

4.2 Repairs and Alterations to Windows: Findings & Recommendations

There are a number of window types within the library which have been subject to a series of alterations, although all remain as leaded lights within Bath stone carved surrounds as per Gilbert Scott's original design. However, there are now a number of areas where water ingress is evident and a number of lights have only a 5-10 year lifespan left. There are also areas of missing glazing and ironmongery and a number of the opening lights no longer function due to loss of ironmongery, or through being purposefully sealed shut. The removal of the mezzanine within the annexe is also of great benefit, allowing the windows here to again be visible in their entirety. The type, condition and proposed repairs and alterations are set out in the following schedule, but in summary repairs include:

- Removal of failing lights and re-glazing making sure to match existing lead calm. The glass would be chosen to replicate the quality of the existing, likely constituting conservation type glass.
- Additional tie bars or steel supports within the lead matrix will be introduced, in particular where windows are showing bowing.
- Removing casements, shot blasting them back to bare metal and powder coating them to match the grey/black of the existing.
- Original ironmongery will be refurbished where possible, and new items will be installed to match as close as possible the originals.

A number of alterations are also proposed:

- There are a series of sliding lights to the north elevation of the ground floor and to all first floor windows within the main library. These have failed in all locations at ground floor and are currently not used at first floor level with the pulley systems removed and the sliding units fixed shut. The failure of these windows is likely due to a combination of the original design, a lack of maintenance and inadequate ironmongery. In discussion with Salisbury Cathedral Glass, they believe that the force of the sliders being lowered causes the fixed lights and sliders to be shaken to the point where this causes damage to the glazing and frames. This may be partly due to the windows not being regularly oiled, or could be that the design of the tracks does not promote a smooth and even operation. The simple pulley system also does not allow users to control the

rate at which the light is lowered, often resulting in the lights dropping quickly leading to shaking.

It is the intent to try and replace these with sliding lights to match the existing, but to propose a more robust pulley system and frame to help prevent future failing. If this is not possible, we would look to replace them with casements to match the south elevation. From historic images from the 1930's we believe that sliders may have also been installed on the south elevation, as a horizontal break can be seen. These are now casements, which would suggest that a solution for repairing the sliding units could not be found at this time and were likely replaced in the 1950's when other refurbishment works were carried out. At ground floor level, the new casements would match the north elevation, with a single casement to the east light. At first floor level, the casement would be in the top section of the window only, keeping the horizontal division as currently seen.

- The windows to the west elevation of the annexe have been altered to incorporate a casement within the upper lights when the mezzanine was installed within the 1950's. These are currently at a level which can be accessed via the mezzanine level. When the mezzanine is removed, these windows will be inaccessible and we are therefore looking to incorporate further opening lights at the lower level. This will be important to achieve adequate ventilation and a comfortable internal environment. We would propose a series of casements, with two out of each of the three lower lights adapted to be opening.

Vented pockets

Internal bars to east and west end casements to prevent falling



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- 01. Upper windows with central casement within the annexe
- 02. Burne-Jones stained glass with casement below
- 03. Sliding light to the north elevation of the main library

4.2 Repairs and Alterations to Windows: Findings & Recommendations



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Photo References: Window Repairs & Alterations

- 01. Sliding light to the ground floor of the main library
- 02. Close up of missing glazing to sliding unit
- 03. Surviving diamond quarries to west gable end
- 04. Burne Jones stained glass with casement below

- 05. Sliding light at the first floor of the main library
- 06. Close up of sliding light at first floor
- 07. Historic England image from the 1930's showing presumed sliding lights to the south elevation

4.2 Repairs and Alterations to Windows: Findings & Recommendations

REV: A

Ref	Location	Type	Condition	Suggested Repairs/ Alterations	Additional considerations
WG1	Ground Floor - Main Library	6 lights (3no below transom and 3no above) 2no tracery pieces. 1no side hung casement	Glazing in fair condition. Some bowing to the casement	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required	Diamond quarries remain
WG2	Ground Floor - Main Library	4 lights (2no below transom and 2no above) 1no small tracery piece. 1no sliding casement.	Glazing in fair condition but water ingress evident. Casement has been fixed shut due to poor condition	Slider to be removed and new slider/ casement installed with new handles and stays/ pulley system	On agreement with Conservation Officer
WG3	Ground Floor - Main Library	4 lights (2no below transom and 2no above) 1no small tracery piece. 1no sliding casement.	Glazing in fair condition but water ingress evident. Casement still operable but rusted	Slider to be removed and new slider/ casement installed with new handles and stays/ pulley system	On agreement with Conservation Officer
WG4	Ground Floor - Main Library	4 lights (2no below transom and 2no above) 1no small tracery piece. 1no sliding casement.	Glazing in fair condition but water ingress evident. Casement glazing is missing and has been replaced with plastic sheeting	Slider to be removed and new slider/ casement installed with new handles and stays/ pulley system	On agreement with Conservation Officer
WG5	Tower	Single lead light with border. Lower section contains side hung casement	Water ingress evident. Glazing in poor condition and casement not operable. Lead light has been removed and replaced with sheet glass	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required	Diamond quarries remain
WG6	Annexe	6 lights (3no below transom and 3no above) 1no side hung casement. Windows have been divided by mezzanine floor internally	Generally poor with water ingress. Casements in good order	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required. New hopper created in 12 or 3 lower lights with new ironmongery. Additional repairs may be required after removal of mezzanine floor	
WG7	Annexe	6 lights (3no below transom and 3no above) 1no side hung casement. Windows have been divided by mezzanine floor internally	Generally poor with water ingress. Casements in good order	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required. New hopper created in 12 or 3 lower lights with new ironmongery. Additional repairs may be required after removal of mezzanine floor	
WG8	Annexe	6 lights (3no below transom and 3no above) 1no side hung casement. Windows have been divided by mezzanine floor internally	Generally poor with water ingress. Casements in good order	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required. New hopper created in 12 or 3 lower lights with new ironmongery. Additional repairs may be required after removal of mezzanine floor	
WG9	Annexe	6 lights (3no below transom and 3no above) 1no side hung casement. Windows have been divided by mezzanine floor internally	Generally poor with water ingress. Casements in good order	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required. New hopper created in 12 or 3 lower lights with new ironmongery. Additional repairs may be required after removal of mezzanine floor	
WG10	Annexe	4 lights with 3no tracery pieces. Inaccessible	Inaccessible. Assume poor condition due to extent of vegetation over and insertion of mezzanine floor	To be assessed following removal of mezzanine floor	
WG11	Ground Floor - Main Library	4 lights (2no below transom and 2no above) 1no small tracery piece. 1no side hung casement.	Glazing is generally poor. Approx 5-10 year lifespan. Water ingress evident. Casement in good working order	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required	
WG12	Ground Floor - Main Library	4 lights (2no below transom and 2no above) 1no small tracery piece. 1no side hung casement.	Glazing is generally poor. Approx 5-10 year lifespan. Water ingress evident	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required	Creation of vented pockets internally to help protect Burne Jones panels
WG13	Ground Floor - Main Library	4 lights (2no below transom and 2no above) 1no small tracery piece. 1no side hung casement.	Glazing is generally poor. Approx 5-10 year lifespan. Water ingress evident	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required	
WF1	First Floor - Main Library	4 light window (2no below transom and 2no above) 1no small tracery piece. 1no side hung casement.	Casements operational. Ferramenta bars are rusting on the 3no fixed lights. Glazing generally poor with water ingress evident. Some bowing to glazing likely due to insufficient support bars	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required. Ferramenta bars removed, shot blasted and powder coated, with new stainless steel end welded to the bar end for refixing into the stone	Internal bars installed to prevent falling. Diamond quarries remain
WF2	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer
WF3	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer
WF4	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections. Lead light replaced with plastic sheeting	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer
WF5	Tower	2 lights (1no below transom and 1no above)	Water ingress evident. Glazing is coming away from stonework on the northern light. Some broken quarries and broken lead work on joints		Diamond quarries remain
WF6	Tower	2 lights (1no below transom and 1no above)	Water ingress evident. Glazing is coming away from stonework on the northern light. Some broken quarries and broken lead work on joints		Diamond quarries remain
WF7	First Floor - Main Library	4 lights (2no below transom and 2no above). 1no small tracery piece to each (not visible)	Casements operational. Ferramenta bars are rusting on the 3no fixture lights. Tracery piece has been removed for a vent to be installed. Glazing generally poor with water ingress evident. Some bowing to glazing likely due to insufficient support bars	Casement removed, shot blasted back to bare metal and powder coated. Handles and stays to be restored/replaced as required. Ferramenta bars removed, shot blasted and powder coated, with new stainless steel end welded to the bar end for refixing into the stone	Internal bars installed to prevent falling. Vent to be removed and glazing to be restored. Diamond quarries remain
WF8	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer

4.2 Repairs and Alterations to Windows: Findings & Recommendations

WF9	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer
WF10	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer
WF11	First Floor - Main Library	Single light with 1no sliding casement above	Generally poor with water ingress. Casement lights are coming away from frames and do not work with some missing metal sections	Slider to be removed and new slider/ side opening casement to match others installed with new pulley system/ handles and stays installed	On agreement with Conservation Officer
Roof level	7no gable end high level rose windows - Main Library	4no quatrefoil tracery pieces with 8no squints. Opening casement to top quatrefoil (not accessible)	Evidence of water ingress. Assumed glazing is in poor condition	To be assessed when access is possible. Assume new pulley system for opening light required	Diamond quarries remain
	3 no high level trefoil windows - Tower	Trefoil windows within stone tower roof (not accessible)	Inaccessible. Assume glazing in in poor condition	To be assessed when access is possible. Assume new pulley system for opening light required	Diamond quarries remain

Notes for all windows All lead light glazing to be removed for re-leading and replacement of missing areas as noted above. Care must be taken to match existing lead calm type. New glass type to be agreed. All to be agreed with Conservation Officer. The introduction of additional tie bars or steel supports within the lead matrix should be allowed for, particularly where windows are bowing

Works will require coordination with stone work repairs

Programme of maintenance for restored frames should be put in place

4.3 Internal Repairs: Findings & Recommendations

Floors

Both the ground and first floor have oak floorboards throughout of varying condition. At ground floor the most eastern bay has been carpeted, and lino has been laid along the central aisle. At first floor level lino has also been laid along the central aisle, as well as throughout the western and eastern bays. The annexe ground floor level has been lowered and consists of a screed with inset rails for the rolling bookstacks. The floorboards which are visible at ground floor have been heavily altered, with a large number of cut or damaged boards and evidence of woodworm activity. The quality and width of the boards also varies widely, ranging from 220mm to the south to 150mm to the north. Over 50% of the floor is also not currently visible due to the presence of the bookcases and lino. This means that we have to make some assumptions on the condition of the floors based on the condition of the boards we can see. The first floor appears to be in a better condition, although there is still evidence of woodworm, cut boards and adaptations due to the installation of contemporary services. The width of the boards is also more consistent being approx 170mm across the whole floor.

The floors will require removal at both levels; at ground floor this is due to the installation of new services and at first floor this is due to the strengthening of the steel beams. This provides us with the opportunity to look at these floors in the context of the project as a whole and ensure that floors of a quality which match that of the library are put back on completion of the repairs works.

We would therefore suggest at this stage it is sensible to assume a salvage rate of approximately 30% at ground floor level and 70% at first floor level based on the floorboards which are visible. We would suggest that salvaged boards be used initially at the first floor where there is likely to be a higher salvage rate and they are of a more consistent quality. We estimate that we would have sufficient salvaged boards to achieve this. At ground floor level we are assuming that we would need to supply 100% new boards and there has been some debate at pre-application stage whether these should be reclaimed boards or new. At this point we would not like to propose which boards we may use as we would like to explore this in greater depth with the College and Conservation Officer.

This would involve visiting other buildings with examples of both approaches, bringing full samples into the library to understand the visual impact, and understanding in more detail how the refurbished bookcases would sit beside any proposals.

The first floor will be raised by 12 mm to incorporate a new plywood deck and a ramped board will be incorporated at the existing threshold.

At first and ground floor levels, we will also be incorporating a series of floor boxes, with those providing power beneath study areas, and larger maintenance hatches at ground floor level. At ground floor, these will be incorporated within the new boards. At first floor level, these will be located, where possible, in boards of a lesser quality. The opportunity for insulating the ground floor will also be taken, with battens fitted to existing joists and rigid insulation laid over to ensure access can be maintained for below ground services.

The floor within the strong room has been overlaid with lino, but it appears to be a solid floor. Floor proposals for the annexe and link block are explored elsewhere.

Walls

Within the main library, the walls are faced Bath stone with carved stone window and door surrounds. Most of the wall surface is covered with the bookcases and the overall condition cannot therefore be assessed. The stone walls in the annexe have been painted.

There are some areas of staining to the windows and walls and cleaning using 'Peelaway', poultices or similar will be undertaken, after tests have been carried out by trained conservators.

There have been a number of contemporary additions to the walls, including services, the glazed entrance lobby and roller blinds, all of which it is hoped can be removed during the works. Anything which has been screwed or nailed into the walls will be removed by hand to avoid blowing the stone when the fixings are removed. Holes will then be either indented with new pieces of stone to match the existing, or filled using a colour matched mortar mix.

We have currently estimated that 150 holes will be filled, and the removal of 21 timber plugs and 2no stone indents. Services have also been surface mounted within the tower requiring filling of approximately 20no small diameter holes after the removal of services.

The condition of the walls within the mezzanine are difficult to determine due to the fact that they have been painted, and most of which are not visible due to the installation of bookcases at mezzanine level and rolling stacks within the basement. The paint from all walls will be removed and any additional repairs identified at this point, also allowing for repairs due to the removal of the mezzanine floor. The stone has also been painted above door G3 and will also be removed.

The room known as the Strong Room (labelled G2 in the accompanying plans) has been lined out to the south and east and plastered to the west and north. A small external store is situated within the south east of the room which will likely be removed during the works. The plasterboard and plaster will be removed from all walls and repairs carried out as necessary.

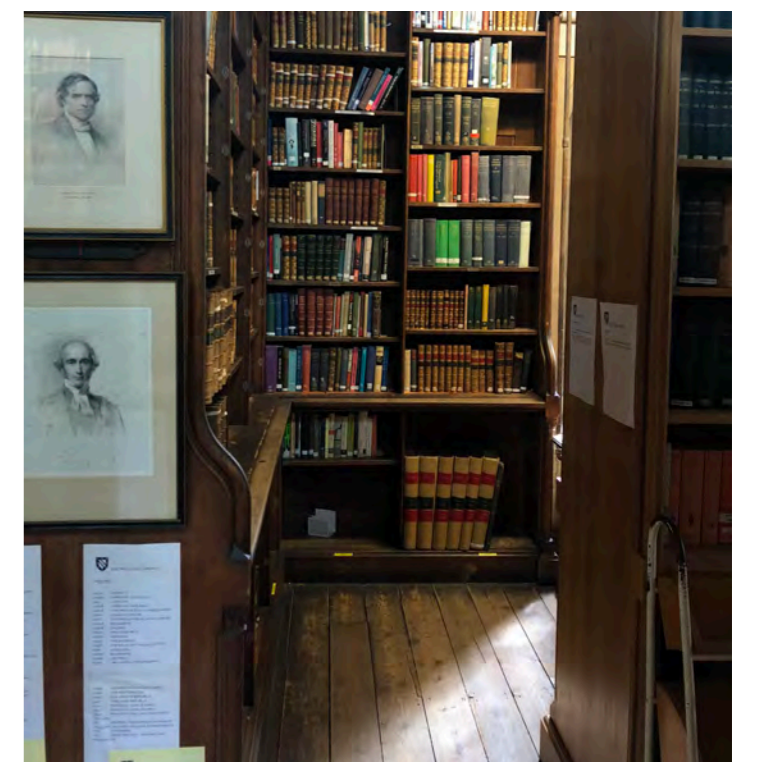
Ceilings

There is a timber beamed roof to the ground floor which has been over-painted in modern white paint. Steel girders were added in 1898, as well as modern strip lights and sprinklers. The first floor has a vaulted and ribbed timber roof supported on stone corbels with radiating dormers. As part of our investigations, paint analysis determined that the paint to the ground floor ceiling was not part of the original decorative scheme and was first decorated when the steel beams were installed. With the steel beams now being removed, it is the intent to strip the ceiling of paint and to return to the bare timber as originally intended. This will require a coat of a clear intumescent paint to ensure fire separation between the first and second floor. New services, including light fittings and fire alarms, will be installed, with holes filled where services are being removed.

