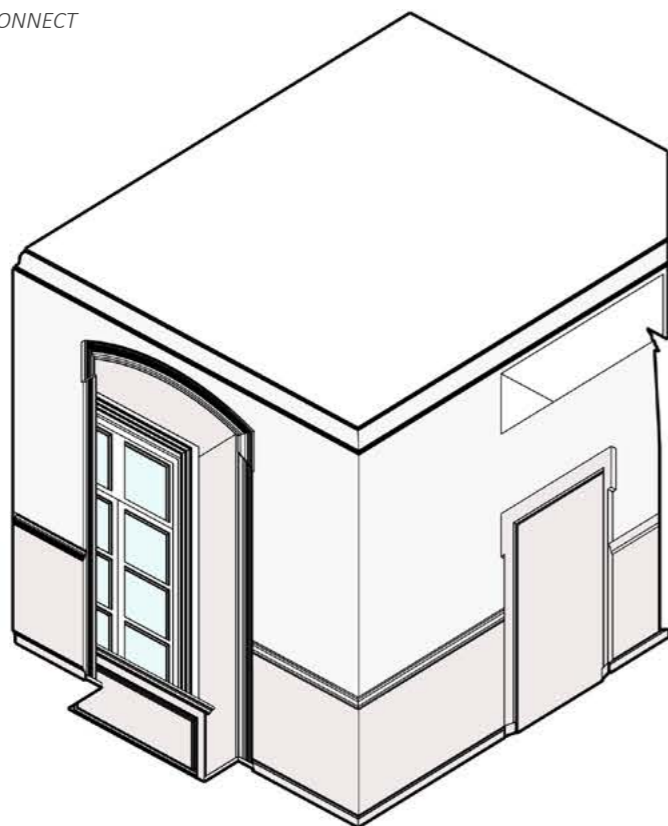


Suspended grid ceilings throughout
Surface mounted trunking cutting through dado rails

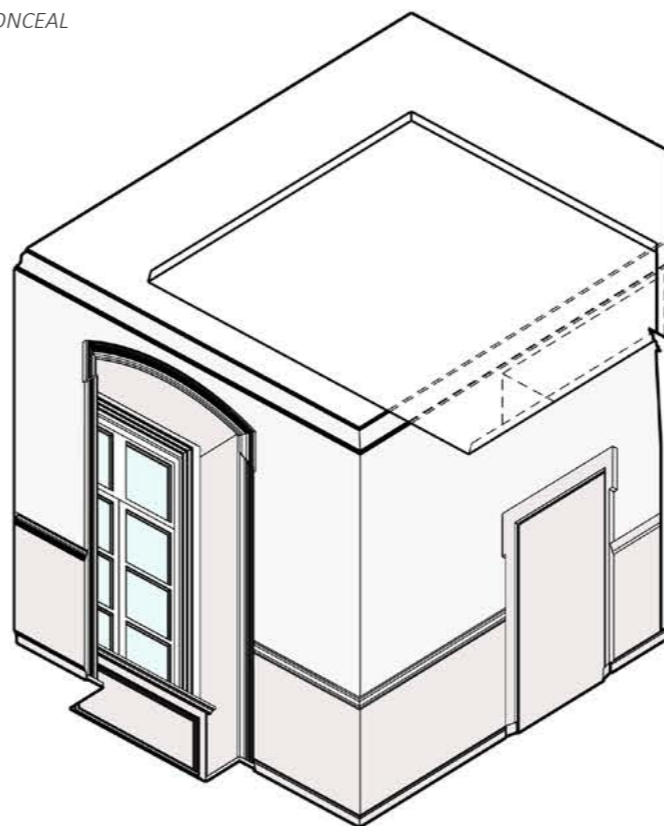


Removal of suspended grid ceiling and surface mounted services
Repair and reinstate decorative elements compromised by current arrangement.

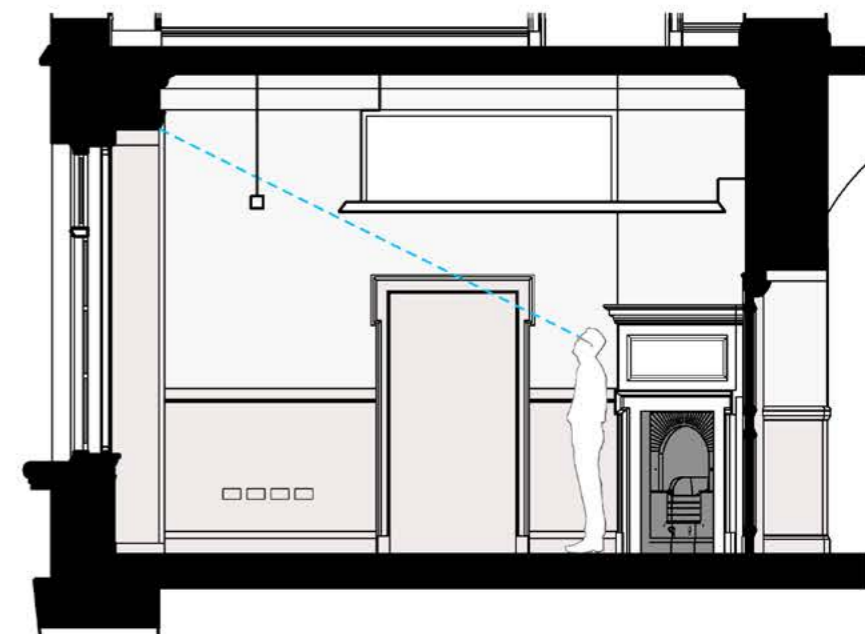
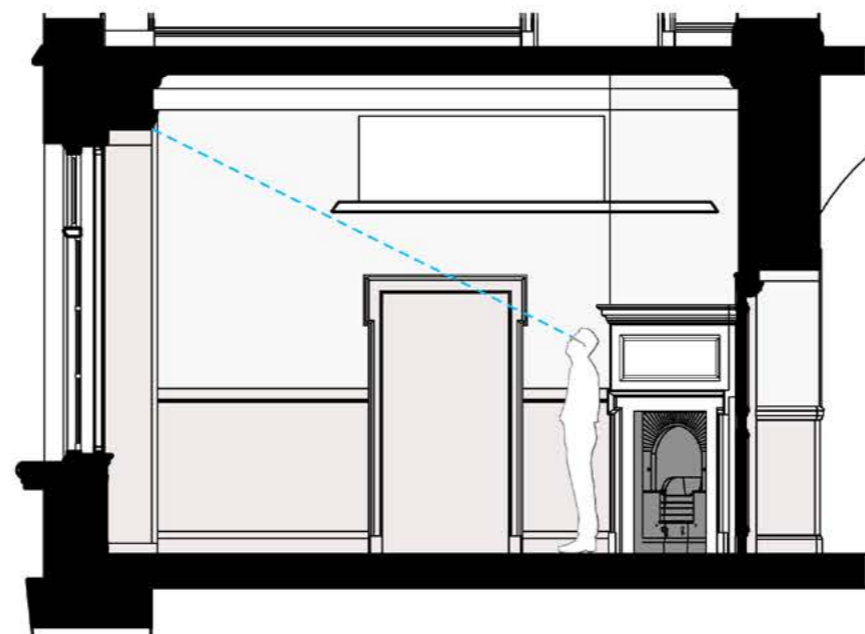
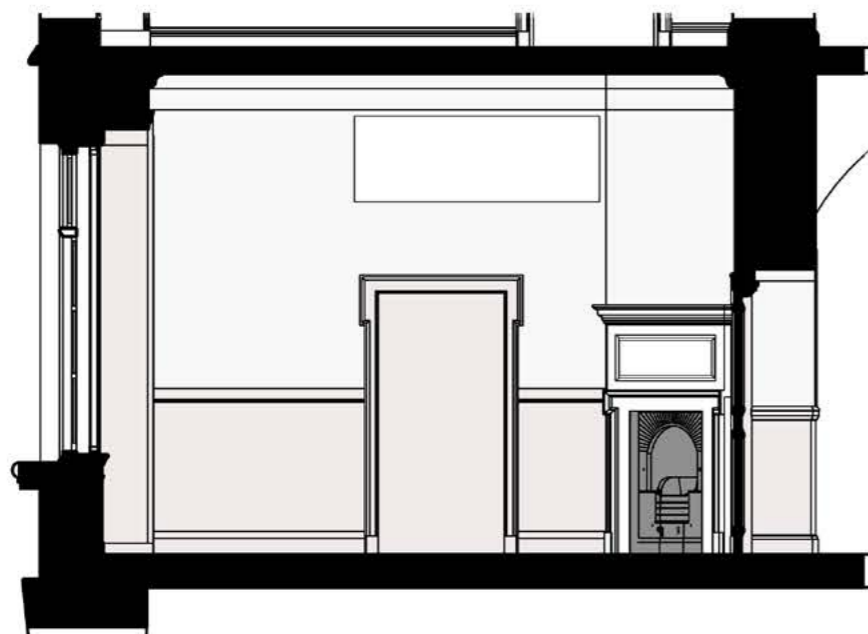
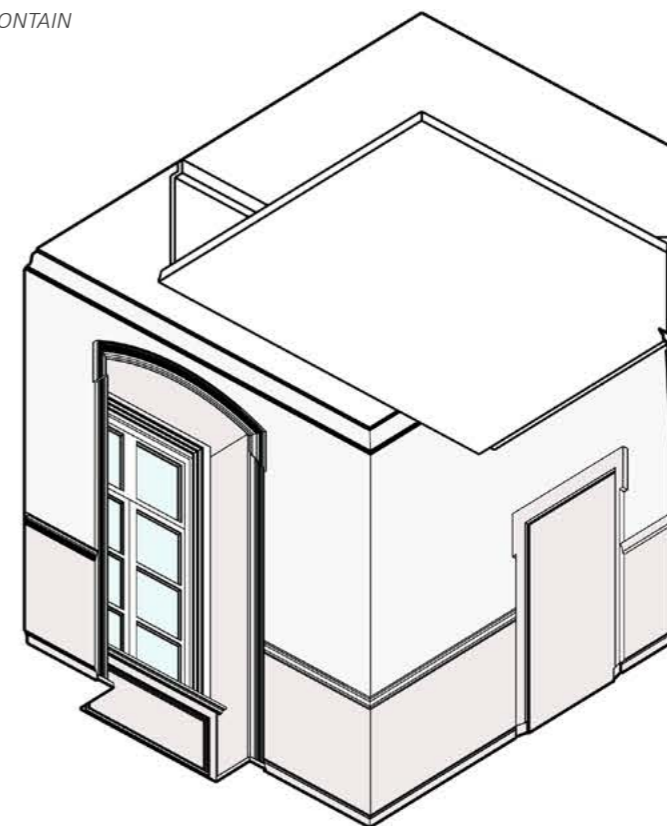
CONNECT



