6.0 Pre-Application Advise and Design Considerations

6.1 Overview

Rock Townsend, on behalf of The London School of Hygeine and Tropical Medicine, submited an Application to Camden council in November 2021 requesting Pre-Application Advise for the proposed works for the Phase 3B Refurbishment of the building as outlined in the proposal below. Please find the submission information and response in Appendix D.

6.2 Response from Camden Council

The general points made by the Senior Conservation officer, Antonia Powell, as per follows:

- In Principlem, the Pre-Application proposals and the ongoing use of this purpose built historical building has the support of Camden Council
- The formal listed building consent will require plans, elevations and typical sections where relevant
- The internal areas of interest for the listed building consent application includes:

1. The treatment of Gower Street stairwell
2. The removal or upgrading for fire of original doors
3. Infilling of windows to support Laboratory use of internal spaces, Camden council advise to retain window articulation. The two key facades include Southern Elevation and Eastern Elevation (Malet Street). Camden Council advise to retain Malet Street window openings.
4. The existing Mansard roof to Gower Street, Camden Council are in support of to create additional research space at this upper level however advise that this roof is made more 'roof-like' with a sloping form and led-like finish from its current appearance of a light-weight yet dominant structure.

No queries nor planning issues have been raised by Camden Council since the submission and response of the Pre-Application advise request

6.3 Design development with consideration to Pre-Application Advise

The design development following the response received from Camden Council has taken into consideration the advise provided to preserve and protect the historical building. Please see the following pages where the Proposal has been outlined in Plans, Sections and Elevations as well as further detail regarding:

1. The treatment of Gower Stairwell (6.4 to 6.9)
2. The Removal of original doors (6.10)
3. Infilling of windows (Southern and Eastern Elevations) (6.11 to 6.12)
4. Roof Proposal and Impact mitigation to Gower Street and Malet Street (6.13 to 6.17)
5. The treatment of Parapets (6.18)

Pre-Application advise considerations and designers response is highlighted in this format on the following pages.

6.4 Malet Street Stairwell | Extension Pre-1977

As part of the overall LSHTM masterplan, this Phase of works, 3B, looks to improve the functionality and efficiency of the Central Wing on Levels 4, 5 & 6 as well as improve and consolidate the laboratory spaces within this zone. To meet this objective we are proposing to extend the Gower Street stairwell

Original Build & Existing Conditions:

In the original building in 1929, Malet Street and Gower Street stairwells reached L4, the top storey of the building at that time, and at the top of each staircase was a large rooflight.

However at some point before 1977 (and prior to the building's Grade 2 listed status), two roof extensions were added creating what are now Levels 5 & 6. This made the roof lights at the top of each staircase redundant and the Gower Street Stair roof light was in-filled to form the new Level 5 floor whilst the Malet Street stair was extended up to L6. The Gower Street stair remained as it was, extending no further than Level 4.

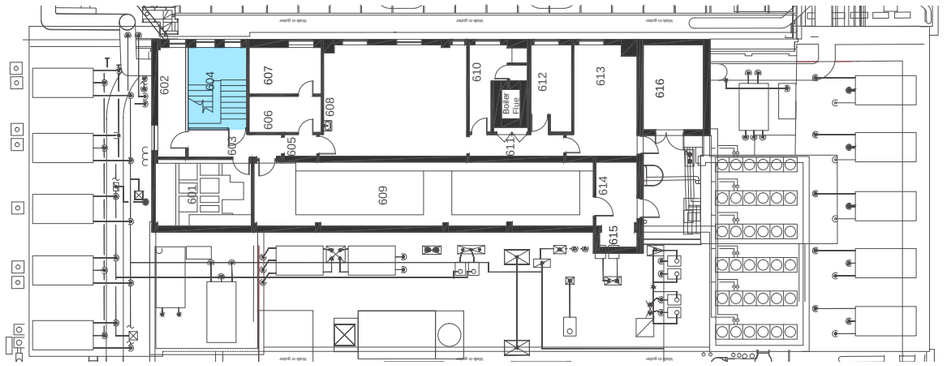
As a result of this change, the vertical circulation between Levels 4,5 & 6, in the central wing, does not provide adequate access to the upper levels.