The first floor ceiling is in a very good condition and there are only three small areas which could benefit aesthetically from repair, 2 within the cornice and one to a timber ceiling board.



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01. Damaged oak floorboards at ground floor
02. Floorboards at first floor

4.3 Internal Repairs: Findings & Recommendations

Doors

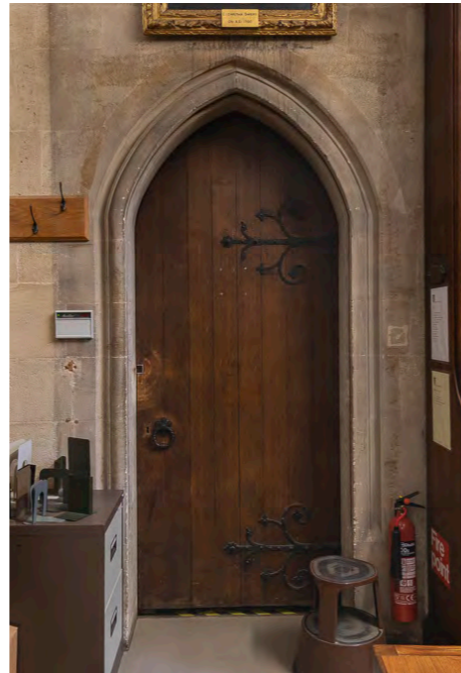
No large alterations are proposed to the existing doors, other than repairs. The existing ground floor door to the safe room and the door at the top of the tower will require upgrading for fire separation. This will comprise of a clear intumescent coating, with intumescent paper inserted behind existing/new handles and locks. Due to the construction of the door, surface mounted smoke fire seals will be installed. An automatic closer will be required, linked to a magnetic floor mounted door holder. These will be powder coated black to match existing ironmongery. An outline specification has been included within the following schedule.

The north door to the Annexe was badly damaged when the mezzanine floor was installed, with the head of the door cut and permanently fixed. With the mezzanine removed, this door will be repaired, with new boards spliced into the head of the door and timber panelling to match the existing moulding created to the inner face. The removal of the existing steps to create a level threshold will also require an additional section to be added to the base of the door.

The existing entrance door requires minor repairs only and will be re-stained externally where it has been weathered. The remaining two doors to the gardener's store and basement book stack in the Annexe will be removed and set aside for use by the College.



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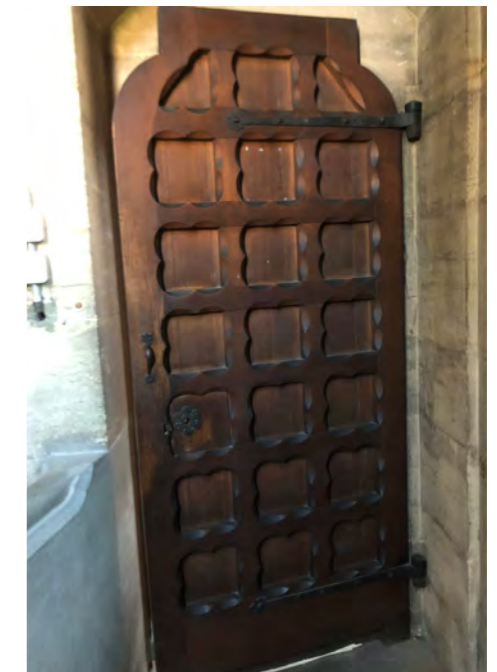
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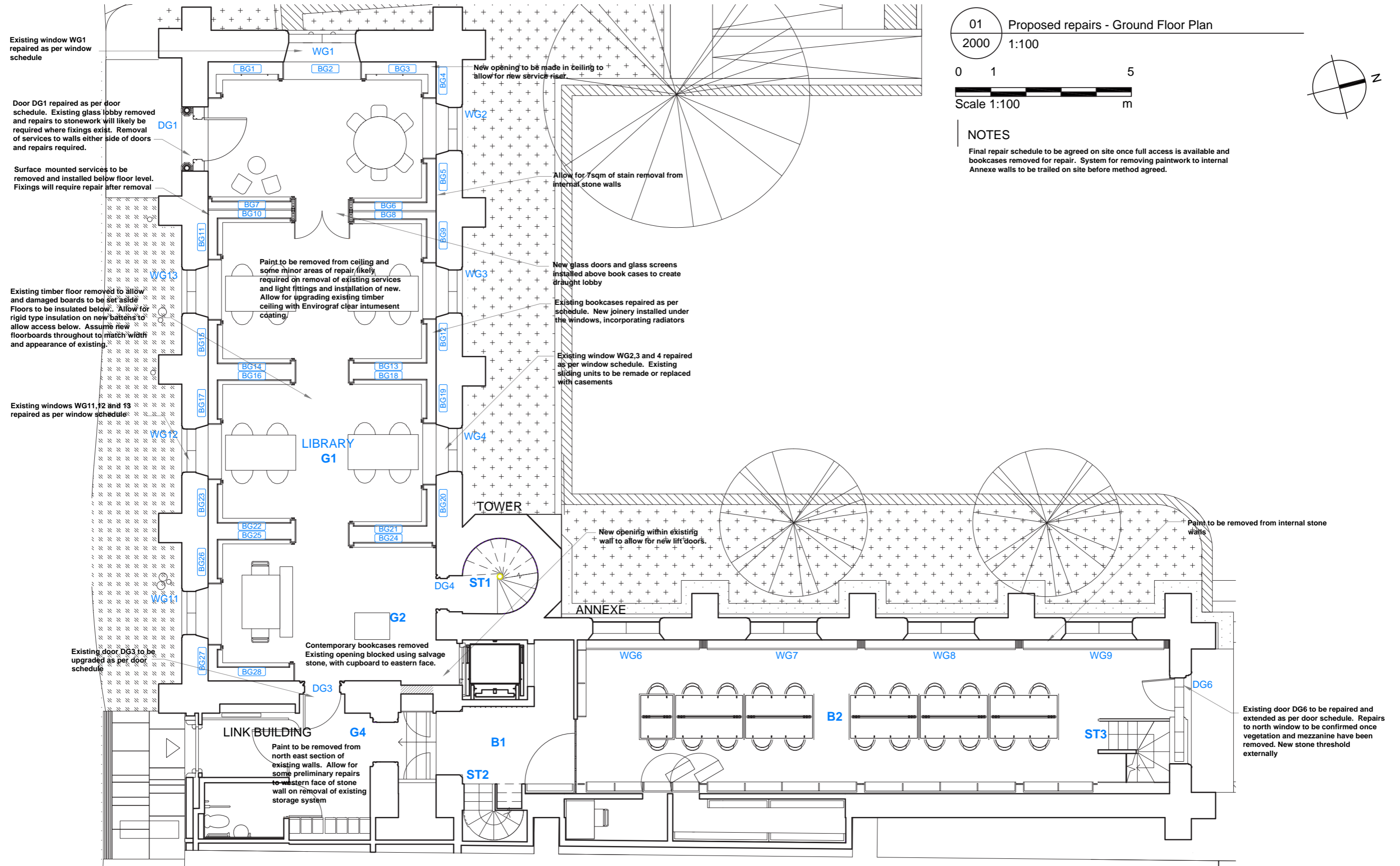
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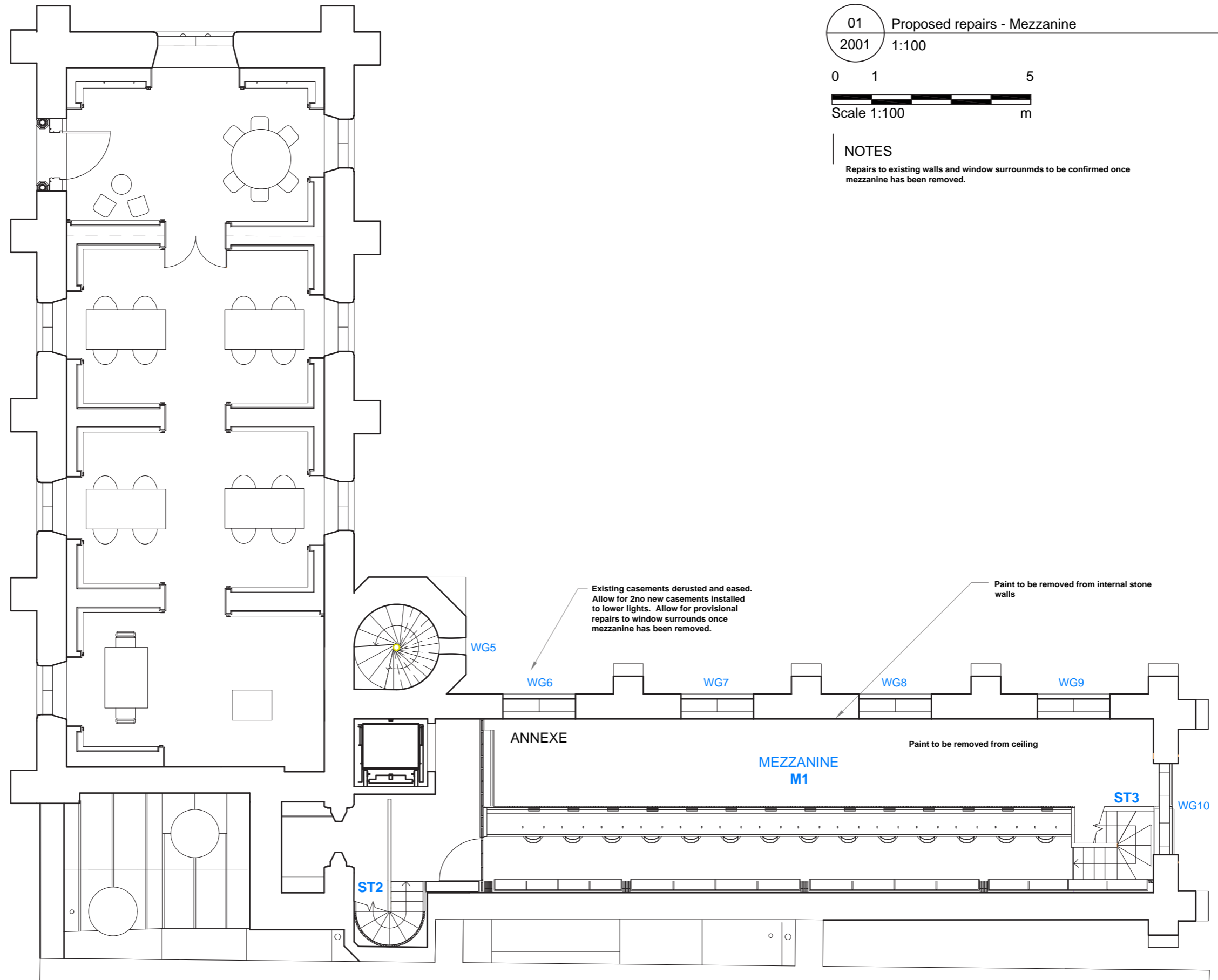
- 01. Door DG1 - Main entrance door
- 02. Door DG2 - To be removed
- 03. Door DG3 - To be upgraded
- 04. Door DG4 - No door
- 05. Door DG5 - To be removed
- 06. Door DG6 - Interior face
- 07. Door DG6 - Cut head to door
- 08. Door DG7 - To be upgraded

4.3 Internal Repairs: Findings & Recommendations



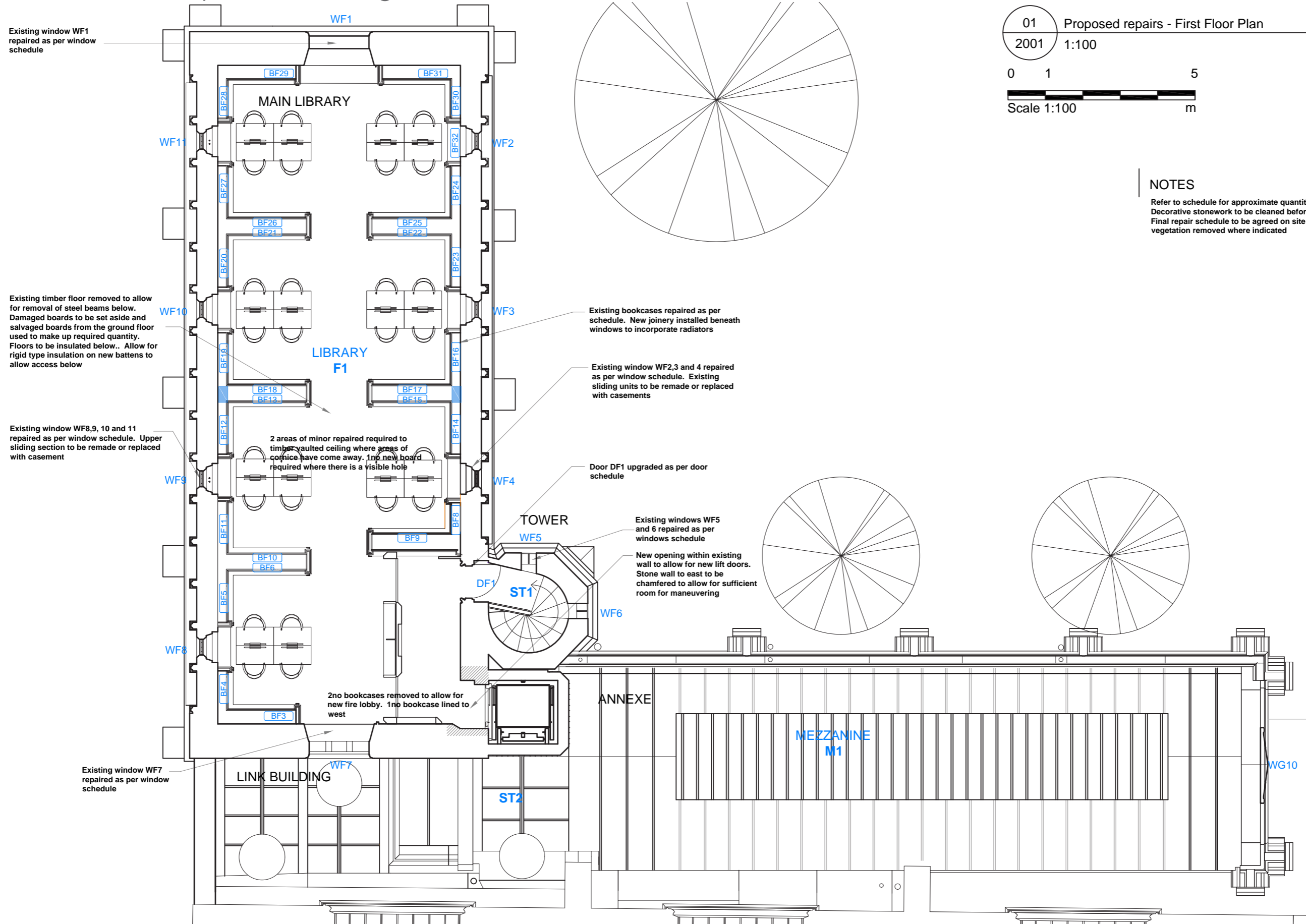
Main Library Ground Floor & Annexe Basement Plan