CONCEAL



CONTAIN



Creation of physical openings within office partition walls .
Set as high as possible within the room but beneath existing cornice and downstand features.
Set out to avoid clashing with corner chimney pieces.

Suspend a simple raft to conceal services
Set off from the existing walls and as far from the external window elevation as possible

Enclose services distribution to provide sufficient acoustic mitigation.
Incorporate lighting, ventilation grilles and other new services.

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5.17 Building conservation proposals overview

5.17.1 The repair proposals are based upon an understanding of the survey data collected since 2017.

5.17.2 This has informed the developing 'menu of repairs' which seeks to define the spectrum of works necessary. This menu addresses all fabric and affects brickwork, stone masonry, timber and joinery, rainwater goods, metalwork, leadwork and the roof slating.

5.17.3 These repairs have a range of order / scale to address further deterioration and structural consolidation, encompassing making good and remediation to renewal and replacement.

5.17.4 This menu will be re-validated following conservation cleaning (which is also subject to re-validation) and further surveys once scaffold is erected.

5.18 External fabric repairs and cleaning

5.18.1 Internal and external surveys have been undertaken to determine the condition of the building fabric. This information has been used to catalogue the condition of the building's fabric and to:

- Determine the scope for remedial works with priority being given to fabric repairs that are required to safeguard the integrity of the building's structure and finishes; to ensure the building is wind and water-tight; and to protect the building fabric in the long term. This includes repairs to the masonry, slate and lead roofs, and windows.
- Inform the development of a planned maintenance strategy.

5.18.2 These surveys have also identified the requirement for a series of more detailed surveys that are currently ongoing, to investigate inconclusive findings further and establish the cause of the defect, the extent of damage and the scope of remedial works required.

5.18.3 Visual and thermographic survey techniques were the main methodologies used for the external fabric condition.

5.18.4 Visual survey

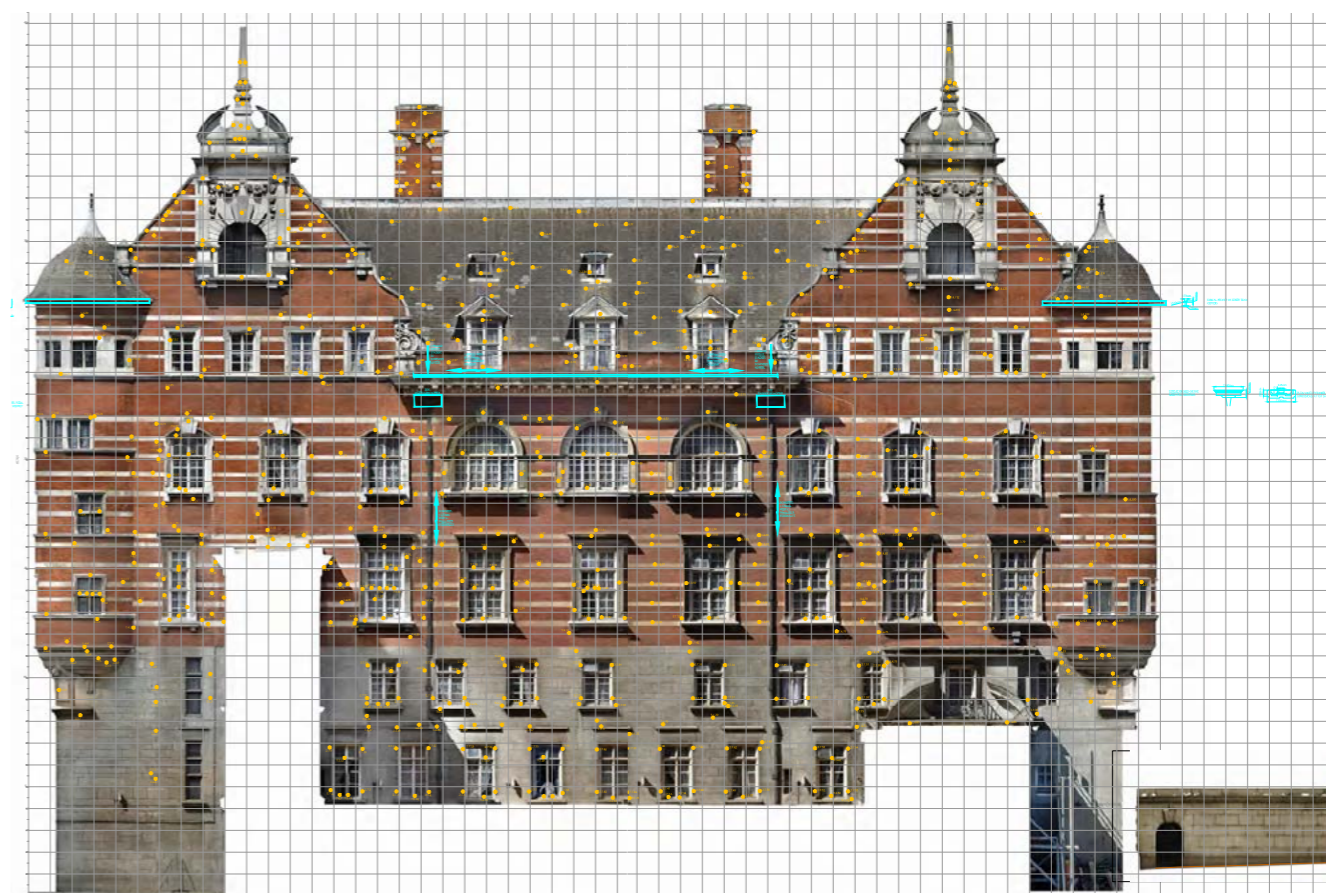
5.18.4.1 A detailed visual assessment of the external envelope of the building was undertaken. The survey was carried out at a distance of 4 metres approximately from each facade, depending on access, and used a high resolution digital camera and wide angle lens to record the findings. A series of overlapping images was taken in a grid arrangement. Each image has been catalogued, defects logged for reference and location, and have been electronically 'stitched' together to provide a seamless mosaic, of a complete facade.