The 2 original small staircases that connect Levels 4 & 5 do not reach Level 6 and therefore the space on level 6 do not meet current Part B regulations.

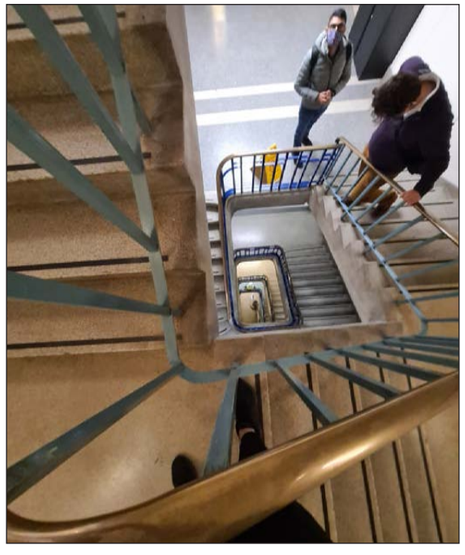
These awkward routes compromise the efficient use of the space and rationalisation of the vertical circulation would help to consolidate the piecemeal extensions to Levels 4, 5 & 6.

Between Levels 4 and 5, the Malet street stairwell extension, (designed and constructed prior to the building's listed status) reflects the original staircase with its the 3-flights and square well. However, from level 5 to Level 6 it is reduced to a 2-flight dogleg stair. We presume this was to deal with the lower floor to floor height between Levels 5 & 6 and maximise occupiable space as far as possible.

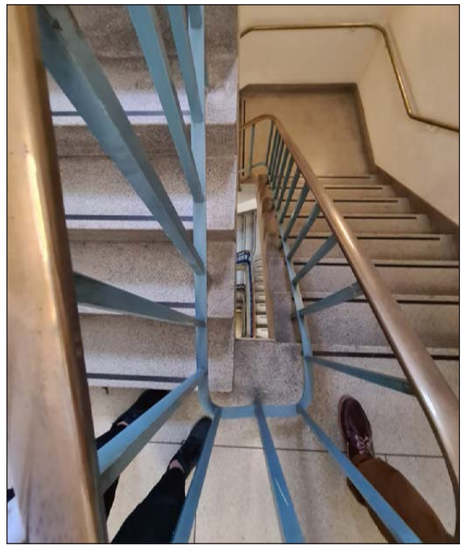
As part of this application, we are proposing a similar strategy for the extension the Gower Street stairwell to provide a well-balanced uniform approach to the 2 stair cores that 'book-end' the central wing of the building.



Existing Malet Street stairwell extension at Level 5



Malet Street stairwell extension. 3-flight stair from L4 to L5



Malet Street stairwell - view from top storey landing looking down

6.5 Evolution of Malet Street Stairwell

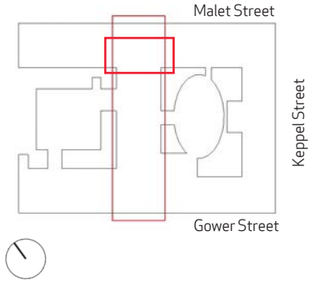
Key:

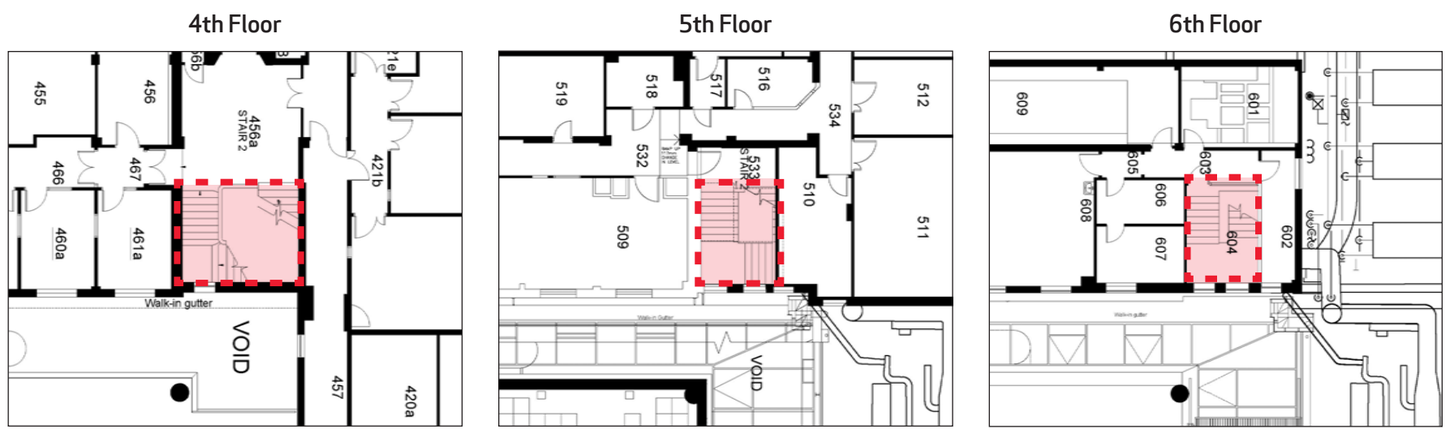
Malet Street stairwell

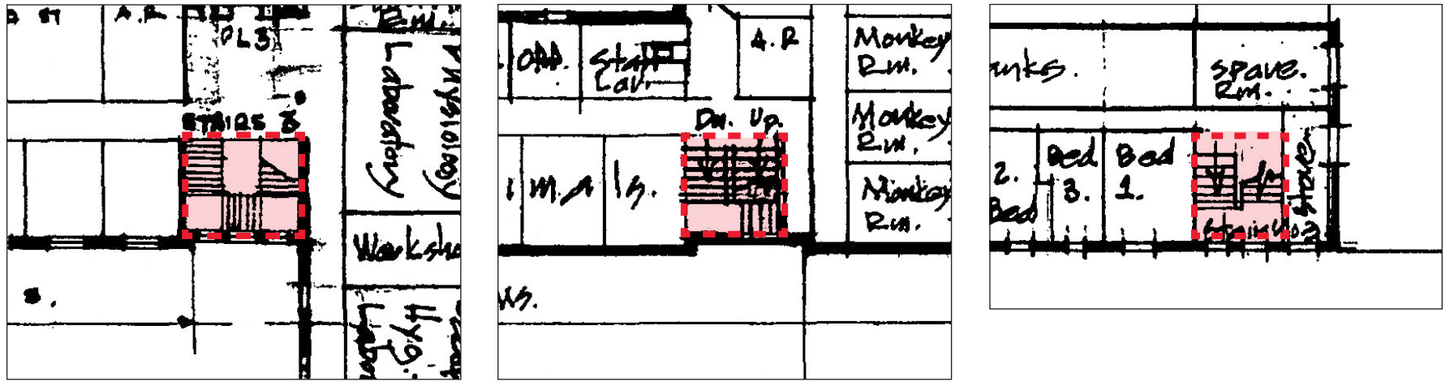
2018

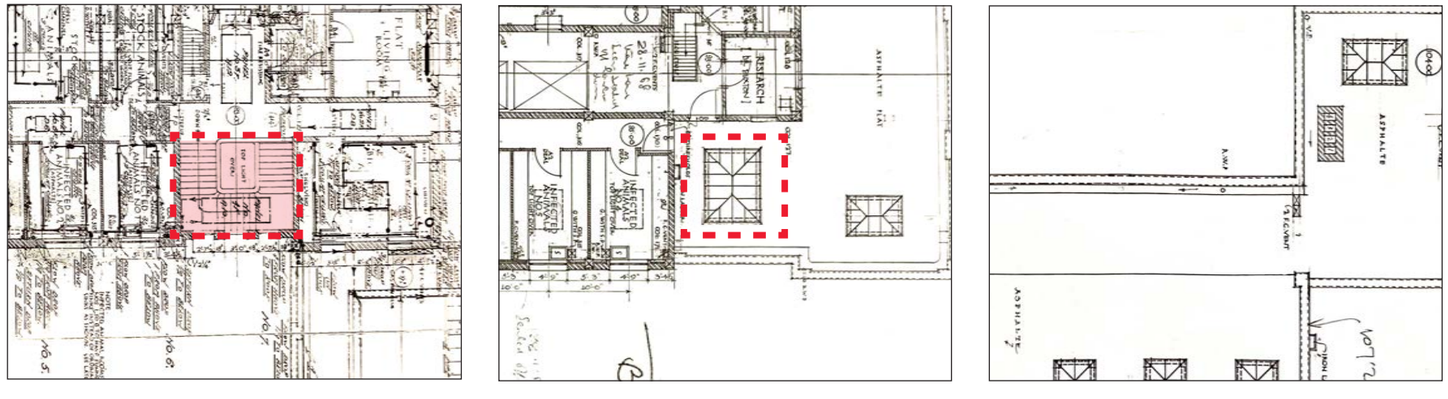
1977

1929









- Extension built pre 1977
- Stair extended to L6 with dog-leg return
- Stair extension pre-listing

- Original 3-flight square staircase finishes at L4
- Rooflight above stairwell

→ Grade II listed in 1982

6.6 Gower Street Stairwell

The existing Gower Street Stair is designed in the same style as the (original section of) the Malet Street Stair. It consists of three flights to each floor with a square well and a terrazzo finish.

The main features of the stair include:

- A light grey terrazzo finish
- A raised stringer with curved corners and moulded detail
- A square section steel balustrade with bolth vertical and horizontal members and a wrap around brass hand rail.

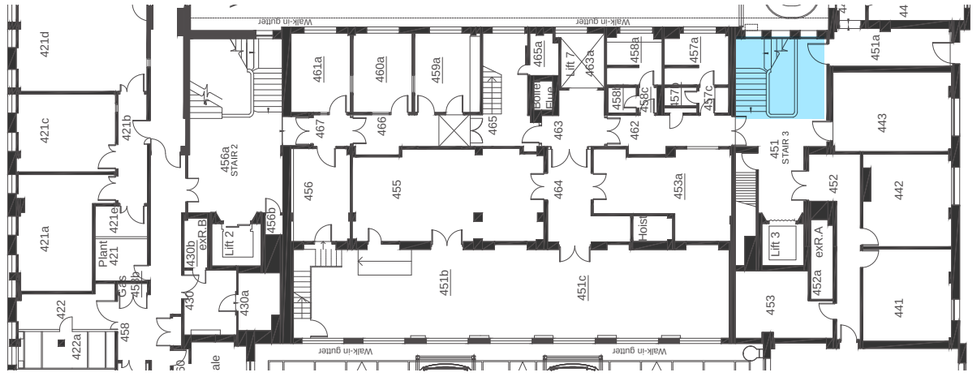
The proposal on Gower Street stairwell is also for a 3 flight square stair from Level 4 to Level 5 and a 2 flight dogleg stair from Level 5 to Level 6.

The new stair extension will maintain elements of the original design, whilst complying with current building regulations.

The extension of this stair up to Level 6 will rationalise circulation between Levels 4 and 5 through the main cores, remove the need for the additional staircases on L5, and provide efficient and compliant vertical circulation up to L6, reactivating the use of spaces on L6.

This proposal intends to provide a rational and readable circulation route through the central wing of the building. Reflecting the arrangement of the Malet Street stairwell creates a distinction between the central wing stairwells and main stairwell on Keppel Street where the original lightwell has been retained.

Please see proposed drawings of the Gower Street stairwell, design and materiality on the following pages.