4.3 Internal Repairs: Findings & Recommendations

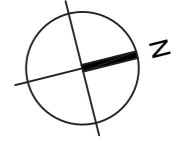
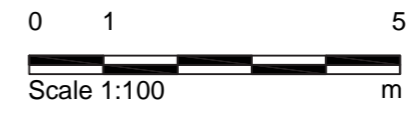


Main Library Annexe Plan

4.3 Internal Repairs: Findings & Recommendations



01 Proposed repairs - First Floor Plan
2001 1:100



NOTES
Refer to schedule for approximate quantities
Decorative stonework to be cleaned before final quantities can be assessed
Final repair schedule to be agreed on site once full access is available and vegetation removed where indicated

Existing window WF1 repaired as per window schedule

Existing timber floor removed to allow for removal of steel beams below. Damaged boards to be set aside and salvaged boards from the ground floor used to make up required quantity. Floors to be insulated below. Allow for rigid type insulation on new battens to allow access below

Existing window WF8,9, 10 and 11 repaired as per window schedule. Upper sliding section to be remade or replaced with casement

2 areas of minor repaired required to timber vaulted ceiling where areas of cornice have come away. 1no new board required where there is a visible hole

Existing bookcases repaired as per schedule. New joinery installed beneath windows to incorporate radiators

Existing window WF2,3 and 4 repaired as per window schedule. Existing sliding units to be remade or replaced with casements

Door DF1 upgraded as per door schedule

Existing windows WF5 and 6 repaired as per windows schedule

New opening within existing wall to allow for new lift doors. Stone wall to east to be chamfered to allow for sufficient room for maneuvering

2no bookcases removed to allow for new fire lobby. 1no bookcase lined to west

Existing window WF7 repaired as per window schedule

Main Library First Floor Plan

4.3 Internal Repairs: Findings & Recommendations

Rev: A

Opening ref	Location						Description of existing	Condition	Repairs	Ironmongery existing	Ironmongery proposed	General Comments
		Fixed / Opening	To be removed	Fire rated	Drawing Ref	Spec. Ref						
DG1	Ground Floor - Main Library	O	No	No	-	-	Timber boarded door with flat arch to head, decorative panel to the rear with cut out sections. Timber weatherboard added to base of door, strip of leather attached to inner face to act as draft stripping. Decorative strap hinges and decorative metal studs.	Generally in good condition. Leather strip partially missing. Some minor damage around handle and rose missing on internal face of door. Some minor damage to lock on internal face.	Provisionally allow for external face of existing door. Remove leather strip and provisionally allow for new brush seal	Decorative straphinges, wrought iron ring handle with decorative rose, single keyhole with wrought iron surround, additional bolt has been added internally.	New rose to match existing on inner face. Allow for de rusting and easing all ironmongery, including strap hinges	Check with College regarding security requirements.
DG2	Ground Floor - Link block	O	Yes	NA	NA	NA	Timber boarded door with flat arch to head, strap hinges, metal studs, wrought iron ring handle and lock.	Generally in good condition with signs of adaptations/repairs to lower part of door.	NA	Straphinges, wrought iron ring handle with decorative rose. All kept with door upon removal.	NA	Internal face not surveyed. Door to be removed and set aside for reuse by College.
DG3	Ground Floor - Main Library	O	No	30min	-	-	Timber boarded door with arched head. Decorative panel to the rear of the door. Decorative strap hinges. Existing keyhole with new keyhole added at a later date.	Generally in good condition. A small section has been cut out of door to fit new lock and there is some minor damage around the handle	Provisionally allow for removing additional lock and for repairing existing door	Decorative straphinges, wrought iron ring handle with decorative rose, single keyhole with additional lock mortice lock added.	Allow for new keyhole cover plate to match existing examples.	Check with College regarding security requirements. Door requires upgrading for fire. Allow for Envirograph Product 42 HW clear coating system, one coat HWAP primer, two coats HW02/N and one top coat of HW Excel. Existing lock and handles will require Envirograf Product 71 flexible intumescent sheet installed around/to rear of existing ironmongery and latch. Provisionally allow for surface mounted Envirograph Product 69 fire/smoke seals. Automatic closer required, linked to magnetic floor mounted door holder. Provisionally allow for D&E Torex 2 Gate Closer, powder coated to match ironmongery.
DG4	Tower	NA	NA	NA	NA	-	Flat arch opening. Door has been removed. Hinges are still in place.	NA	NA	Wrought iron hinges to be left in situ. All kept with door upon removal.	NA	
DG5	Ground Floor Annexe	O	Yes	NA	NA	-	Painted 2 paneled fire-door.	Reasonable condition	NA	Knob handle with single mortice lock	NA	Door to be removed and set aside for reuse by College.
DG6	Ground - Floor Annexe	O	No	No	-	-	Timber boarded door with flat arch to head, decorative panel to the rear with cut out sections. Timber weatherboard added to base of door. Brush seal attached to inner face. Decorative strap hinges and metal studs.	The top of the door has been cut and fixed when the mezzanine was added.	New upper section of door required. New panelled section to be spliced into existing door. New decorative arched section required to inner face. Allow for removing existing brush seal and for installing a new seal. Door to be extended at base where existing steps removed and level threshold created	Decorative straphinges, wrought iron ring handle with decorative rose, single keyhole with wrought iron surround externally. Upper straphinge has been cut through.	New straphinge required to replicate existing. Cover plate for inner key hole required to match existing.	Check with College regarding security requirements.
DF1	First Floor Tower	O	No	30min	-	-	Timber boarded door with flat arch to head, decorative panel to the rear of the door with cut-out sections. Decorative strap hinges.	Generally in good condition. Pieces of foam have been stuck to the door.		Decorative straphinges, wrought iron pull handle, wrought iron rose left over from handle. Wrought iron keyhole surround to inner face only.	Provisionally allow for new wrought iron ring to match existing examples.	Door requires upgrading for fire. Allow for Envirograph Product 42 HW clear coating system, one coat HWAP primer, two coats HW02/N and one top coat of HW Excel. Existing lock and handles will require Envirograf Product 71 flexible intumescent sheet installed around/to rear of existing ironmongery and latch. Provisionally allow for surface mounted Envirograph Product 69 fire/smoke seals. Automatic closer required, linked to magnetic floor mounted door holder. Provisionally allow for D&E Torex 2 Gate Closer, powder coated to match ironmongery.

Door Schedule

4.3 Internal Repairs: Findings & Recommendations



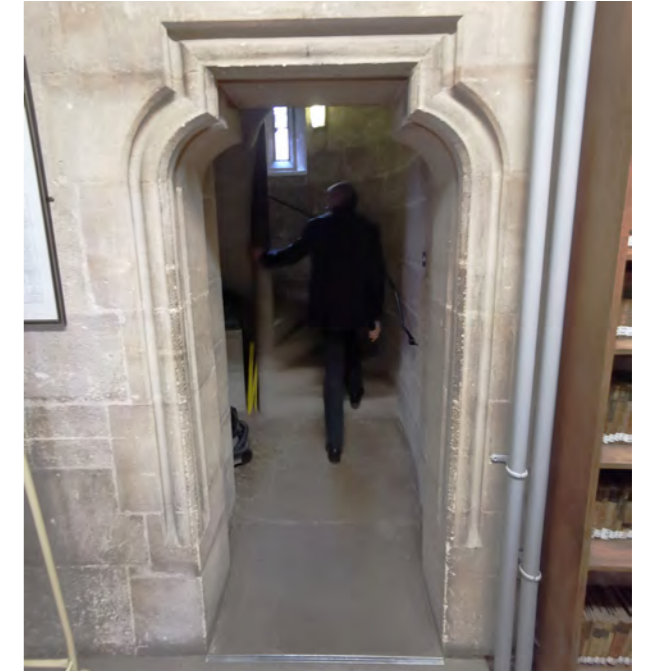
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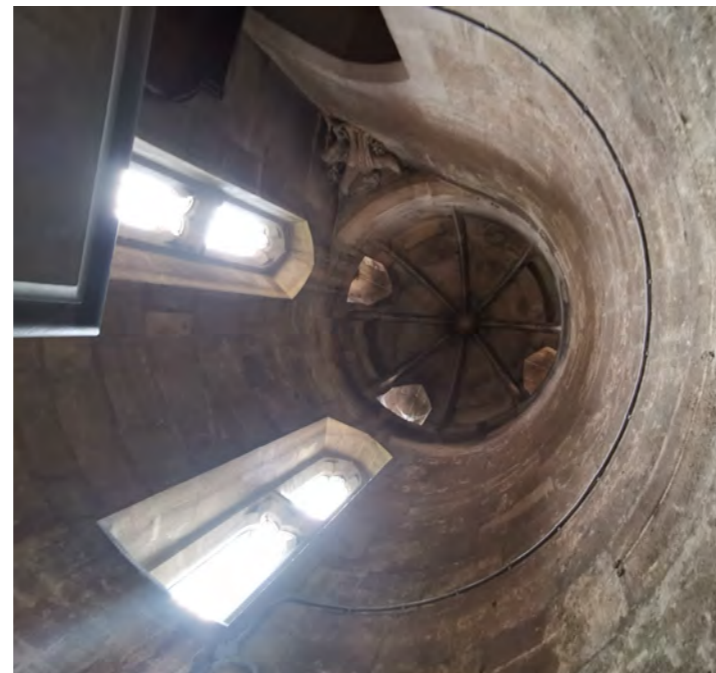


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Photo References: Interiors



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01. Room G1, Main Library at ground floor
 02. Room G2 at ground floor
 03. Room G4 at ground floor
 04. Door to ST at ground floor

05. Room F1 Main Library at first floor
 06. Room ST1 at first floor, view towards ceiling of tower
 07. Room ST2 at mezzanine level
 08. Room B2, Annexe

4.4 Repairs to Bookcases: Findings & Recommendations

Bookcases

The Gilbert Scott bookcases are a large part of the building composition and are the main component of the internal spaces. There are 60 bookcases in total with 32 on the first floor and 28 on the ground floor. There were originally bookcases below each of the windows and the housings for these are still evident behind thin plywood panels which have been added to the end of each of the bookcases at lower level. This would have added an additional 12 bookcases, with 1 still evident, labelled BF32, within the accompanying reference plans. These were presumably removed when radiators were added to the library. It is possible that light fittings, presumably gas powered, were installed to each of these bookcases, evidenced by a circular hole to the back of the remaining bookcase.

The bookcases are comprised of a lower and an upper section, with decorative carved components at each end, all of which vary in their design. The shelves are designed to be adjustable with holes within each upright and brass fixings recessed into the base of each shelf. Each shelf has been covered with a thin layer of leather. A number of new shelves have also been added to provide additional storage capacity, or replace those which have been damaged or lost.

The bookcases have an original reference system, with painted tin letter plates at each shelf and a painted tin number plate at the base of each section. At a later date, some additional number plates have been added to the shelf edges. Brass plates are installed to the bookcase ends facing the central corridor.

The bookcases to the ground floor have decorative timber grilles below the bottom shelf, which it is assumed acted as a heating system for the ground floor. There are no grilles to the bookcases on the upper floor, with this floor seemingly originally unheated.

The bookcases are now showing signs of use and age and most of the bookcases have open joints. Some have noticeably sagged and shelves are out of level. Bookcases BG1 and BG5 have had additional shelf supports added as the vertical supports have pulled apart from each other meaning that the shelves are no longer supported on the original housings. Additionally the leather on the shelves has failed quite substantially and is peeling from most shelves.

In consideration of the above, we would suggest the following:

Each bookcase will be carefully dismantled by hand, labelled and taken back to a joinery conservation workshop where all of the joints can be carefully cleaned out and repairs undertaken, including the removal of the leather from each of the shelves. On completion of other work, the bookcases will be cleaned, re-stained where necessary and then carefully reassembled on site.

Some repairs may not currently be visible, due to the library being in a working state. Items such as plug sockets and wiring have also been attached to many of the bookcases which will require careful filling/plugging.

The contemporary number plates to the shelf ends will be cleaned, conserved and reattached. The letter and number plates will also be carefully cleaned and conserved and missing items replaced. New bookcases will be installed beneath the windows for housing radiators and providing additional book storage, with the design for these outlined in Nex Architects drawings.

Repairs will be required to the existing bookcase uprights where the existing plywood panels are removed. This will be in the form of a new piece of oak, stained to match the existing, with a moulded trim to the top to match the existing shelves.

Some Notes On Workmanship:

Leather removal

Tests have been undertaken to remove the leather and this was possible without causing damage to the timber beneath. Shelves will then be re-stained to match the bookcases.

Removal of added items

Items such as sockets and additional shelf supports need to be removed by hand to avoid additional damage being caused when removed. Dependent upon the size of the hole remaining, these will either be plugged using oak dowels which are stained to match the existing joinery, or filled and then coloured to match.

Bookcase bases

An initial investigation by the University Estates Joinery Department concluded that the sagging to some bookcases may be the result of sections of the bookcase base frames being removed to allow for heating pipes beneath. If required, new timber bases will be constructed beneath the bookcases to re-support them. These will not result in any aesthetic changes to the bookcases.

Service Access

Service pipes will be run above ground floor level beneath all of the bookcases at ground and first floor level as per the M&E layout drawings. Upon completion of the repairs to the bookcases, the bottom shelf to all perimeter bookcases will be reinstated to be removable, on push release or magnetic type fittings, to allow access as required without damaging the bookcases in the future.

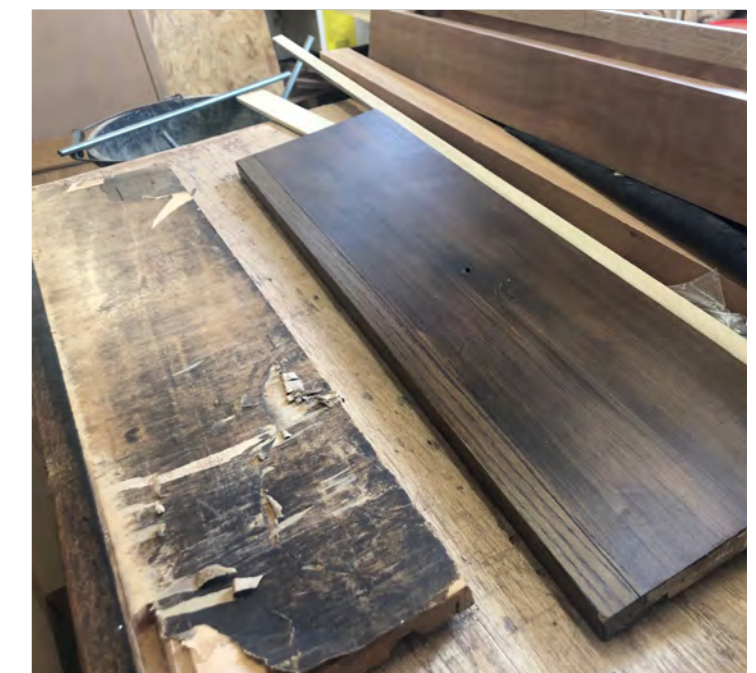
Alterations

At the ground floor a new glass screen with glass doors is proposed to create a draught lobby to the western most bay of the library. This will require the removal of a small section of skirting and cornice at high level.