5.18.5 Thermographic survey

5.18.5.1 This was undertaken using a nondestructive remote sensing survey technique of Thermography that uses a long wave infra-red thermal camera to locate variations across the external facade surface of the structure. Temperature differentials identified through the use of thermography can be directly attributed to conditions such as elevated moisture, spalling and/or voiding. This technique can identify locations where water may be retained on the wall surfaces and consequently areas where likely stone deterioration - i.e. the development of cracks, spalls/delamination etc



Thermographic survey example images

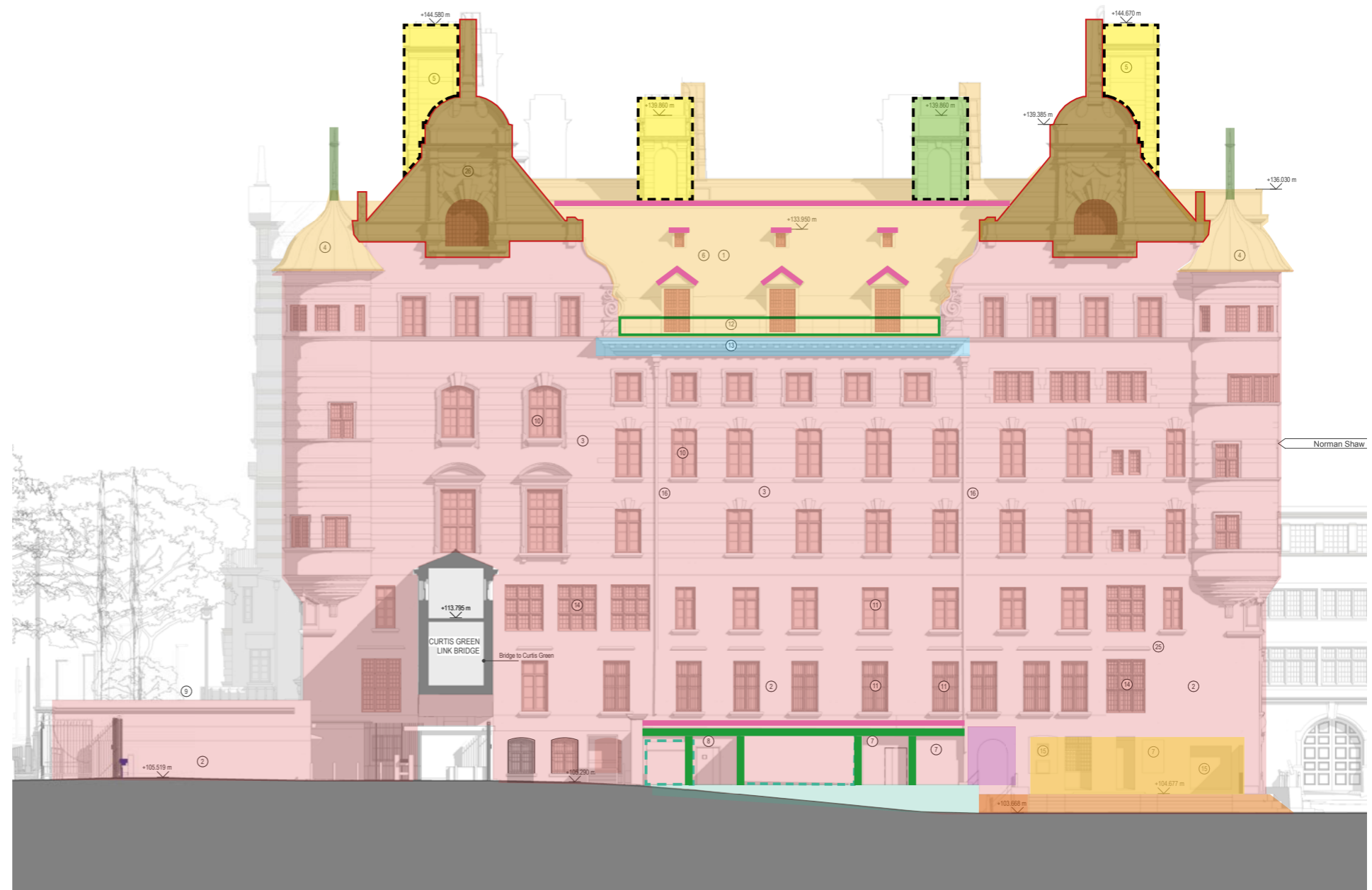


South elevation - visual inspection of external fabric and drainage condition

5.18.6 Elevation works

5.18.6.1 The following items outline the elevation repair and refurbishment works, using the north elevation as an example.

- Careful facade cleaning and fabric repair, including removal of organic matter, making good and preventing further deterioration.
- Windows repaired, refurbished and repainted.
- Comprehensive roof repair, including slates (reusing existing wherever feasible), leadwork, stonework and underlying substrate above truss and rafter line. Insulation introduced between rafters. Gutters repaired. Lightning protection replaced and re-integrated.
- Stone repairs to pediment and ridge.
- Stone Repairs to cornice
- Reconstruction of existing chimneys
- Repairs to Portland stone and brickwork at retained chimneys
- New leadwork to dormer roofs, cheeks, flashings and roof ridges / valleys. New lead drip over refurbished ironwork
- Existing ironwork revealed, repaired and refurbished, including new paint protection
- Existing metal railings to be repaired, consolidated and decorated
- Repairs to roof finials
- Reinstatement of original paired window reveals and windows with inset louvred grille to one pair.
- Door reinstated within recovered granite opening
- Window removed and cill lowered to make new door opening
- Removal of portacabin and shed
- Decking removed, felt roof replaced with new hard landscaping prior to installation of plant
- Plinth reconfigured as part of landscape re-setting. Balustrade added