Existing (original) Gower Street stairwell at Level 5


Fig. B Gower Street stairwell - view from Ground level looking up

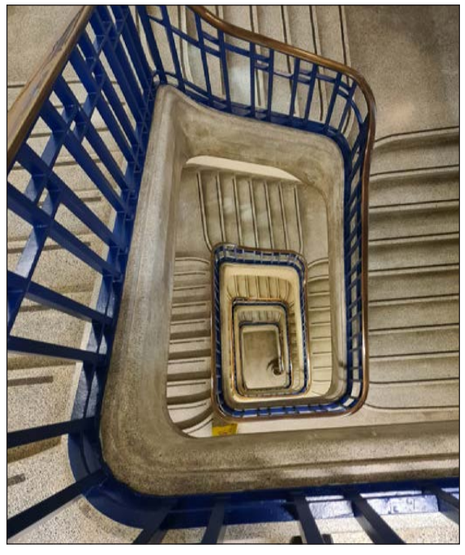


Fig. D Gower Street stairwell - view from top storey landing looking down

6.7 Gower Street Stairwell Proposal

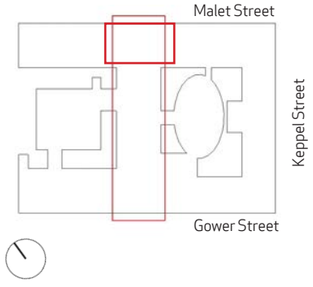
Key:

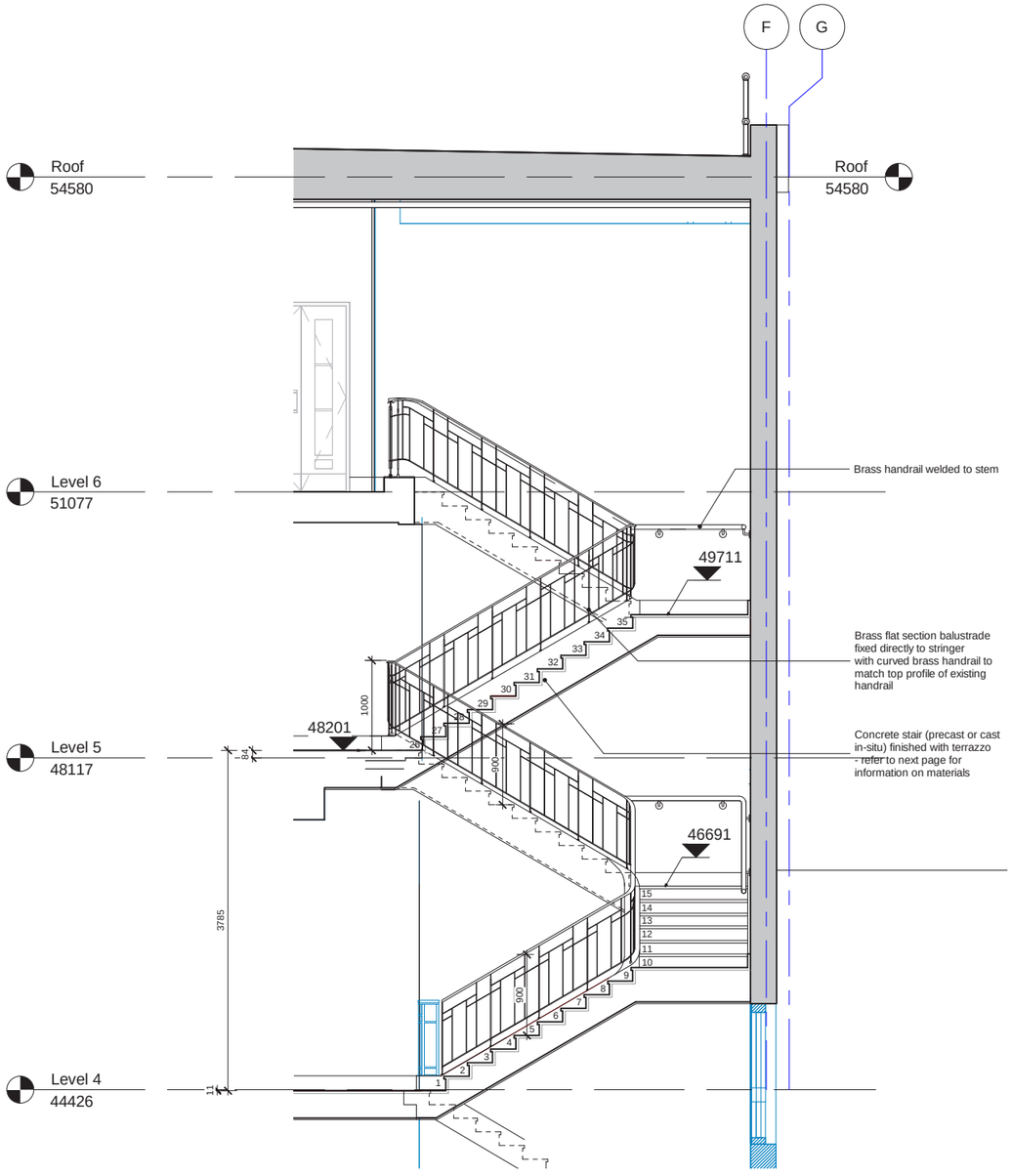
Existing

Proposed

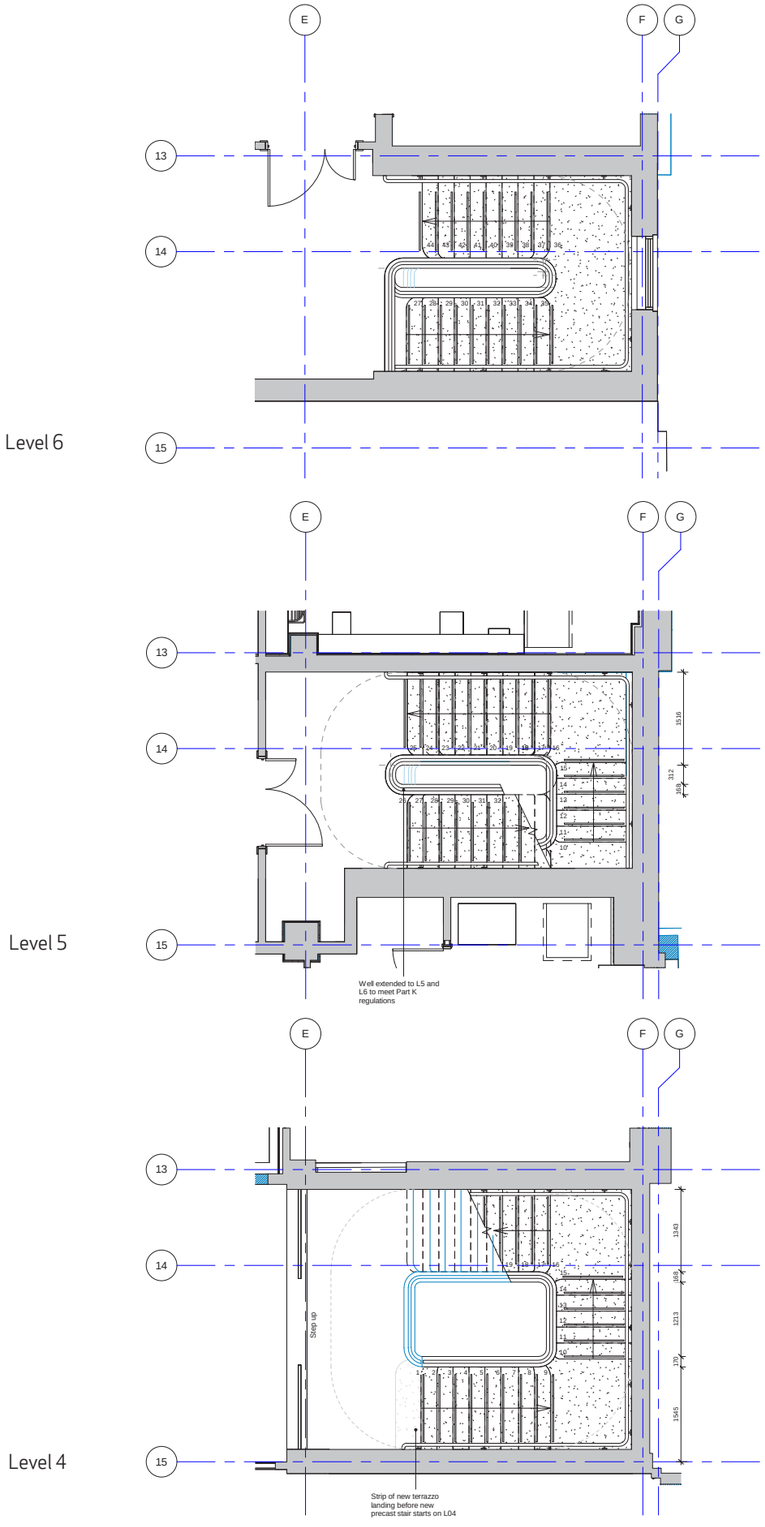
In order to improve both the accessibility and functionality of Levels 5 & 6, whilst being sensitive towards the original design and extensions of the building, the Gower Street stair will be extended to create a mirror image of the Malet Street stair extension.