At first floor level, the creation of the fire refuge will require bookcase BF7 to be partially covered as per Nex Architects drawings. This will be in a manner which is reversible so that the bookcase can be uncovered and re-used should the refuge ever be removed.



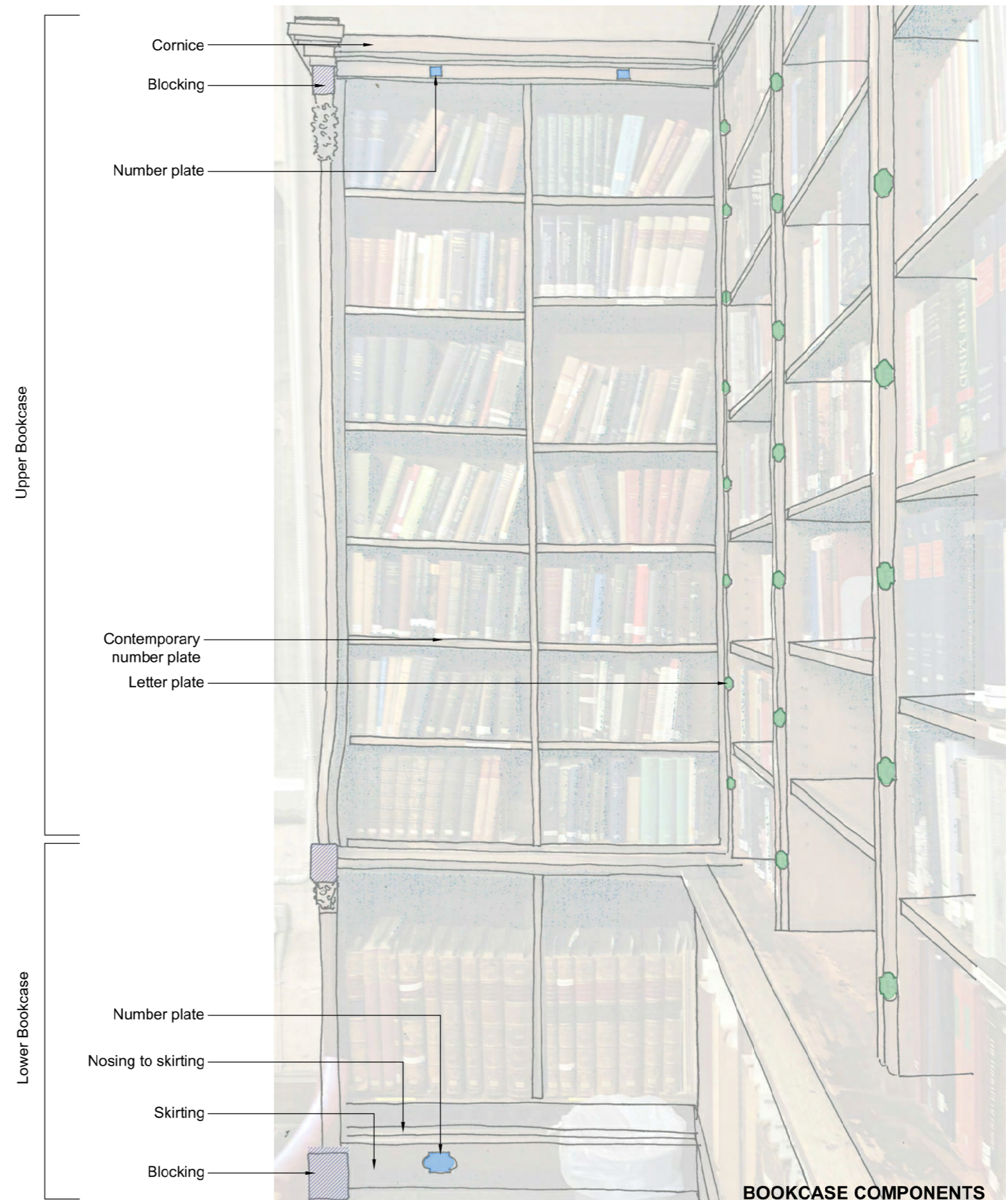
01.



02.

01. Typical bookcase at ground floor
02. Test removal of the leather from the bookcases

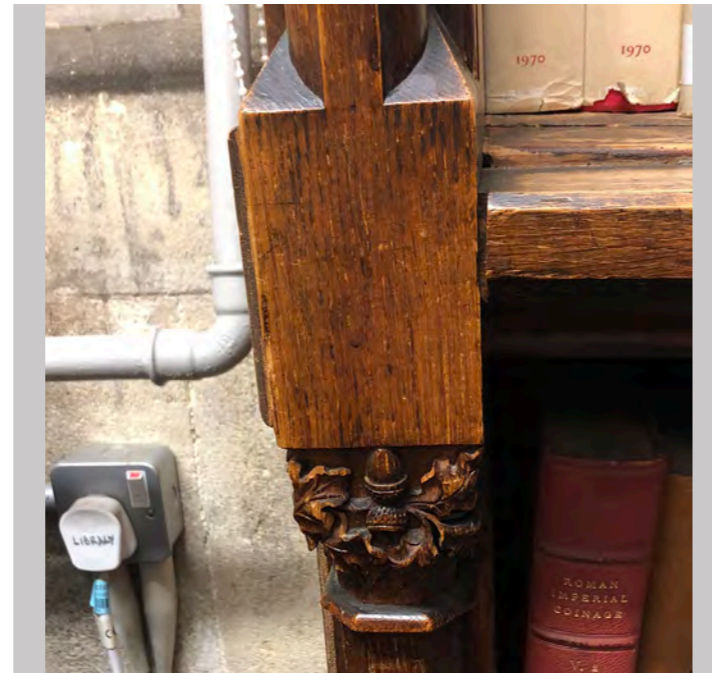
4.4 Repairs to Bookcases: Findings & Recommendations



4.4 Repairs to Bookcases: Findings & Recommendations



01.



02.



03.



04.



05.



06.



07.



08.



Photo References: Bookcases Components

- 01. Lower blocking
- 02. Middle blocking
- 03. Top blocking and cornice
- 04. Rear panelling to back of bookcase

- 05. Skirting and nosing
- 06. Top: letter plate Bottom: Contemporary tin plate
- 07. Top: end plate Bottom: number plate
- 08. Traditional coat hook

4.4 Repairs to Bookcases: Findings & Recommendations



01.



02.



03.



04.



05.



06.



07.



08.

Photo References: Bookcases Repairs

- 01. Repair to lower blocking
- 02. Missing nosing to bottom shelf
- 03. Woodworm to middle blocking
- 04. New shelves

- 05. Removed leather to shelves
- 06. Missing number plate and repairs to skirting and nosing
- 07. Missing end plate
- 08. Contemporary coat hook

4.4 Repairs to Bookcases: Findings & Recommendations

Room Reference	Item Reference	Components											Notes
		Lower bookcase						Upper bookcase					
		Shelves	Skirting	Nosing to bottom shelf	Blocking	Letter Place	Number plate	Shelves	Cornice	Blocking	Number Plates	Letter plate	
G1	BG1	Allow for removing leather from 4no shelves		To be reattached	Skirting missing on two sides	2no to be cleaned	2no to be cleaned. Provisionally allow for 2no new if they are too damaged to repair	12no. Shelves have additional shelf supports added. Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	1no missing. 5no to be cleaned	24no shelf supports to be removed and screw holes to be plugged and stained to match existing joinery/ filled and coloured to match. Clean brass end plate
	BG2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Bookcase to be removed and replaced with new. To be handed to the College for possible reuse.
	BG3	Allow for removing leather from 3no shelves. Leather has already been removed from 1no shelf	Repair and refix skirting			2no to be cleaned	2no to be cleaned. 1no missing	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	6no to be cleaned	Clean brass end plate
	BG4	Allow for 1no new shelf. Allow for removing leather from 1no shelf	Reassemble, repair and refix skirting and grille. Allow for new skirting and grille if existing can not be repaired		Allow for new skirting to front	2no to be cleaned	1no missing	Allow for removing leather from 7no shelves		Pin/glue back together		6no to be cleaned. 1no missing	Socket installed to end of bookcase
	BG5	Allow for removing leather from 4no shelves			Allow for new skirting to front	2no to be cleaned	2no to be cleaned	6no shelves have additional shelf supports added. Allow for removing leather from 12no shelves plus bottom shelf		Small repair to damaged corner	2no to be cleaned	16no to be cleaned	12no shelf supports to be removed and screw holes to be plugged and stained to match existing joinery/ filled and coloured to match
	BG6	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	4no to be cleaned	Missing brass end plate. Allow for new to match existing. 1no contemporary tin number plate to be cleaned. Glass screen to be installed above and doors installed between here and bookcases BG7/10
	BG7	Allow for removing leather from 6no shelves		Missing		6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	16no to be cleaned	Missing brass end plate. Allow for new to match existing. Bookcase may require adaption at the top and southern end panel to allow for new draft screen. Glass screen to be installed above and doors installed between here and bookcases BG6/8
	BG8	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 15no shelves plus bottom shelf. Allow for 2no new shelves, stained to match existing joinery			3no to be cleaned	24no to be cleaned	Small section of damage between shelf supports. Allow for small infill Bookcase may require adaption at the top and northern end panel to allow for new draft screen. Glass screen to be installed above and doors installed between here and bookcases 7/10
	BG9	Allow for removing leather from 2no shelves. Allow for 2no new oak shelves, stained to match existing joinery				4no to be cleaned	2no to be cleaned	Allow for removing leather from 10no shelves plus bottom shelf. Allow for 2no new shelf, stained to match existing joinery			2no to be cleaned	16no to be cleaned	Traditional coat hook to end of bookcase plus wires. 2no contemporary tin number plates to be cleaned.
	BG10	Allow for removing leather from 6no shelves				5no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	2no contemporary tin number plates to be cleaned. Modern coat hook to be removed. Socket to plywood end panel. Glass screen to be installed above and doors installed between here and bookcases BG6/8
	BG11	Allow for removing leather from 4no shelves	Missing		Reattach front skirting	4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	Traditional coat hook to end of bookcase. 2no contemporary tin number plates to be cleaned
	BG12	Allow for removing leather from 4no shelves				4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			1no to be cleaned. 1no missing	16no to be cleaned	Traditional coat hook to end of bookcase. 1no contemporary tin number plate to be cleaned
	BG13	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 17no shelves		Trim missing to front edge	3no to be cleaned	24no to be cleaned	2no contemporary tin number plates to be cleaned
	BG14	Allow for removing leather from 2no shelves				3no to be cleaned	2no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	Clean brass end plate. 1no contemporary tin number plate to be cleaned. Further investigation to be undertaken to determine reason for sagging bookcase
	BG15	Allow for removing leather from 2no shelves. Allow for 2no new oak shelves, stained to match existing joinery		Missing		3no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	17no to be cleaned	Further investigation to be undertaken to determine reason for sagging bookcase. Traditional coat hook to end of bookcase
	BG16	Allow for removing leather from 3no shelves				6no to be cleaned	2no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf		Trim missing to front edge	3no to be cleaned	24no to be cleaned	Further investigation to be undertaken to determine reason for sagging bookcase. 2no contemporary tin number plates to be cleaned
	BG17	Allow for removing leather from 2no shelves		To be reattached	Top flat missing	4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	Further investigation to be undertaken to determine reason for sagging bookcase. 1no contemporary tin number plate to be cleaned. Traditional coat hook to end of bookcase
	BG18	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	Further investigation to be undertaken to determine reason for sagging bookcase
	BG19	Allow for removing leather from 4no shelves		Missing	Skirting missing to 2 sides	4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf				16no to be cleaned	Further investigation to be undertaken to determine reason for sagging bookcase. 2no contemporary tin number plates to be cleaned. Traditional coat hook to end of bookcase. New plywood panel to end
	BG20	Allow for removing leather from 4no shelves				4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	Some furniture beetle evident. Further investigation to ensure there is no live infestation. 2no contemporary tin number plate2 to be cleaned. Traditional coat hook to end of bookcase

4.4 Repairs to Bookcases: Findings & Recommendations

Room Reference	Item Reference	Components											Notes	
		Lower bookcase						Upper bookcase						
		Shelves	Skirting	Nosing to bottom shelf	Blocking	Letter Place	Number plate	Shelves	Cornice	Blocking	Number Plates	Letter plate		
	BG21	Allow for removing leather from 6no shelves				6no to be cleaned	1no missing. 1no to be reattached. 2no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	24no to be cleaned	Clean brass end plate. 1no contemporary tin number plate to be cleaned.
	BG22	Allow for removing leather from 5no shelves		Missing		6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	24no to be cleaned	Clean and reattach brass end plate. 1no contemporary tin number plate to be cleaned.
	BG23	Allow for removing leather from 4no shelves		Missing		4no to be cleaned	2no to be cleaned	Allow for removing leather from 11no shelves plus bottom shelf				2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned. Traditional coat hook to end of bookcase
	BG24	Allow for removing leather from 3no shelves. Allow for 3no new oak shelves, stained to match existing joinery		To be reattached		2no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned.
	BG25	Allow for removing leather from 3no shelves		Missing		5no to be cleaned. 1no missing	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	14no to be cleaned	Reattach front section of bottom shelf. 2no contemporary tin number plates to be cleaned.
	BG26	Allow for removing leather from 2no shelves. Allow for 1no new oak shelf, stained to match existing joinery		Missing		4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf				2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned. Traditional coat hook to end of bookcase
	BG27	Allow for removing leather from 1no shelf. Allow for 1no new oak shelf, stained to match existing joinery		Missing		2no to be cleaned	1no to be cleaned	Allow for removing leather from 7no shelves				1no to be cleaned	7no to be cleaned	Further investigation to be undertaken to determine reason for sagging bookcase. 1no contemporary tin number plate to be cleaned. Traditional coat hook to end of bookcase
	BG28	Allow for removing leather from 4no shelves. Allow for 2no new oak shelves, stained to match existing joinery		To be reattached		3no to be cleaned	3no to be cleaned	Allow for removing leather from 19no shelves plus bottom shelf				3no to be cleaned	15no to be cleaned	Clean brass end plate
F1	BF1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Bookcase to be removed to allow for new lift installation. Bookcase to be retained and used for repairs to other bookcases if agreed with CO
	BF2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Bookcase to be removed to allow for new lift installation. Bookcase to be retained and used for repairs to other bookcases if agreed with CO
	BF3	Allow for removing leather from 2no shelves. Allow for 2no new oak shelves, stained to match existing joinery				2no to be cleaned	2no to be cleaned	Allow for removing leather from 11no shelves plus bottom shelf				1no to be cleaned. 1no missing	12no to be cleaned	Clean brass end plate. No plywood. 1no contemporary tin number plate to be cleaned. Modern coat hook to be removed
	BF4	Allow for removing leather from 4no shelves				3no to be cleaned. 1no missing	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf				2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned
	BF5	Allow for removing leather from 4no shelves				4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf				2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned. Socket to plywood end panel
	BF6	Allow for removing leather from 5no shelves. Allow for 1no new oak shelf, stained to match existing joinery				6no to be cleaned	3no to be cleaned	Allow for removing leather from 16no shelves plus bottom shelf				3no to be cleaned	24no to be cleaned	Clean brass end plate. 3no contemporary tin number plates to be cleaned
	BF7	Allow for removing leather from 4no shelves. Allow for 2no new oak shelves, stained to match existing joinery				4no to be cleaned	3no missing	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	16no to be cleaned	Clean brass end plate. Majority of bookcase to be lined to allow for fire refuge. Southern most bay to remain exposed and therefore provisionally allow for removing and all repair works
	BF8	Allow for removing leather from 2no shelves				2no to be cleaned	1no missing	Allow for removing leather from 7no shelves				1no to be cleaned	8no to be cleaned	Reattached plywood end panel. Modern coat hook to be removed
	BF9	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	24no to be cleaned	
	BF10	Allow for removing leather from 6no shelves				5no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	24no to be cleaned	2no contemporary tin number plates to be cleaned
	BF11	Allow for removing leather from 4no shelves				3no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf				2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned
	BF12	Allow for removing leather from 4no shelves	Allow for slip of timber between skirting and bottom shelf			4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf				2no to be cleaned	16no to be cleaned	3no contemporary tin number plates to be cleaned (1no badly damaged). Modern coat hook to be removed. Plywood panel to be reattached. 2no sockets to plywood panel
	BF13	Allow for removing leather from 6no shelves	Allow for slip of timber between skirting and bottom shelf			6no to be cleaned. 1no to be reattached	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf				3no to be cleaned	24no to be cleaned	Clean brass end plate. 2 contemporary tin plates to be cleaned