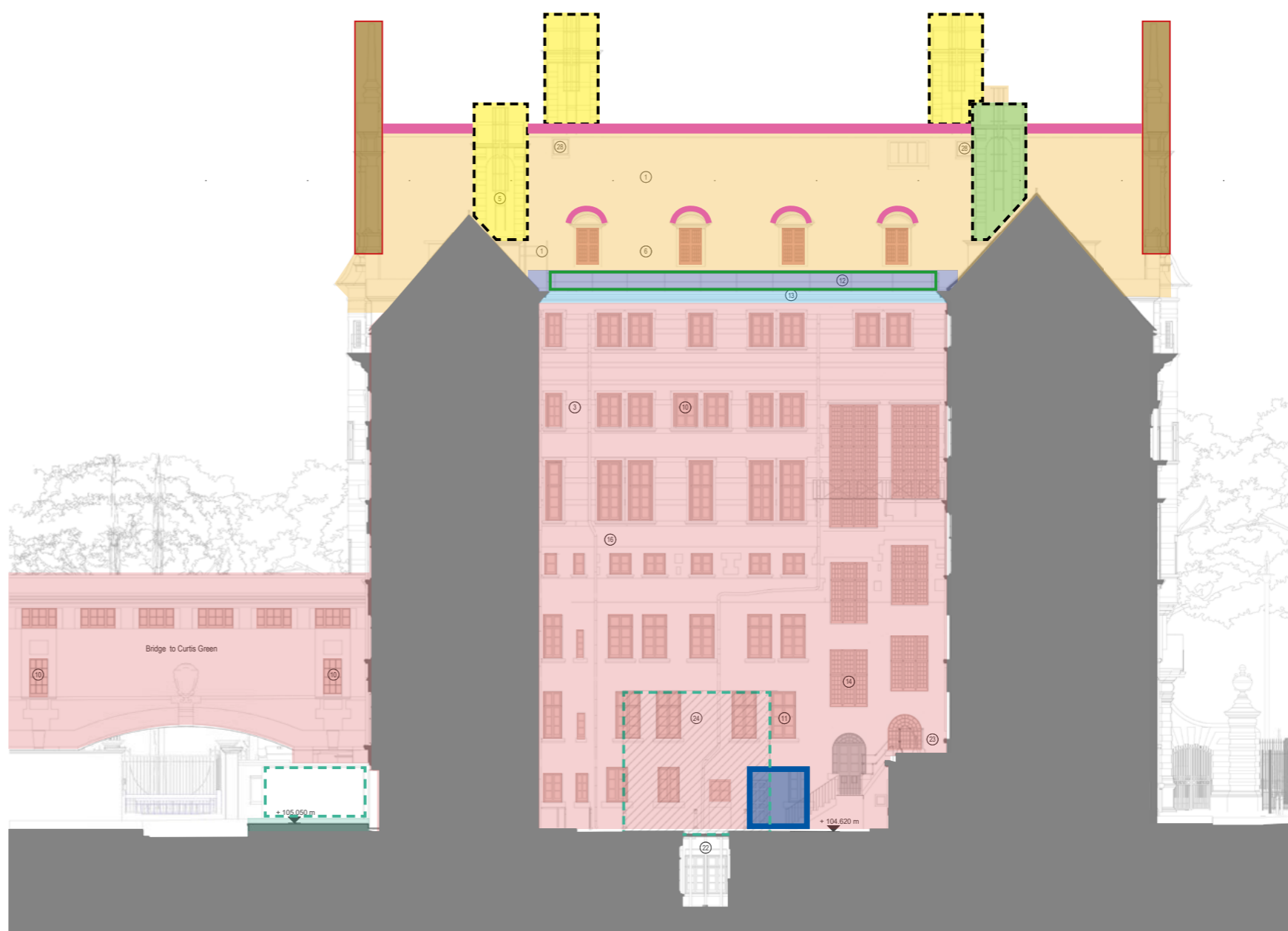


Illustrative proposed north elevation showing scope

5.18.7 Courtyard works

5.18.7.1 The following items outline the courtyard elevation repair and refurbishment works, using the east elevation as an example.

- Careful facade cleaning and fabric repair, including removal of organic matter, making good and preventing further deterioration.
- Windows repaired, refurbished and repainted.
- Comprehensive roof repair, including slates (reusing existing wherever feasible), leadwork, stonework and underlying substrate above truss and rafter line. Insulation introduced between rafters. Gutters repaired. Lightning protection replaced and re-integrated.
- Cutback to roof line to create new courtyard maintenance access gallery with louvre panel eaves detail.
- Stone repairs to pediment and ridge.
- Stone Repairs to cornice
- Reconstruction of existing chimneys
- Repairs to Portland stone and brickwork at retained chimneys
- New leadwork to dormer roofs, cheeks, flashings and roof ridges / valleys
- Existing metal railings to be repaired, consolidated and decorated
- Repairs to roof finials
- Decking removed, felt roof replaced with new hard landscaping prior to installation of plant
- Removal of portacabin, external furniture and fittings
- New opening to make new accessible building entrance
- Removal of non original steps and restoration of facade and window to original format



Illustrative proposed courtyard section showing scope

5.19 Refurbishment of north elevation

5.19.1 Damage caused by the removal of northward projecting buildings at Norman Shaw North at the time that Richmond House was originally developed has left the elevation with an area of temporary brick infill. The remaining original iron columns and beams and edges of stone cladding are exposed to the elements. Repairs are necessary and this also represents the opportunity to refurbish and remodel the external elevation at the lower ground floor level.

5.19.2 In addition, the plant enclosure and landscape proposals in this area can provide a degree of consolidation and re-presentation at the base of the building. Proposals for the elevation have developed in three sections, the areas of which are outlined in red on the elevation drawing.

5.19.3 Three windows set within a section of brickwork adjacent to the Curtis Green Bridge (see Area 01 on the adjacent elevation) represent a material and architectural language shift in the existing elevation. Proposals seek to modify one of these windows to provide fire fighting access and egress and also accommodate a new dry riser inlet.



Shaw's original drawing for the north elevation showing laundry pavilion

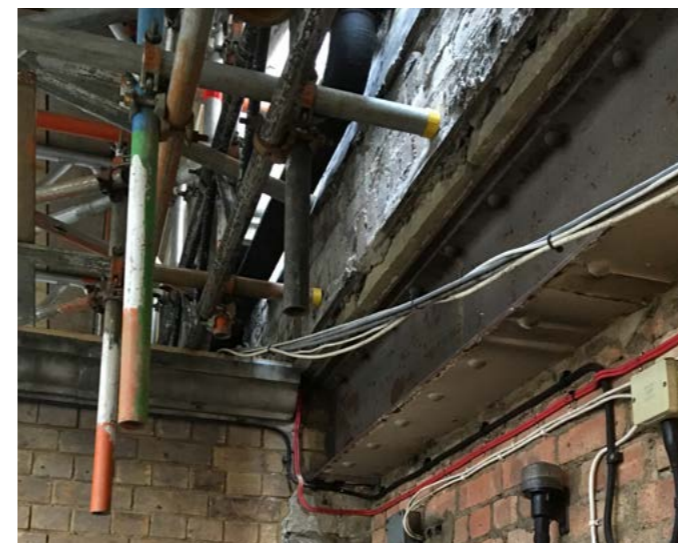
- ① Modification of an existing window to provide a new fire fighting access
- ② Refurbishment of existing columns and beam with infill construction.
- ③ Reinstatement of existing door and window openings, one with louvred infill



North elevation 1939-1940 (Parliamentary Archives)



Shaw's expressed structure in Liverpool White Star Line Headquarters



Existing condition of beam



Existing condition of columns

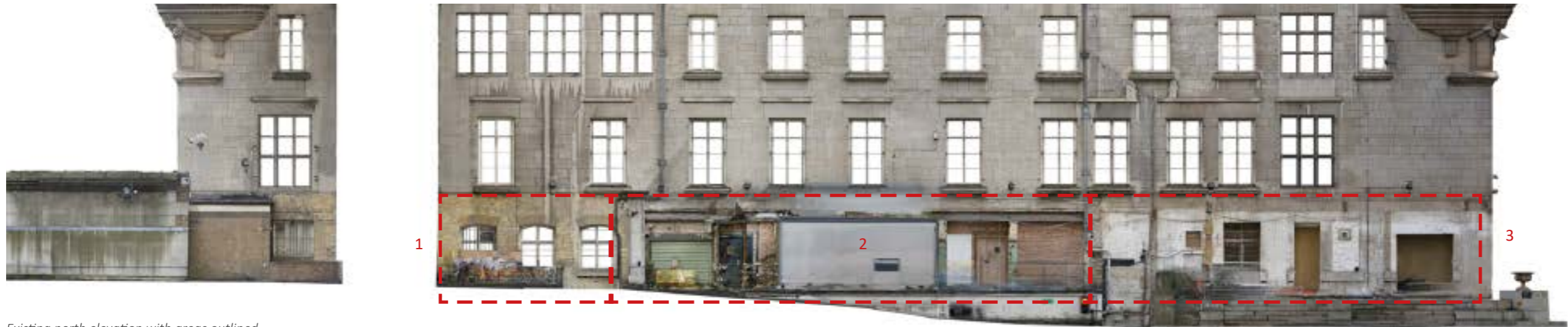
5.19.4 The area to the centre of the elevation (Area 2) is where the former laundry pavilion has been removed and rough blockwork infill construction fills the gaps between the original iron structural elements, that are variously encased or exposed. The restoration and consolidation approach comprises:

- Facing brickwork to be cleaned and re-pointed, including removal of existing bitumen and loose/broken bricks replaced with matching
- Introduction of new lead-clad drip to provide weathering and protection to retained iron metalwork
- Repair and re-painting of the wrought iron metalwork, beam and columns
- Simple, infill facade set behind the column line, incorporating a clerestory light to bring daylight into the kitchen space behind

5.19.5 Whilst clearly modified over time, Area 03 within the elevation reveals the window openings, heads and cills of the original design intent drawings and construction. It is proposed that these are reinstated and the stonework surrounding the openings repaired. The eastern most window will be fitted with louvres to support the ventilation building services to the catering areas behind. The original arched door opening will be reinstated with a new door matching the design intent of the original, to provide service access from the north.



North elevation bay study



Existing north elevation with areas outlined



Proposed north elevation

5.19.6 Enclosure Design

5.19.6.1 A new enclosure structure is required to the base of the north elevation, directly in front of the restored area of north facade. This has been developed with an architectural identity and is comprised of base, body and head elements, translated as plinth, post and beam structure with infill panelling, terminated by an 'entablature', and cornice.