4.4 Repairs to Bookcases: Findings & Recommendations

Room Reference	Item Reference	Components										Notes	
		Lower bookcase					Upper bookcase						
		Shelves	Skirting	Nosing to bottom shelf	Blocking	Letter Place	Number plate	Shelves	Cornice	Blocking	Number Plates		Letter plate
	BF14	Allow for removing leather from 4no shelves	Allow for slip of timber between skirting and bottom shelf			4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	1n contemporary tin plate to be cleaned. Socket to plywood end panel
	BF15	Allow for removing leather from 6no shelves	Allow for slip of timber between skirting and bottom shelf			6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	3no contemporary tin plates to be cleaned
	BF16	Allow for removing leather from 2no shelves. Allow for 2no new oak shelves, stained to match existing joinery				4no to be cleaned	2no missing	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	14no to be cleaned. 2no missing	2no contemporary tin number plates to be cleaned. Modern coat hook to be removed. Socket to plywood end panel
	BF17	Allow for removing leather from 5no shelves. Allow for 1no new oak shelf, stained to match existing joinery				6no to be cleaned	3no missing	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	2no contemporary tin number plates to be cleaned
	BF18	Allow for removing leather from 5no shelves. Allow for 1no new oak shelf, stained to match existing joinery				6no to be cleaned	3no to be cleaned. 1no to be reattached	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	23no to be cleaned. 1no missing	3no contemporary tin number plates to be cleaned
	BF19	Allow for removing leather from 3no shelves				4no to be cleaned	2no to be cleaned. 1no to be reattached	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	2no contemporary tin number plates to be cleaned
	BF20	Allow for removing leather from 2no shelves. Allow for 1no new oak shelf, stained to match existing joinery				4no to be cleaned	2no to be cleaned	Allow for removing leather from 11no shelves plus bottom shelf. Allow for 1no new oak shelf stained to match existing joinery			2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be cleaned. 2no sockets to plywood end panel
	BF21	Allow for removing leather from 4no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 17no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	Clean brass end plate. 1no contemporary tin plate to be cleaned
	BF22	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	Clean brass end plate. 3no contemporary tin number plates to be cleaned
	BF23	Allow for removing leather from 4no shelves. Allow for 1no new oak shelf, stained to match existing joinery				4no to be cleaned	3no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf		Pin/glue back together	2no to be cleaned	16no to be cleaned	2no contemporary tin number plates to be cleaned
	BF24	Allow for removing leather from 4no shelves.				4no to be cleaned	2no missing	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	2no contemporary tin number plates to be cleaned
	BF25	Allow for removing leather from 3no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	3no contemporary tin number plates to be cleaned
	BF26	Allow for removing leather from 6no shelves				6no to be cleaned	3no to be cleaned	Allow for removing leather from 18no shelves plus bottom shelf			3no to be cleaned	24no to be cleaned	3no contemporary tin number plates to be cleaned
	BF27	Allow for removing leather from 3no shelves				4no to be cleaned	1no missing. 1no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	15no to be cleaned. 1no missing	2no contemporary tin number plates to be cleaned. 2no sockets to plywood end panel
	BF28	Allow for removing leather from 2no shelves. Allow for 1no new oak shelf, stained to match existing joinery	Allow for new section of timber to top of skirting			4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	4no contemporary tin number plates to be cleaned
	BF29	Allow for removing leather from 2no shelves. Allow for 2no new oak shelves, stained to match existing joinery				4no to be cleaned	1no missing. 1no to be cleaned	Allow for removing leather from 8no shelves plus bottom shelf			2no to be cleaned	10no to be cleaned	Clean brass end plate. Modern coat hook to be removed. 1no contemporary tin number plate to be removed. 2no fixings to plywood end panel
	BF30	Allow for removing leather from 2no shelves				3no to be cleaned. 1no missing	2no to be cleaned	Allow for removing leather from 10no shelves plus bottom shelf			2no to be cleaned	12no to be cleaned	Clean brass end plate. Modern coat hook to be removed. 3no contemporary tin number plates to be removed
	BF31	Allow for removing leather from 3no shelves. Allow for 1no new oak shelf, stained to match existing joinery				4no to be cleaned	2no to be cleaned	Allow for removing leather from 12no shelves plus bottom shelf			2no to be cleaned	16no to be cleaned	1no contemporary tin number plate to be removed. Wiring has been attached to end of bookcase with 7no small pins
	BF32	Allow for removing leather from 2no shelves.				2no to be cleaned							Large hole to end section of top of bookcase. Allow for replacing with new section of oak, stained to match existign bookcase. Bookcase may require adaptation. To be confirmed

Additional Items

Allow for new support plinth below each bookcase to resupport their structures where these have been damaged due to service installations

A new piece of oak with decorative trim will be required for each end panel where this faces a window, above the level of the new bookcases being installed beneath each window

Two additional contemporary bookcases below the windows to the gable ends at first floor level to be set aside for reuse by the college

Perimeter bookcases to the first and ground floor to have removable bottom shelves to allow future access to service pipes beneath

5.1 Structural Design—

Substructure Modification Strategy

The foundation system comprises two parts; a retaining wall structure (to form the proposed lift pit) and shallow footings to the proposed mezzanine structure.

Trial pits have been undertaken and have proven the depth of the existing foundations to be in excess of 1.2m below LG floor level.

Historic borehole records note made ground extending to eight feet (~2.4m) in depth. It is anticipated the existing buildings are founded at the base of this strata. New footings are proposed to extend to a similar depth to limit differential settlement and seasonal movement.

The proposed lift pit is to be formed of cantilever reinforced concrete walls with a ground bearing RC raft slab at the base. Underpinning of the adjacent stone wall is not anticipated.

The shallow pad footings are proposed to consist of reinforced concrete and will be coordinated with the existing footings to avoid undermining, disturbance, damage or differential stiffness.

Where modifications are to be made to the existing stone walls it is proposed to install a low-level ground beam which bears directly onto the existing wall at low level. This will ensure the existing load paths are maintained wherever possible, and will limit movements and settlements.

The proposed ground floor slab is intended to be ground bearing and formed of either limecrete or conventional reinforced concrete. The overall build-up depth is anticipated to be a maximum of 570mm allowing for 150mm of compacted hardcore beneath the slab.

SP 515 064 SP 50/63 F 236 246/156 1" N.S. 236 E
RECORD OF WELL (SHAFT) 1" O.S. 156
 Grid Ref.

At **Bodleian Library, Delegacy of Lodgings, Broad Street**
 Town or Village **Oxford** County **Oxon.** Six-inch sheet

Exact site _____ A rough sketch-map or a tracing from a map is very desirable

_____ in parish of _____

Level of ground surface above sea-level (O.D.) **220** ft. If well starts below ground surface, state how far _____ ft.
 Shaft _____ ft., diameter _____ ft. Bore _____ ft. Diameter of bore: at top _____ ins.; at bottom _____ ins.
 Details of permanent lining tubes (internal diameters preferred) _____

Water struck at depths of (feet) _____

Rest-level of water below top of well _____ feet. Suction at _____ feet. Yield on _____ hours' test
 _____ gallons per _____ (with pump of capacity _____ g.p.h.); depressing water level to _____ feet
 below top. Time of recovery _____ hrs. Amount normally pumped daily _____ g.p.h. for _____ hours.
 Quality (attach copy of analysis if available) _____

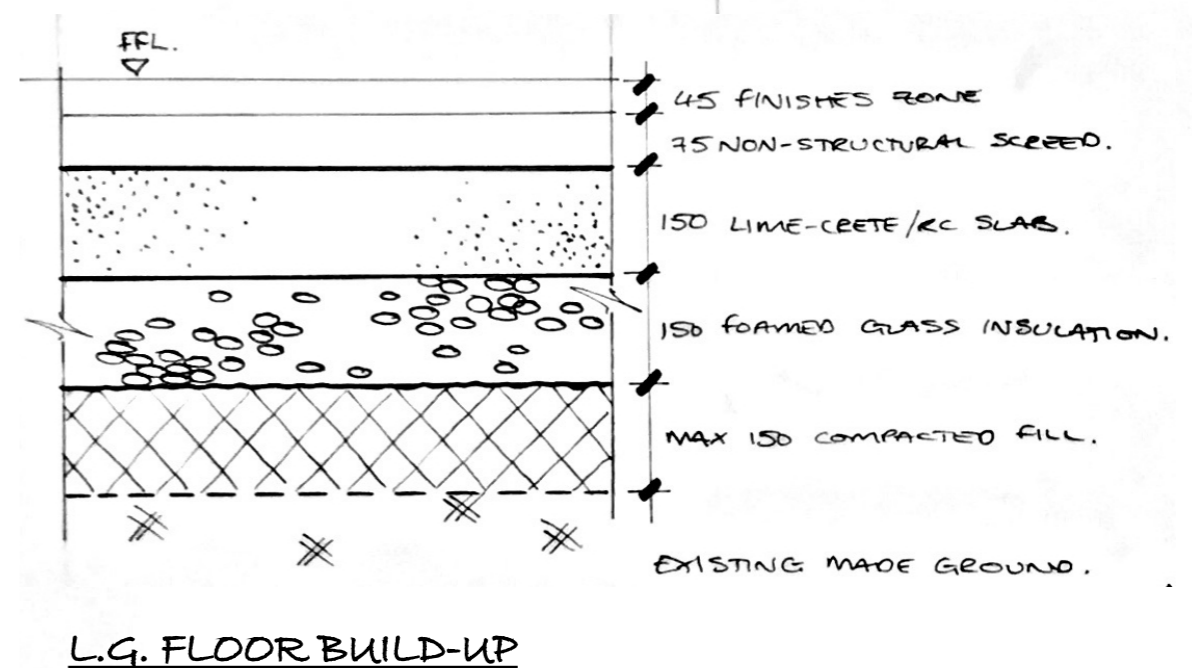
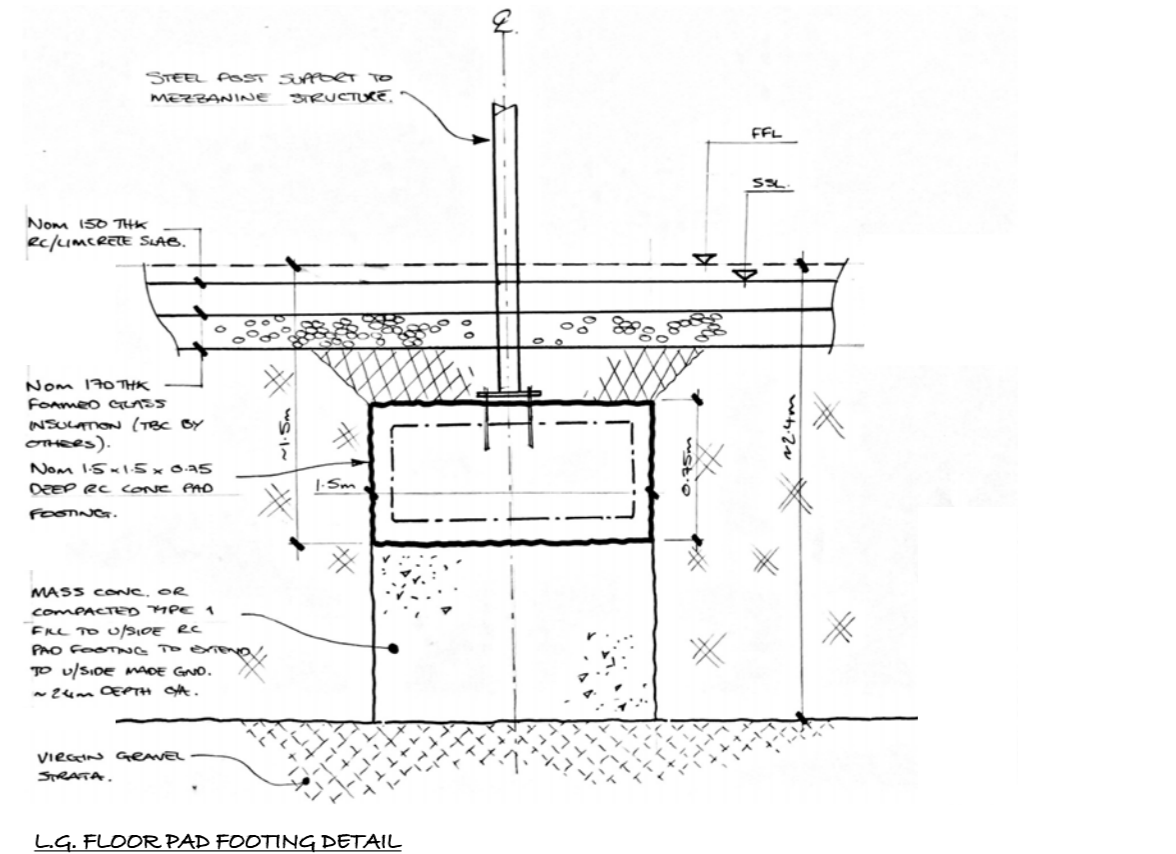
Sunk by **Isler and Co.** for Mr. **Bernard Green** Date of well **Sept. 1935**

Information from _____

(For Survey use only). GEOLOGICAL CLASSIFICATION.	NATURE OF STRATA (and any additional remarks).	THICKNESS		DEPTH	
		Feet.	Inches.	Feet.	Inches.
	Test Hole No. 6				
Drift	Made ground	8	0	8	0
	Sand and ballast	16	0	24	0
Oxford Clay	Mottled clay	1	0	25	0
	Blue clay	5	0	30	0
	Water at 22 feet, rose to standing level of 21 feet				
	Visited. Delegacy of Lodgings demolished about 1938 previous to erection of New Bodleian Library, Broad St. Sited by A on 6" map Oxon 33 SE/W. O.D. approx. +208 ft. 3/4/57. BH.				