5.19.6.2 The scaling of the elements has been adjusted to have an equivalence to the east pavilion and to respond to the weight and character of the granite base, which comprises the immediate context.

5.19.6.3 This scaling also responds to the oblique views that are most common to the enclosure, helping to maintain a sense of visual solidity and balance. The portrait aspect of the resultant bays responds to the facade fenestration above.

5.19.6.4 Differentiation of the plinth from the enclosure building over, provides a resolution to the varying ground levels of Curtis Green and allows for future re-installment of the original ground plan around NSN.



Enclosure elevation in the context of the full North elevation

5.19.6.5 The enclosure is proposed as a structural metal construction with overcladding. The structural grid references the original structure, restored as part of the elevation repair works, to result in the same number of bays.

5.19.6.6 The structural grid is less dogmatic at east and west elevations, where the enclosure is more responsive to the immediate context and need to provide access. This results in a greater degree of solidity to these end facades.

5.19.6.7 The height of the enclosure matches the height of the lost structure that previously occupied the space, and is set one brick course beneath the granite cill of the ground floor windows above.

5.19.6.8 An offset 'shadow gap' has been introduced to space the enclosure from the building. This has been tested to provide the right balance between divorcing the enclosure and revealing too much of the facing brickwork that was never designed to be seen (particularly from the western view).



East elevation

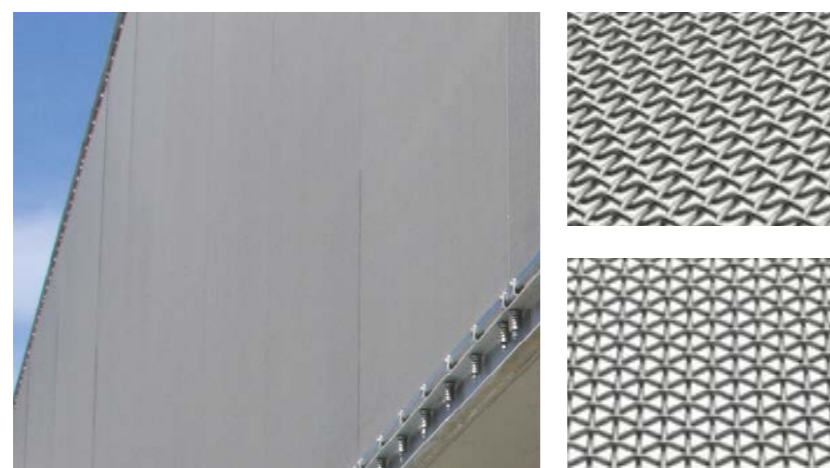
5.19.6.9 The proposed finishes for the enclosure comprise metal over-cladding, such as self-finished or painted steel and architectural wire mesh that together compliments the granite tones.

5.19.6.10 Joints between panels will be carefully set-out and detailed to maintain the scale of elements and provide subtle differentiation and articulation where necessary.

5.19.6.11 To meet air flow requirements, mesh of 50% open area is required within the bay panels. To preserve a sense of solidity, high density mesh is proposed to help conceal views through, particularly from the oblique views.

5.19.6.12 The base plinth panels are to have a smaller scaling and be tonally darker, to provide differentiation from the 'building' above.

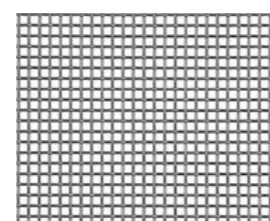
5.19.6.13 The adjacent balustrade is also tonally darker to differentiate it from the enclosure.



Example stainless steel wire mesh - tone and 'solidity' in oblique view
DOKA-MONO 1601 by Haver & Boecker