GEOLOGICAL SURVEY AND MUSEUM, SOUTH KENSINGTON, LONDON, S.W.7.
 For Survey use only: Date received _____ G.S.M. Office File No. _____ Site marked on 1" map (use symbol) _____
 (7998) W.L. 38084/0849 5,000 12/88 A.S.S.W.Ltd. Gp. 686

Historical Trial Pits Record



Proposed Annexe Sub-structure Build-Up

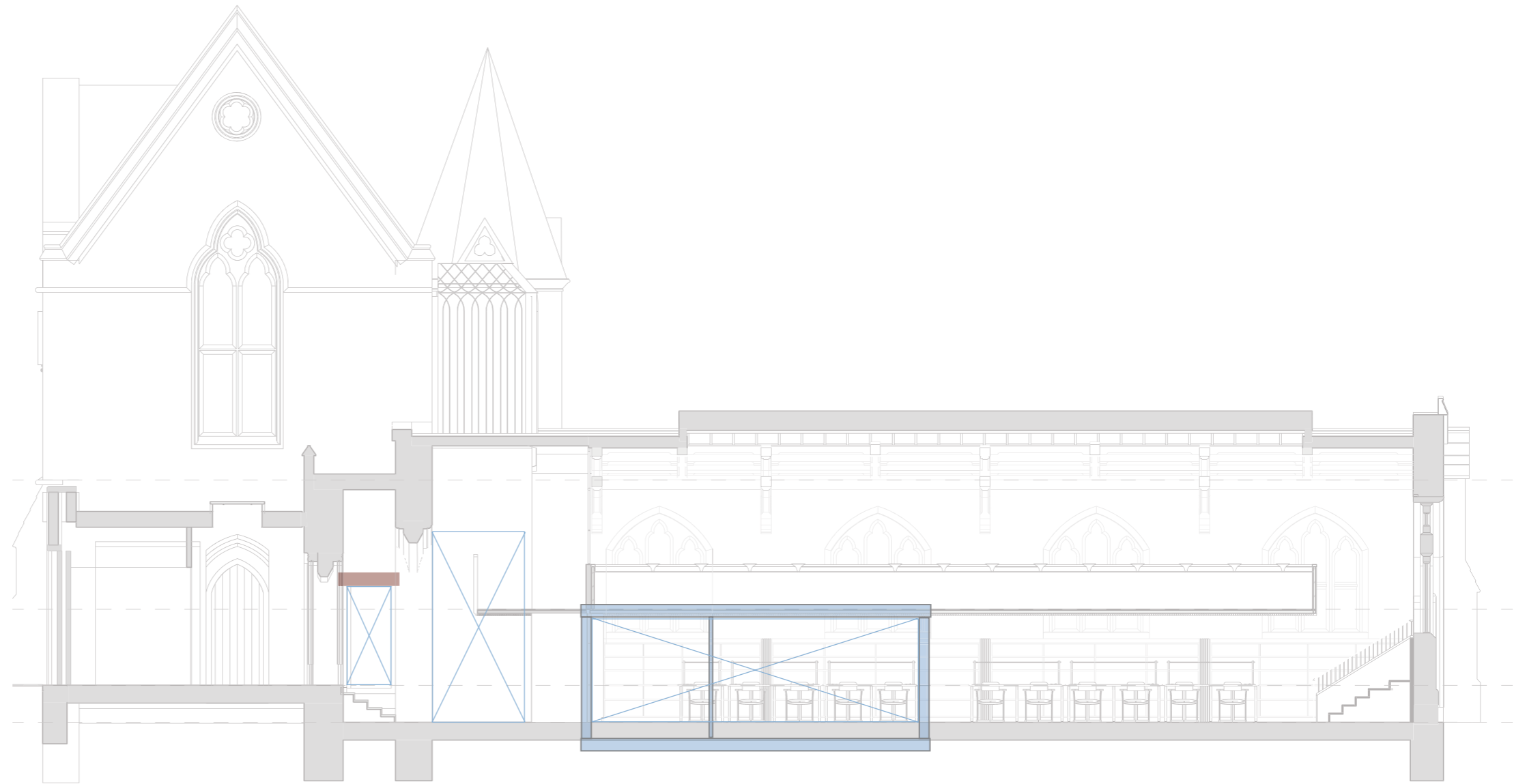
5.1 Structural Design—

Superstructure Modification Strategy

The annex building is proposed to be extended towards the Bodleian library boundary. These modifications are proposed to be carried out in a manner which maintains existing vertical and horizontal load paths wherever possible. This will be achieved through the provision of a steel “picture-frame” installed within the eastern wall of the annex. The low level beams, located below the proposed ground floor slab, will be encased in concrete and will sit directly onto the existing stone wall (retained at low level).

The picture frame will ensure loads are re-distributed onto the existing wall foundations in a very similar manner to the existing arrangement, and will limit future movements and settlements.

In addition to the above, a series of smaller openings are to be formed within the existing stone walls. Where practical, stone beams will be used to act as lintels. These works will be carried out in a sequence which maintains the resilience and robustness of the existing fabric. This sequence of works will be developed with the contractor.



Section along East Wall Boundary with the Bodlaein

6.1 MEP Services Design—

MEP Services Strategy

The approach to the provision of new MEP services for the library will be to minimise and reduce impact on the existing fabric: re-using existing services routes wherever possible and desirable, minimising both the size and number of any new penetrations, and careful selection and replacement of equipment to sensitively integrate with the building.

New fabric elements will be used for penetration and fixing in preference to existing fabric elements, considering the relative historical significance of and impact on different existing fabric elements where new elements cannot be used instead. The number and size of cables and pipework will be kept to a minimum, partly by using wireless, low-energy and networked technology where possible.

The environmental services, heating and ventilation, will aim to balance comfort and energy use, whilst supporting conservation of the existing fabric and mitigating thermal and hygral issues.

Heating

A new space heating system will use radiators in the same positions as existing in the main library, replaced where necessary like-for-like and supplemented sparingly as required, also with similar units or concealed. The existing flow and return into the building will be re-used, and new circuits from this will be hidden under the bookcases in the plinths at ground and first floor level in the main library. The existing penetration between ground and first floors will be reused to connect the two spaces.

This approach will almost entirely conceal visually intrusive pipework that is currently exposed at high level; concealing the pipework under the bookcases should not require substantial modification to the existing fabric of the bookcases as the ends of the bookcase plinths are already to be replaced and the structure of the plinths to be rebuilt. Continuous lengths will be used where pipework is concealed to avoid hidden joints prone to leakage and robust and treated screwed-steel pipework will be used for longevity.

Heating will be taken into the annexe below the floor, under the threshold of an existing doorway and through the wall between the main library and annexe. From there it will run under a new stair and into the plant room – this will involve two c. 100mm penetrations in the wall below the threshold. The locations of penetrations will be subject to further site investigation. The annexe will be heated by underfloor heating in a new floor screed, and concealed finned tubes and radiators in the new bookcases. There will be no notable further impact on the existing fabric.

Electricity

Electricity will be brought into the building via new cast-in ducting in the link block floor, avoiding the historic fabric. Distribution of electrical (and ancillary) services will be under the floor of the main library (below the joists), and in the ceiling above to serve high-level services and services at low level on the floor above.

In the ceiling of the main library notching of joists or small diameter penetrations will be required to route the cables, the number and size of which will be kept to a minimum. Power will be taken into the main library from the link block via penetrations in the wall above and below the existing doorway between the two, the size and number of the penetrations are indicatively: 4 no. c.50mm above and 4 no. c.50mm below.

In the annexe, low level electrical services will be distributed in the new bookcase structures and cast into the new screed, and at high level where roof interventions are required in any case, with no additional notable impact on the historic fabric.

Water and Drainage

Water and drainage to the reinstated WC are already in-situ and significant impact to the fabric is not anticipated as a result.

Ventilation

The main library is to remain naturally ventilated via existing openable windows. Solar gain is to be reduced by using blinds to increase thermal comfort in summer.

The annexe is to remain naturally ventilated, using a mixture of existing windows made openable, and new lantern windows at roof level. Due to relatively high solar gains and dense occupancy, a reasonably high air change rate of at least 20ACH is required, even allowing for solar control window films and blinds where applicable.

To achieve this rate of air flow in the annexe, the new lantern includes a significant area of opening windows, but the existing windows on the west side must also be made openable - 1 of every 6 casements is already openable, but at the top of the windows they are too high to reach and there is no satisfactory opening solution. As a result, at least two of the bottom three casements of each of the west windows must be openable, side-hung. Likewise, at least two casements of the north windows must be made openable.

The WC will have intermittent mechanical extract activated by the room light. The back-office, which lacks openable windows, will have the same. The plantroom will have automatic temperature activated extract ventilation, with passive make-up air vents in the roof also providing background ventilation. The terminations for these ventilation systems are all in the new annexe roof, concealed with lead mushroom ventilators.

7.1 Landscape Proposals—

Site Context

The external spaces surrounding the Library and Annexe are principally defined by building facades, which is typical of a collegiate environment. The two primary spaces bisected by the Library include the Rector's Garden at the northern boundary of the site and the Fellows' Garden at the south. There are a few specimen trees that provide vertical spatial definition and surfaces including lawn, loose gravel, and concrete flagstones that define circulation around the site.



7.1 Landscape Proposals—

Project Ambition and Core Objectives

Landscape proposals have been developed based upon the notion of full accessibility between internal and external spaces, with special consideration given to the approach to the Library. In order to strengthen this ambition, we have also proposed a design that renders the Rector's Garden fully accessible from both the levels of Peryam Mansions and the Annexe. The following core objectives have driven the proposals:

- Design of a fully-accessible landscape, which works in concert with an architectural ambition of full accessibility within the Library and Annexe.
- Appraisal of existing planting around perimeter of the Library and the Annexe -- having a direct impact on experience of the internal space -- and recommendations for tree works and renewals.
- Design of two gardens that may be flexibly programmed for a number of outdoor events

Legend

- Landscape Limit of Works
- Yorkstone Pavement
- Hoggin Self-Binding Gravel
- Shrub/ Herbaceous Planting
- Lawn
- Hedging



7.2 Rector's Garden—

- ① Sloped lawn providing access from Annexe to level of Rector's Garden
- ② 300mm-deep trench exposing lower section of facade to ameliorate damp issues
- ③ Yorkstone-paved terrace to accommodate catering/ events within the Rector's Garden
- ④ Part M-compliant ramp providing access from Peryam Manions to Rector's Garden
- ⑤ Renewed planting beds

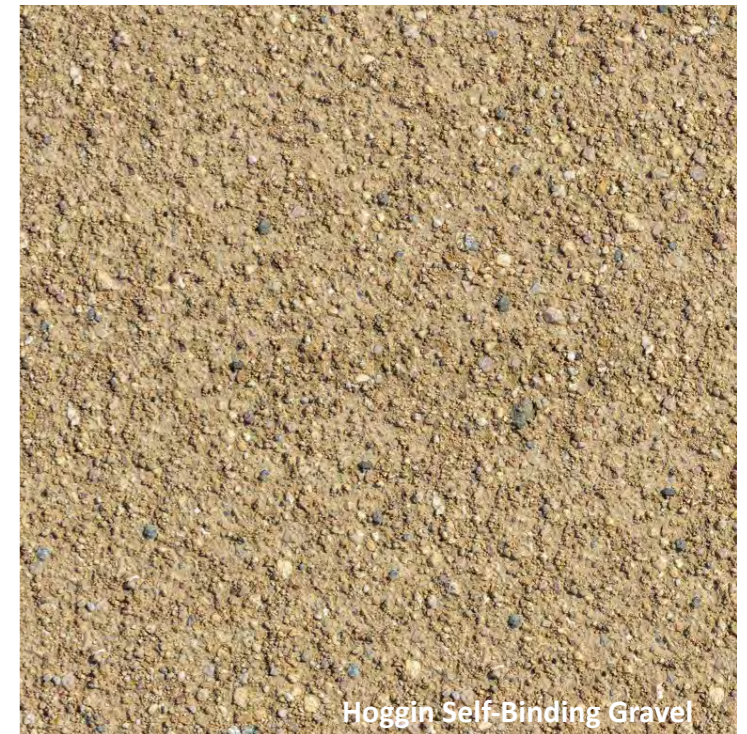
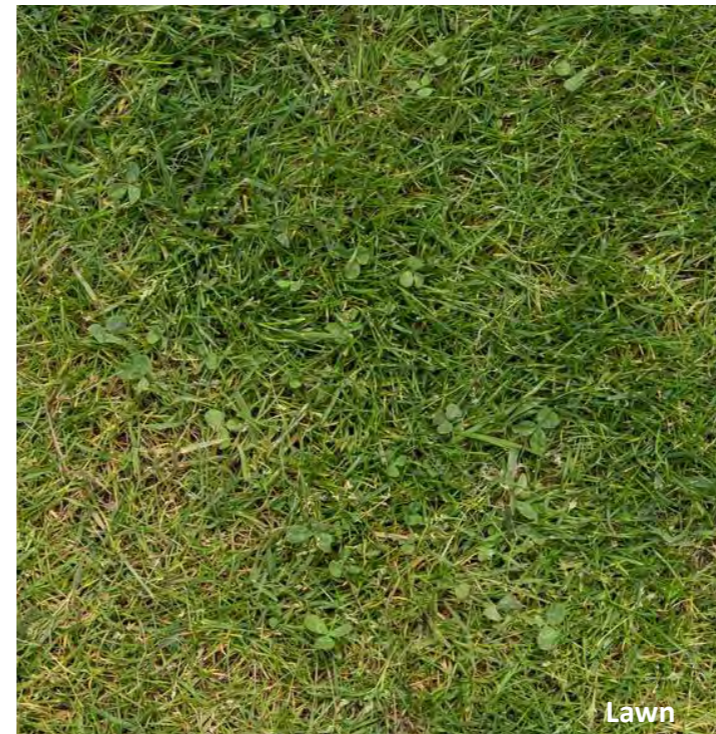
Legend

- Landscape Limit of Works
- Yorkstone Pavement
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- Lawn
- Hedging



7.2 Rector's Garden—

Materials and Finishes



7.3 Fellow's Garden—

1. Part M-compliant ramps leading to the Rector's and Fellows' Gardens
2. Yorkstone paved thresholds to Library entrances
3. Hoggin self-binding gravel surface with metal edge
4. Renewed planting beds along facade of Peryam Mansions and Library



7.3 Fellow's Garden—

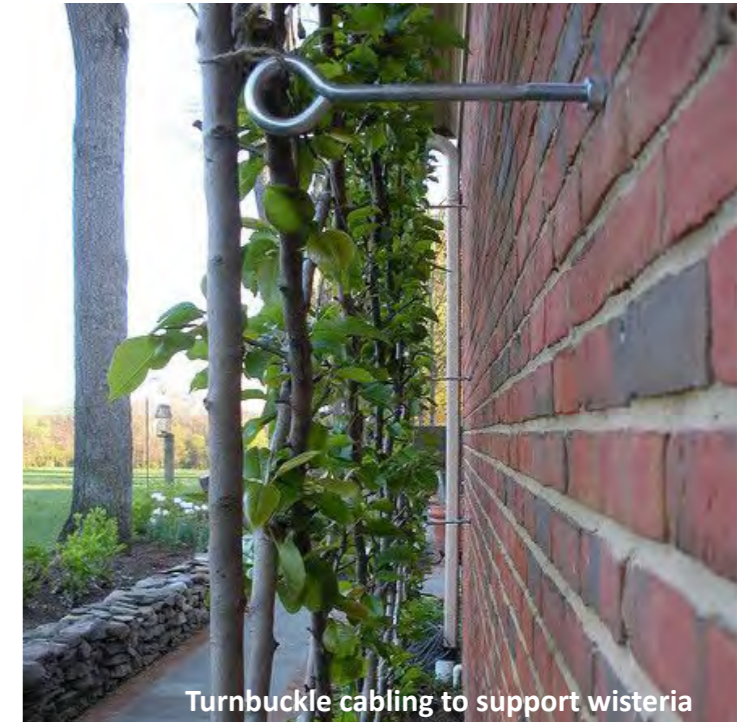
Materials and Finishes



c. 1910 photo of south facade of the Library (courtesy Historic England Archive)



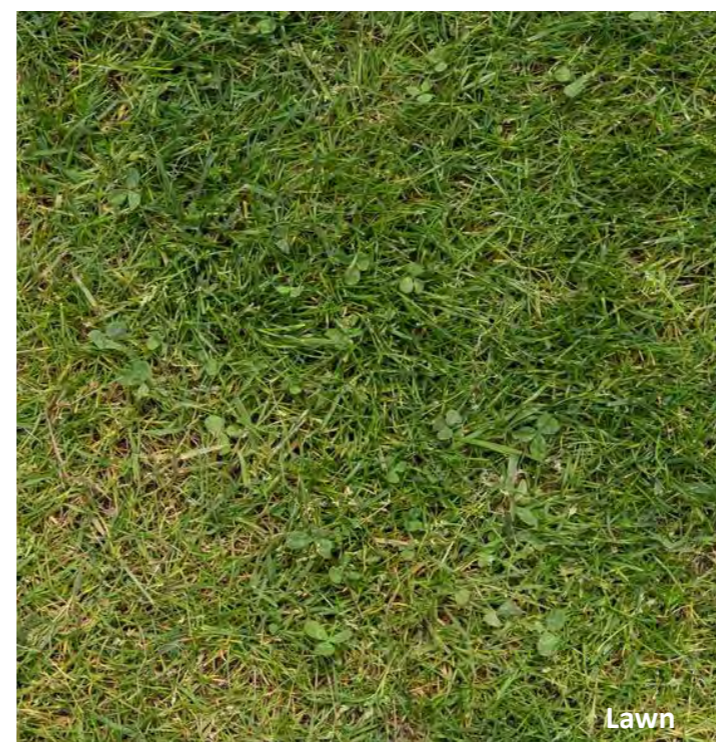
Yorkstone Flags



Turnbuckle cabling to support wisteria



Wisteria on south facade of the Library



Lawn



Hoggin Self-Binding Gravel

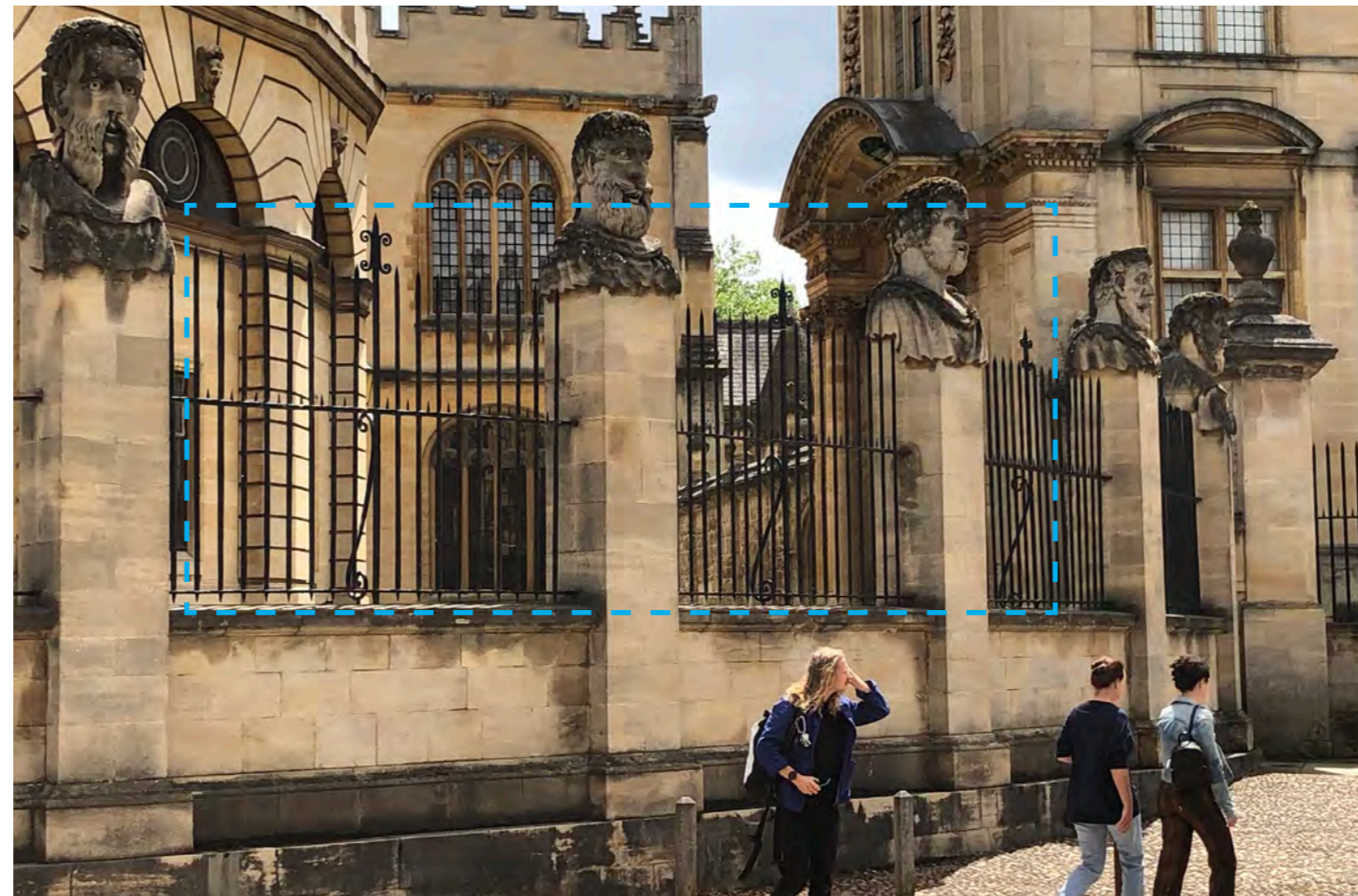
8.1 Small Views Study—

Small Views Study

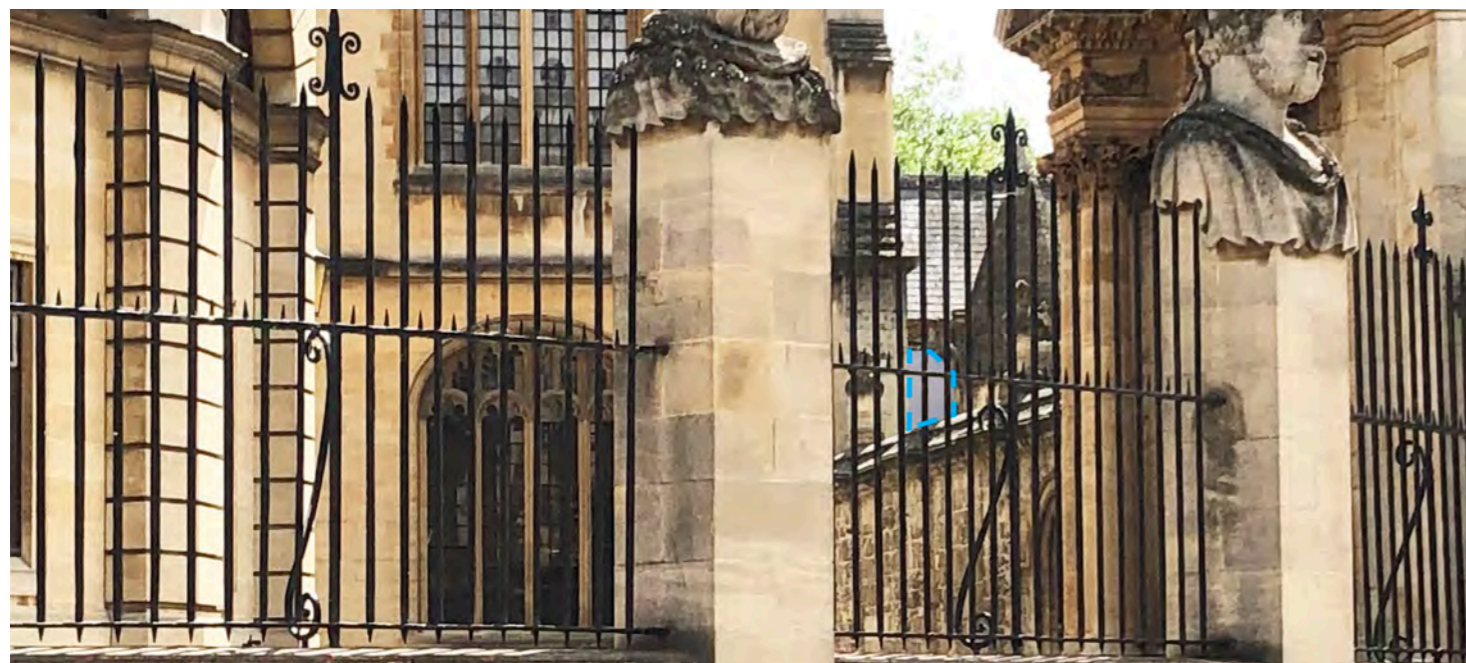
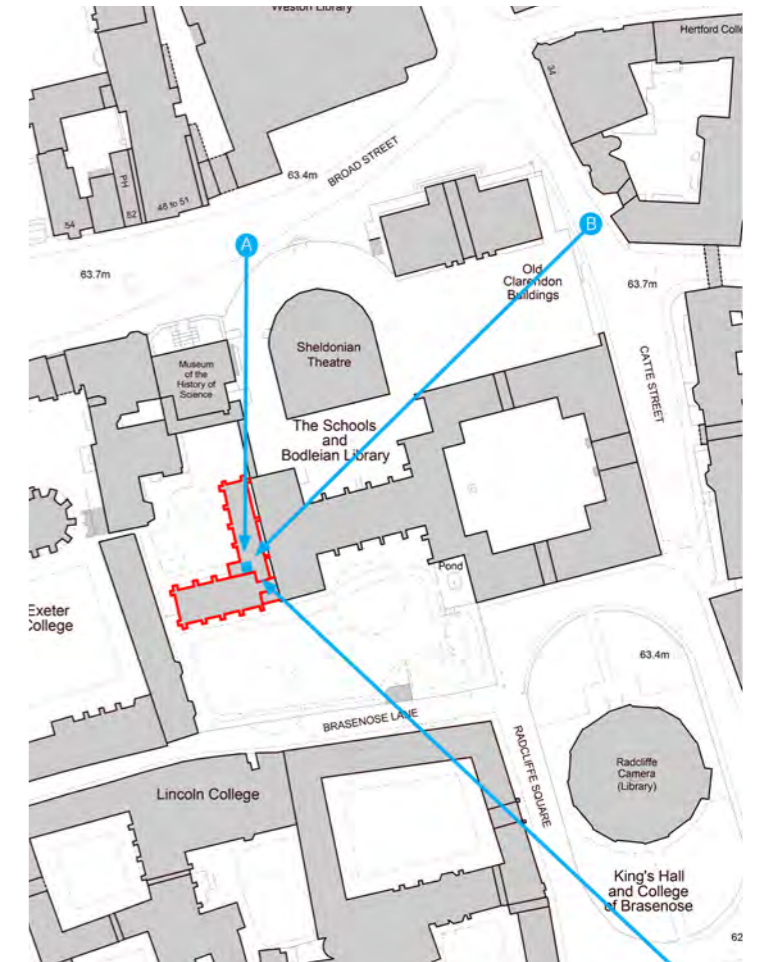
As part of the first pre-application response from the Conservation Officer, a question was raised regarding the extent to which the alternations to the library would be seen from the street and the preparation of a small views study was recommended. This would look at the impact of these extensions to the building, particularly the visual impact of the lift overrun on the Central Conservation Area and the impact on the setting of adjacent listed buildings.

We have looked at a number of views across the city, (see adjacent plan) and a number were immediately ruled out including views from Catte Street (B) and St Mary's tower (C). In both cases the lift shaft structure is obscured from view by the Bodleian Library.

We have identified that the lift overrun is slightly visible when viewed from one specific point on Broad Street, outside the Bodleian wall (A), and a similar glimpse of overrun housing can be seen from within the Bodleian grounds in front of the Sheldonian Theatre.