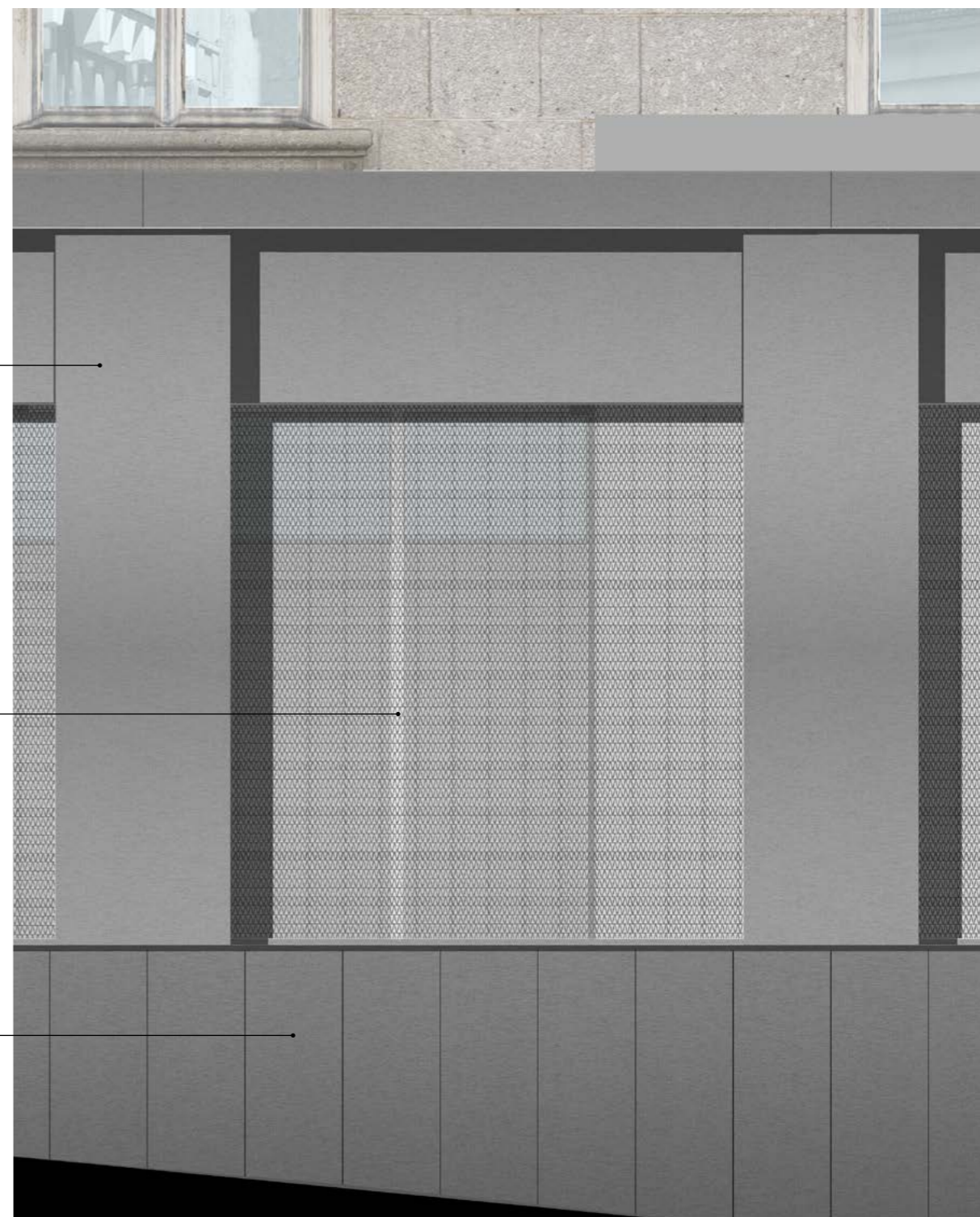
Self-finished / painted metal



Stainless steel wire mesh



Treated / finished metal for tonal differentiation and greater robustness



North elevation Enclosure bay study



Proposed view from Curtis Green Gate



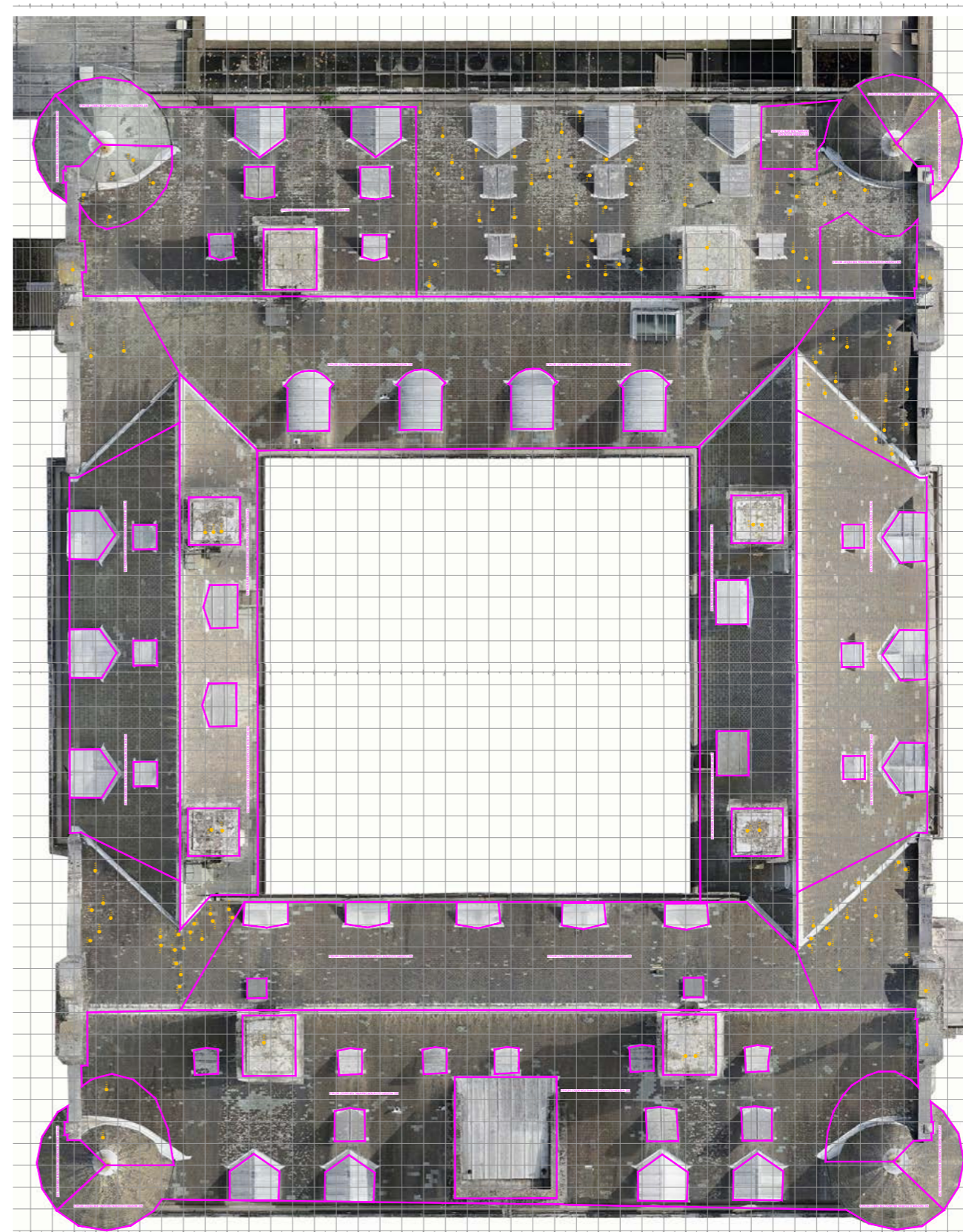
Proposed view from Laundry Road

5.20 Main roof

5.20.1 Repair proposals

5.20.1.1 There is comprehensive package of structural and fabric repairs proposed as part of these works, including replacement of sections of rotten rafters, purlins and sarking boards, repair to steel rafters, replacement of leadwork, and the lifting and relaying of the existing roof slates, as well as repairs to the asphalt gutters and replacement of failing lead pipe outlets and downpipes.

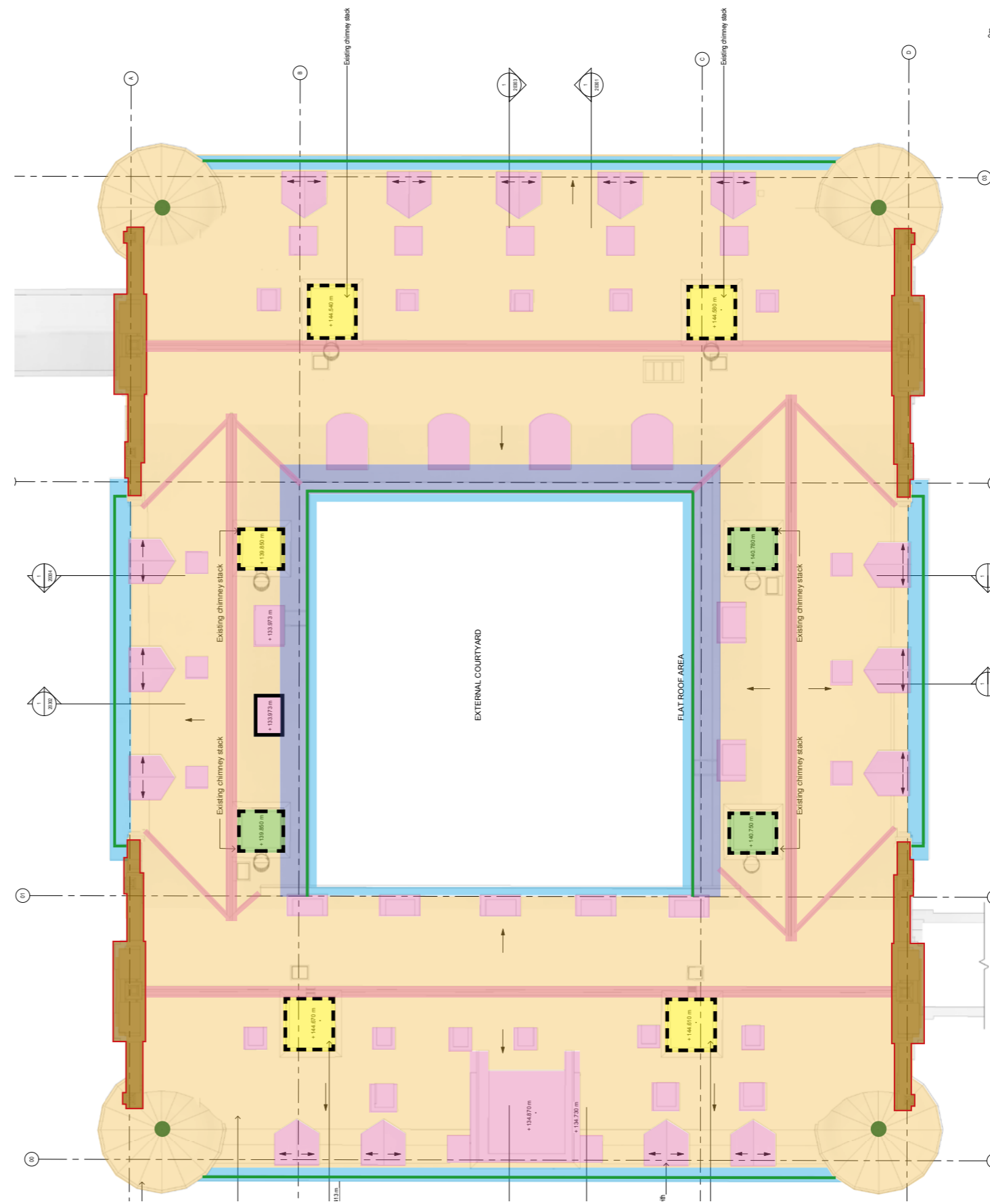
5.20.1.2 The major refurbishment of the roof, dormers and chimney stacks also provides an opportunity to address fundamental building performance issues.



Existing roof photo from above, showing defects

The comprehensive repair to the roof up to truss and rafter line, including the following items:

- Comprehensive roof repair, including slates (reusing existing wherever feasible), leadwork, stonework and underlying substrate above truss and rafter line. Insulation introduced between rafters. Gutters repaired. Lightning protection replaced and re-integrated.
- Cutback to roof line to create new courtyard maintenance access gallery with louvre panel eaves detail.
- Stone repairs to pediment and ridge.
- Stone repairs to cornice
- Reconstruction of existing chimneys
- Repairs to Portland stone and brickwork at retained chimneys
- New leadwork to dormer roofs, cheeks, flashings and roof ridges / valleys
- Existing metal railings to be repaired, consolidated and decorated
- Repairs to roof finials
- Dormer window extended to become a door



Illustrative roof proposals

5.21 Internal fabric repairs and cleaning

5.21.1 The repairs and cleaning strategy will be developed following the principles and best practices and recommendations published by Historic England and the conservation-led approach outlined by Donald Insall Associates.