01. Existing View from Broad Street - north side

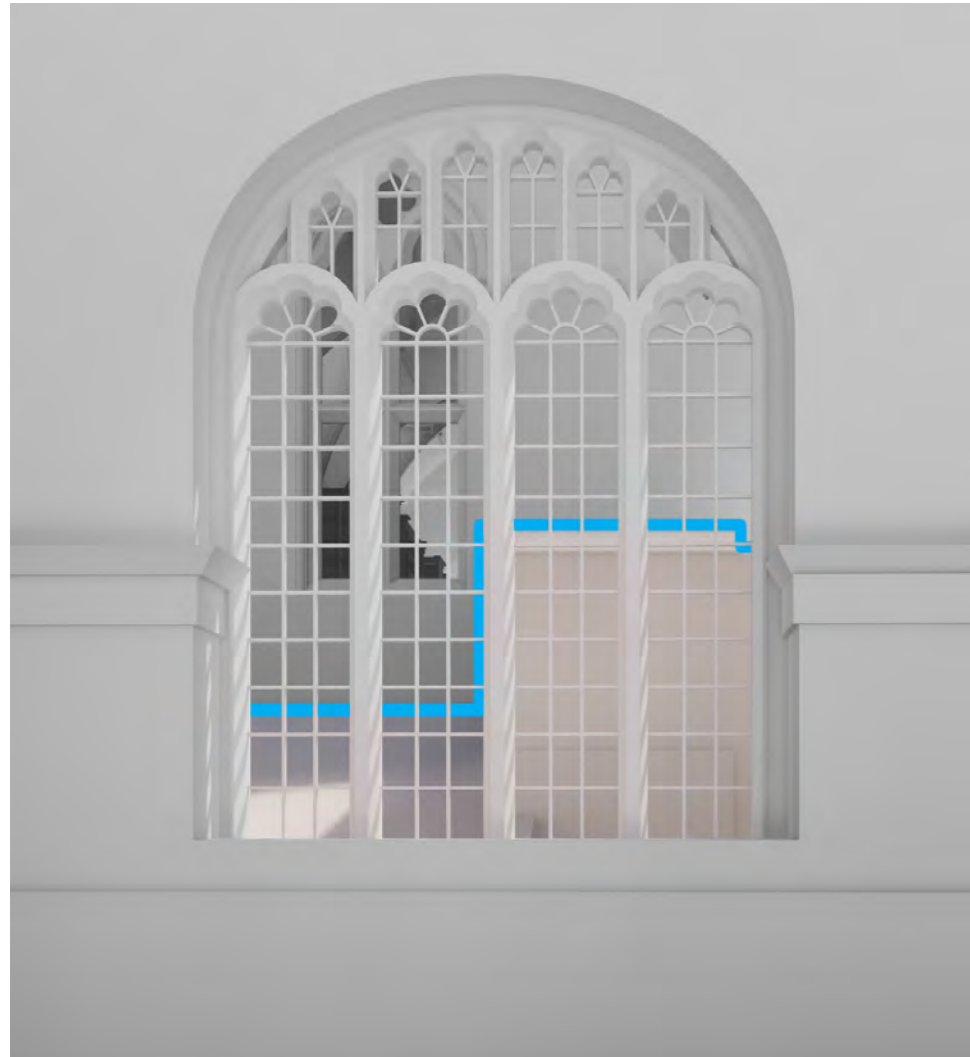


02. Proposed View from Broad Street - north side - magnified

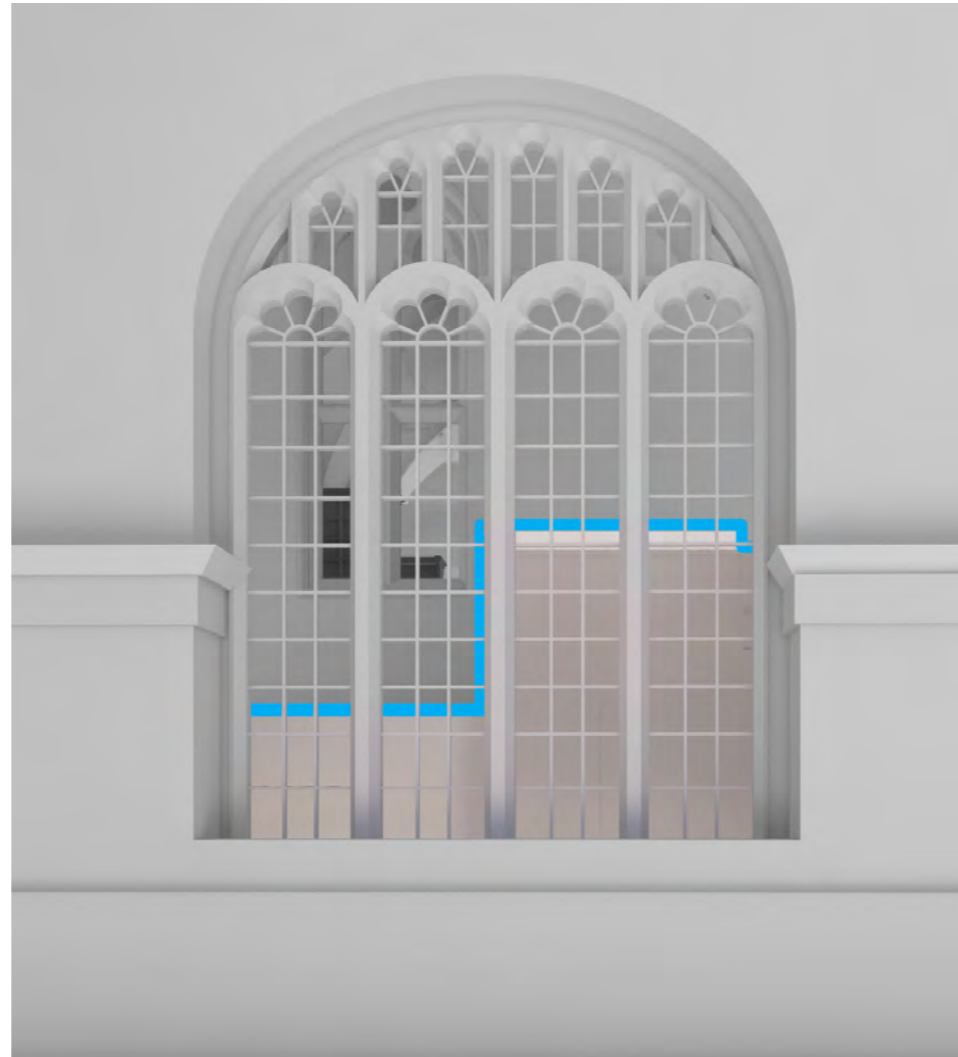


03. Existing View from St Mary's Tower

8.2 Bodleian Impact Assessment—



01. Convocation House - West - Ground Floor South Window - Existing



02. Convocation House - West - Ground Floor South Window - Proposed

Bodleian Impact Assessment

As part of our consultation with the Bodleian Library, we have carefully considered and visualised the impact of our proposals on the outlook from the west facing windows of their building. Specifically, we have looked the impact on two ground floor windows in Convocation House and a first floor window in the Seldon End.

Over the course of this dialogue, our design proposals have been refined materially and geometrically to reduce visual impact on the Bodleian. Refinements included the removal of obscured glass windows fronting onto Convocation House, the use of lead material to cover the link-block roof and the reduction in height of the lift overrun so that it will not be visible from within the Seldon End.

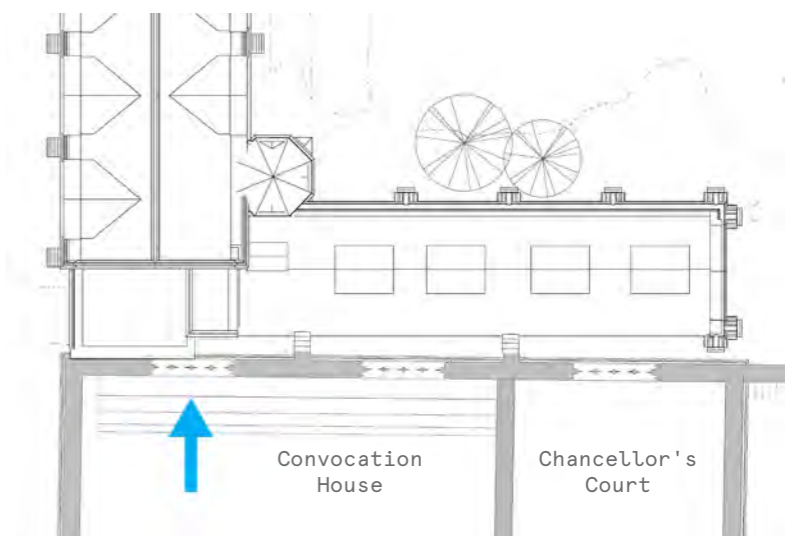
Outward looking views from their windows were presented to the Bodleian and University Estates Teams during these consultations, which were positively received.



03. Ground Floor South Window EXISTING



04. Convocation House interior view



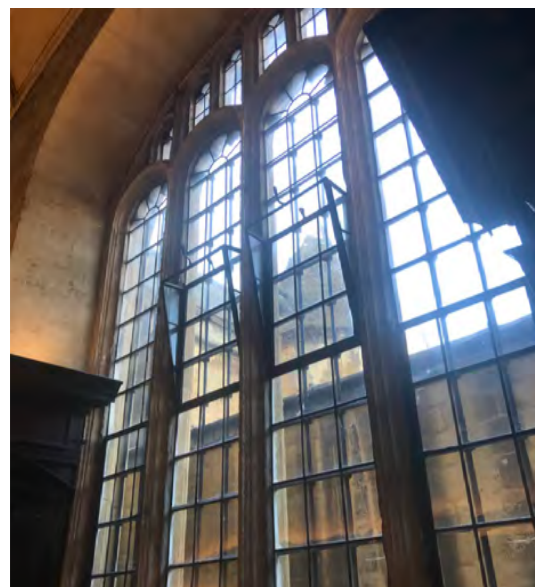
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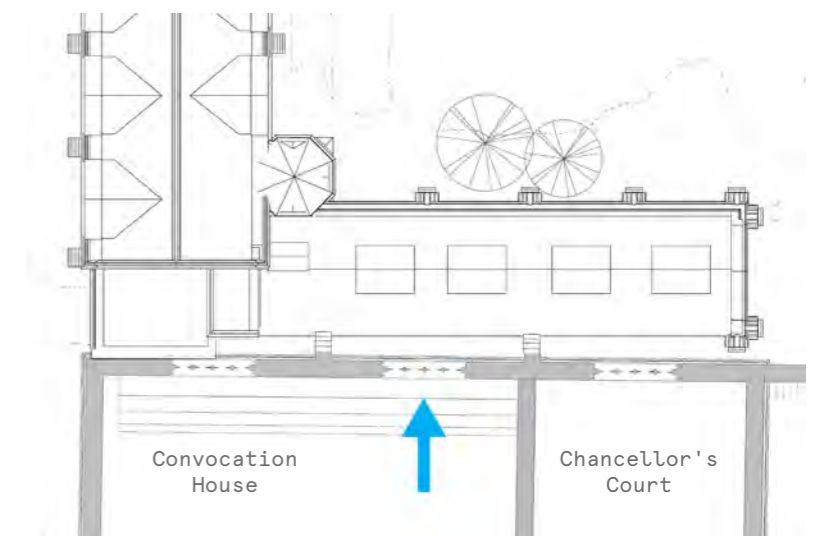
05. Convocation House - West - Ground Floor Central Window - Existing



06. Convocation House - West - Ground Floor Central Window -Proposed



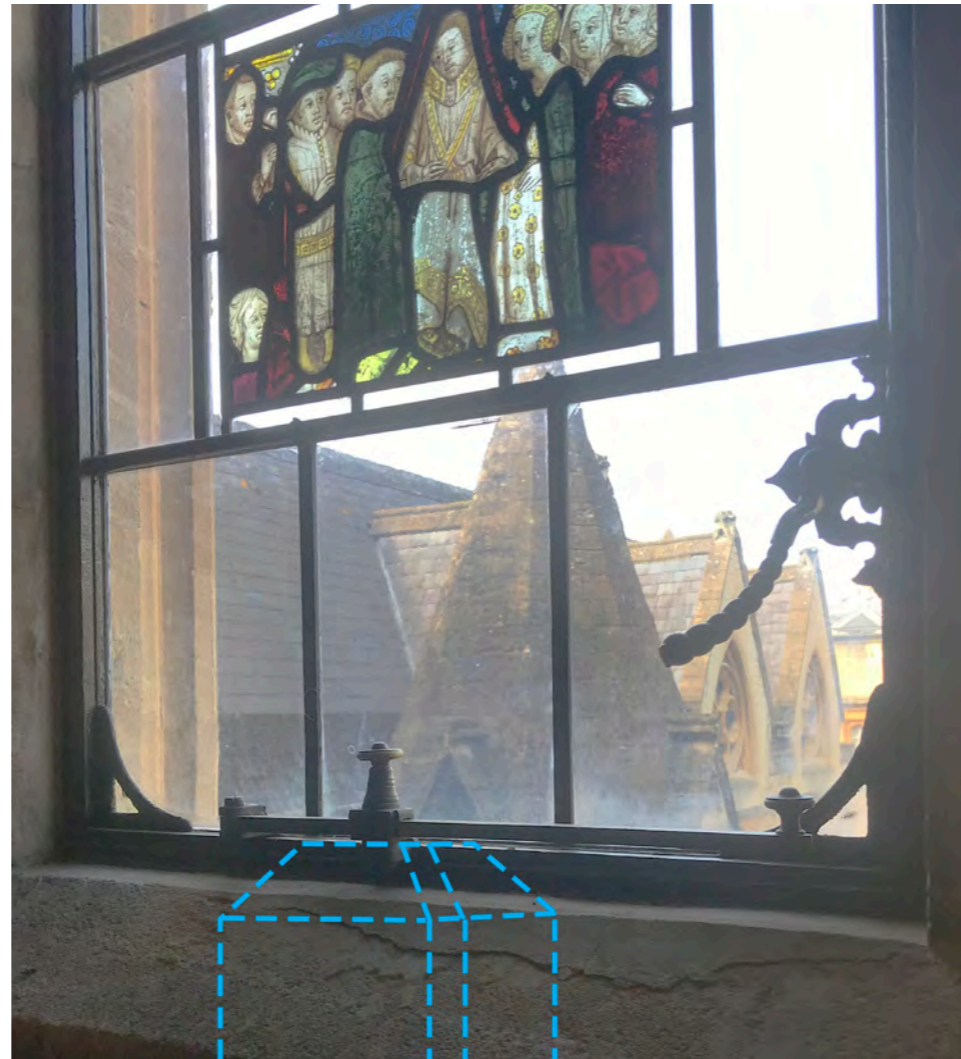
07. Ground Floor Central Window - Existing



8.2 Bodleian Impact Assessment—



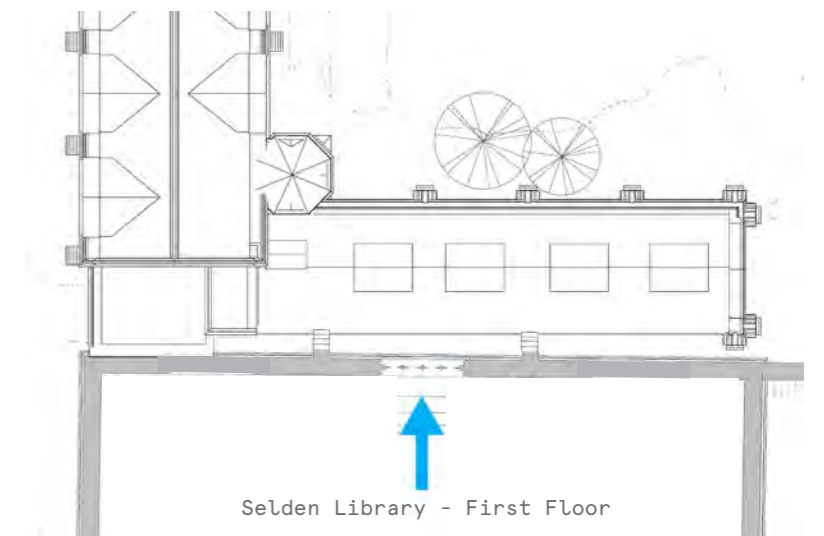
01. First Floor Central Window - Existing



02. First Floor Central Window - Proposed



03. First Floor Central Window - Existing



Selden Library - First Floor

9.1 Stakeholder Consultations—

Consultation Summary

In parallel with pre-application discussions with Council officers, we have undertaken extensive consultations with the key stakeholders listed in the time line opposite.

Responses to our initial round of consultations were positive and supportive of the proposals in principle. Further detail was requested in some areas, and feedback on the massing of the lift overrun has influenced our design development.

A second round of consultations was commenced at the end of October 2020 to coincide with the developing Stage-3 design, which offered consultees a greater level of detail on proposals.

A second Pre-Application submission was made followed by an online meeting with the Conservation and Planning officers on the 25th November. The meeting was positive and a brief follow up was arranged for more detailed discussion about archaeological methods to be employed during ground works.

In parallel we presented the scheme to the Bodleian and University Estates teams. Feedback was positive and a strategy of regular technical reviews to look at interface details will be arranged for Stage 4 Technical Design to support the appointment of a party wall surveyor.

Following second consultations with the Victorian Society and Historic England, we received a positive response to our Coordinated Design proposals.

Key Consultation events and dates:

May 2020

- Pre-application meeting 01 with Conservation Officer.

June 2020

- Written feedback received from the City Conservation Officer following pre-application meeting 01.
- Consultation document issued to Historic England and Victorian Society.

July 2020

- Written feedback received from Historic England.
- Consultation meeting with University Estates.
- Consultation meeting with Bodleian team.

August 2020

- Archaeological and geotechnical site investigations.
- Feedback received from city archaeologist.

September 2020

- Reports received from site investigations and Oxford Archaeology.
- Confirmation no underpinning required along Bodleian boundary.

October 2020

- Second pre-application and consultation documents prepared and circulated / presented.
- Second consultation material issued to Historic England and Victorian Society.

November 2020

- Written feedback from Victorian Society received.
- Second Consultation presentation to Bodleian and University Estates.
- Pre-App 02 with Conservation and Planning Officers.
- Townhall meeting with College Fellows.