5.21.2 The detailed design of repairs are to be informed by surveys of the building's structure and an investigation of the nature and condition of its materials and the causes and processes of decay.

5.21.3 The investigative works are planned on a two-stage approach. The first involves establishing an overview of the significance of the building and its general condition through visual inspection to inform the programme, access issues and resourcing and provide the base for the second line of surveys more detailed and targeted at specific areas.

5.21.4 The assessment of significance has been conducted and a hierarchy of significance has been established for the fabric of the building. Interior features of high significance and most sensitive to change are listed below:

- Original staircases.
- The principal staircase with its grand stone stair and generous landings.
- The elegant winding stone service stair in the northwest corner.
- Original painted metal balusters and timber handrail.
- Original joinery such as doors, windows, skirtings and dados.
- Existing original door types:
- Original double-panelled timber doors with plaster architrave.

- Double panelled timber doors with brass knob and rim lock.
- Painted and moulded timber shouldered architraves around windows and doors.
- The timber benches in the corridors, which appear to be original.
- Original casement windows with modern wired glass serving a glazed brick lightwell.
- Original painted casement timber window with original segmental brick arch.
- Original timber casement windows in shallow arch headed recess with panelling below.
- Original stone mullion and transom windows with metal comes.
- Original iron casement dormer windows.
- Original ironmongery.
- Original moulded plaster skirting, dado rails and architraves.
- Original chimney pieces types:
- Original fireplaces with timber overmantel, marble slips and grate.
- Cast iron radiators fixed in panelled recesses below windows.
- Visible original structural detailing, such as arched openings and barrel and cross vaulted ceilings.
- Basement original brick vaulted ceiling and brick arched openings.
- Structural steel visible with arches over accommodating window heads.



Principal staircase and windows, 1970 (London Metropolitan Archives)



1975 Corridor refurbishment (Parliamentary Archives)



Commissioner's room, 1970 (London Metropolitan Archives)



Commissioner's room entrance and chimney piece, 1970 (London Metropolitan Archives)

5.21.5 Devising the repair strategy in line with Historic England guidance and the conservation-led approach results in the following steps:

- Understanding the significance of the spaces.
- Understanding the defects.
- Forming policies for repairs.
- Evaluating options with relevant stakeholders.
- Confirming final repair proposals when full access is available and post enabling works.

5.21.6 Stone/marble fireplace surrounds

5.21.6.1 Proposed methodology:

- Cleaning would be carried out using a PH neutral conservation detergent.
- Paint removal would be specified from paint removal trials.
- Pointing of open joints.
- Potential microcrystalline wax finishing.
- Stone indent repairs may be carried out where surface damage is too substantial for filling or pointing to suffice. Repair and replacement stone should be of matching type. If the original stone is no longer quarried and reclaimed stone is unavailable, the replacement should be the nearest possible match, both geologically and visually. Best practice dictates that the natural geological bedding planes of the stone should be observed and stones laid with the correct orientation of the bedding planes, relative to their location.
- Flue cleaning in advance by others/capping assessment.
- Re-securing/replacing tile surround.

5.21.7 Timber panelling and joinery repairs

5.21.7.1 Proposed methodology :

- Photographic and written records should be completed before, during and immediately after all repairs and remedies and should be reviewed by a supervising conservator on a daily basis.
- Re-secure loose panelling.
- Assess, record and identify all active fixing points along with those that have failed to establish safest and least intrusive method of re-securing (or indeed, temporary removal for resetting if required).
- Panelling should not normally be removed from a wall for unless absolutely necessary (for example, where it has become saturated by flooding and has to be removed to allow for controlled drying).
- Repairs should be carried out in-situ wherever possible. Where dismantling is unavoidable, the panelling should be fully recorded prior to commencement of the work and each component should be fitted with a securely fixed, durable identification tag.
- Establish the most suitable method of re-fixing eg. adhesive, metal dowels, staples, batons etc.

5.21.8 Closing gaps and filling

5.21.8.1 Where panel boards have cracked or split, a decision should be made about whether to repair or leave them as part of the visual character of the panel. The splits will be acting as movement joints, accommodating the dimensional change in the timber caused by fluctuations in moisture content.

5.21.8.2 Assess, record and identify gaps for closing and those areas which require filling to establish the most suitable method of repair.

5.21.9 Joinery indent repairs

5.21.9.1 Repairs to the framing of panelling are best carried out in situ by carefully cutting away damaged or decayed timber, and piecing-in suitably shaped timber inserts.

5.21.10 Repairing damage/splits with resin fills.

5.21.10.1 Identify a suitably strong, but flexible, chemically stable filler material with good adhesive properties according to the type and condition of the timber. Consider the application and environmental conditions such as a polyester resin-based filler which acts as a repair and a consolidant in semi-decayed areas

5.21.11 Refinishing to degraded surface

5.21.11.1 Surfaces should be suitably prepared for refinishing by ensuring the repair surface is sufficiently free from blemishes and defects, and to remove oil, wax, dirt and other contaminants which might interfere with the application or subsequent performance of the finish that is to be applied.

5.21.11.2 Surfaces should be carefully tested for solubility and preparation should not result in the removal of finish or wood from the original surface that abuts the repair



Example of existing damaged joinery item to be repaired



Example of existing damaged joinery item to be repaired

5.22 Secondary glazing to windows

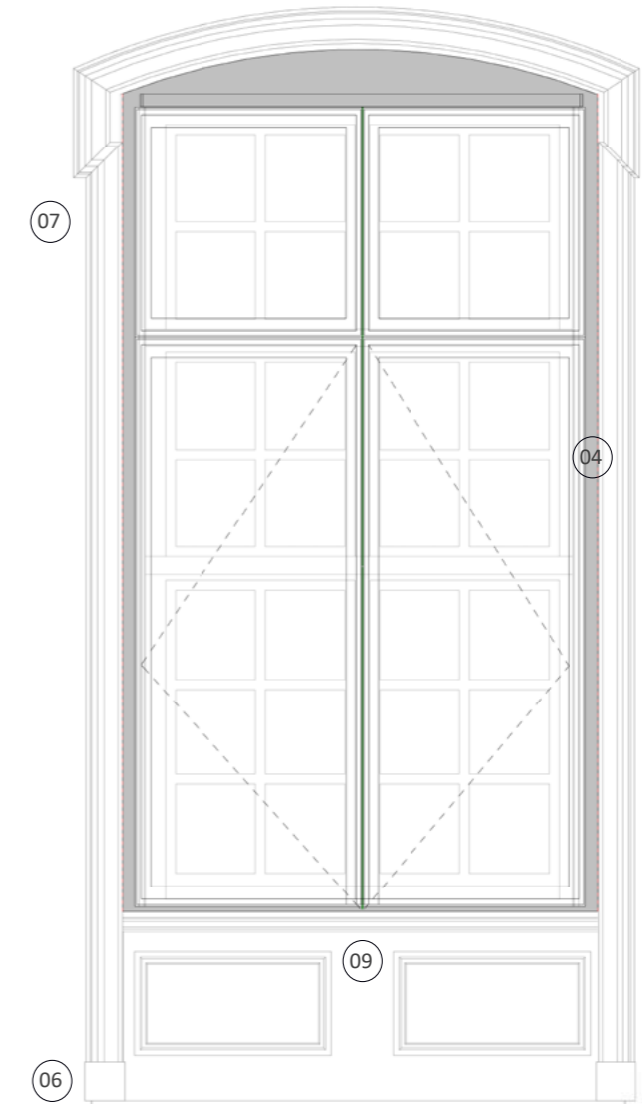
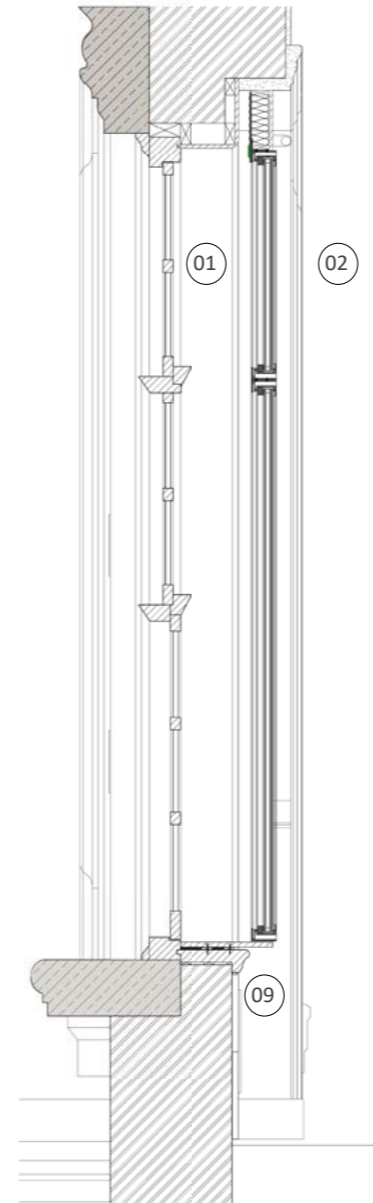
5.22.11.1 Secondary glazing will be provided to all windows in Norman Shaw North external perimeter facades, designed as either sash or casement type windows with glazing panels and frames to meet the requirements set out in the security, acoustic and thermal reports. Windows sitting below the new courtyard roof, will have secondary glazing to meet essential thermal and fire requirements.

5.22.11.2 The secondary glazing is designed to be lockable and locked in normal operation and operable only for access, maintenance and cleaning. The scale and arrangement of mullion and transom elements to the secondary glazing will reflect the existing historic window detailing.

5.22.11.3 In order to meet the performance requirements, the secondary glazing will require fixings with steel brackets directly to window reveals, head and jambs. Therefore further knowledge about the existing masonry strength is needed. The data is typically gained using pull tests and opening up work and as such, these will be required as part of finalising the design.

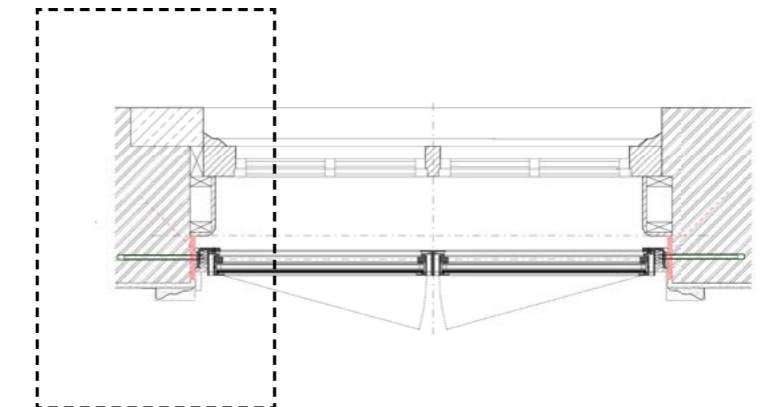
5.22.11.4 The existing window frame and layout designs vary throughout the building and there are a variety of surrounds / mouldings and linings including timber, Keenes cement or plaster. For the pull tests, some of these finishes will require to be partially removed in order to expose the underlying masonry.

5.22.11.5 The principle adopted for the secondary glazing looks to minimise any removal, alteration or adaptation of the existing window and reveals. Subject to pull test surveys the secondary glazing would sit within the depth of the window reveal with a 'shadow gap' between the existing reveals and the secondary glazing frame. Where existing linings are removed these will be re-instated and / or repaired. Where adaptation is required to cills, linings, etc these will be local to suit the specifics of each location / window type.



Principles of secondary glazing

- 01 Refurbished and repaired existing windows
- 02 New secondary glazing and framing, profile and arrangement to suit performance criteria
- 03 Secondary glazing fixed to masonry with local repair to existing finishes (e.g. Keene's cement)
- 04 Shadow gap 'picture frame' perimeter detail between existing reveal and framing
- 05 Existing decorative mouldings to be retained and repaired / refurbished
- 06 Existing skirting retained
- 07 Existing decorative architrave retained
- 08 Requirement for supporting structure to be confirmed with specialist fabricator
- 09 Original timber profile reinstated to suit glazing installation, where new cill is required, to match existing profile



See detail over

5.23 Approach to existing doors

5.23.1 The design proposals assume the retention, refurbishment and upgrade of existing office doors, where feasible, to meet the required fire performance. This includes those doors between offices.

5.23.2 Modern timber and glass doors within circulation areas will be removed and replaced as required to meet fire performance requirements (refer to proposals earlier in this section).

5.23.3 There are anticipated to be 7no. doors to be removed as part of the works. These doors and frames will be retained or used for the general refurbishment of the existing doors and frames.

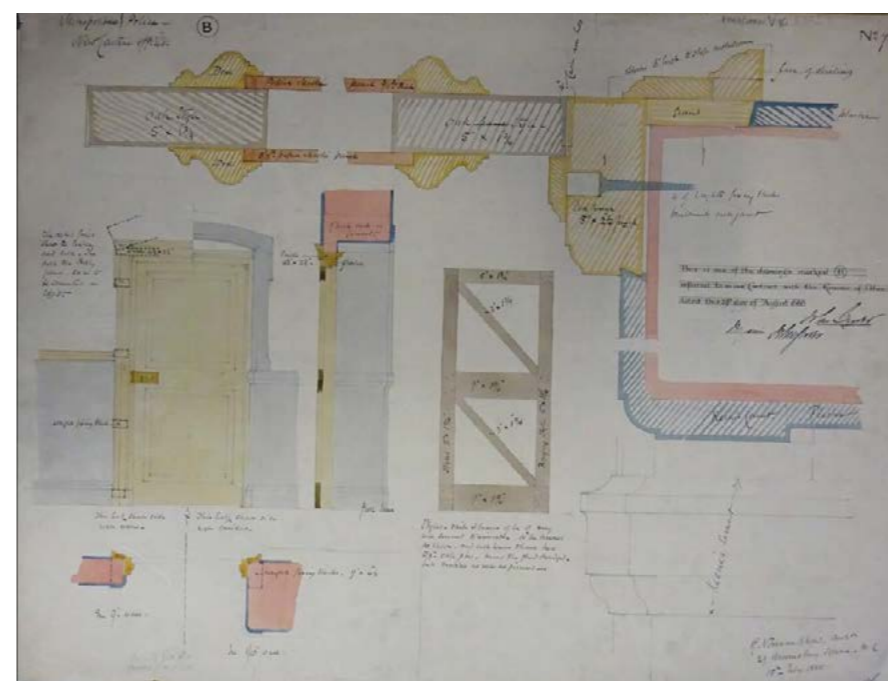
5.23.4 Proposed works to existing doors

5.23.5 The archive drawings indicate the existing doors are oak framed with 'papier mache' infill panels, as illustrated in the adjacent illustration. The majority of the doors open onto the existing perimeter corridors and will need to provide a level of fire protection to meet current regulatory requirements. A passive fire assessment has been undertaken to establish the likely upgrades to provide both 30 minute and 60 minute fire protection. The strategy developed and adopted looks to retain as much of the existing door fabric as possible, whilst still providing the required level of protection.

5.23.6 Existing doors that do not require fire upgrades are to be retained, refurbished and decorated, as part of the general refurbishment of the interior spaces. Existing doors requiring upgrade to achieve 30 minute fire protection will replace the existing 'papier mache' panel with a wood veneer faced fire rated board. The existing softwood deal beading will be replaced with hardwood to match the existing profile. The retained frame and oak door leaf will be carefully repaired and refurbished including update of ironmongery and fire seals to achieve the required fire performance. Existing 'knobs' are to be retained and reinstated within new rim locks and cylinders.

5.23.7 Existing doors requiring upgrade to achieve 60 minute fire protection will retain the existing door frame and replace the leaf with a new fire rate door leaf to match the existing in detail and profile, with modifications to the door frame to accommodate the increased door thickness requirements. All stop beads are to be replaced with hardwood to match existing profiles.

5.23.8 There are a number of new proposed doors within new and existing openings, these will reference the existing door details and profile to create a 'family' of door updates. Where doors require vision panels these are to be replaced with new door leaves. Doors requiring vision panels are typically limited to the tea points which are generally 2no. per floor.



Archive Information: Contract drawing for the doors with 'papier mache' panels and pegged construction © RA Drawings Collection



Office doors within Norman Shaw North

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