The extension will continue the three flight / square well design up to level 5 and from there it will continue as a two flight dogleg stair, similar to the Malet Street stair extension.





Section through proposed stairwell



6.8 Gower Street Stairwell Details

Key:

Existing

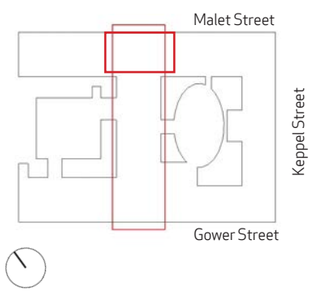
Proposed

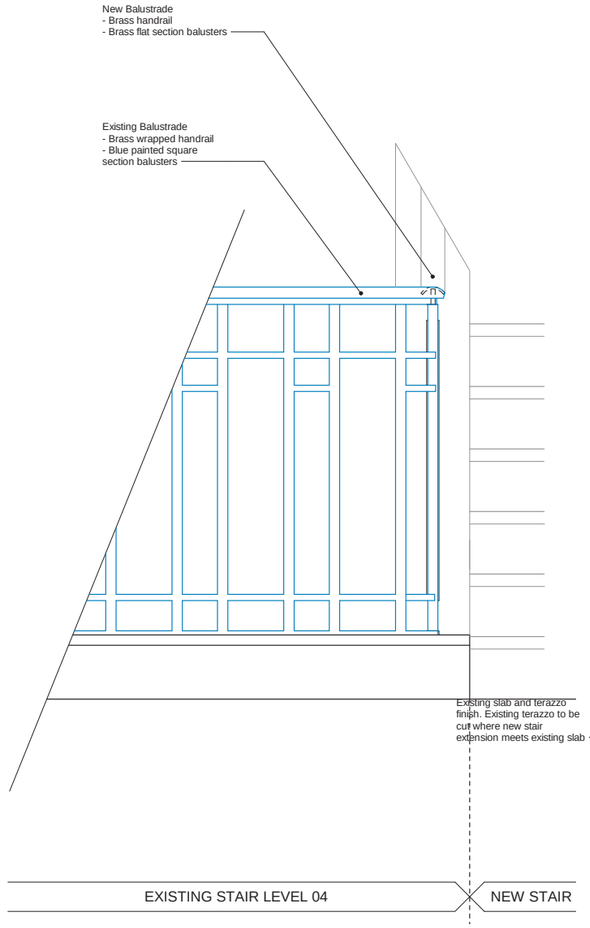
The extension to the Gower staircase will be in keeping with the style and materials used in the existing staircase through a minimal and contemporary design.

The design will be somewhat simplified in comparison to the existing, taking specific elements of the design and repeating them;

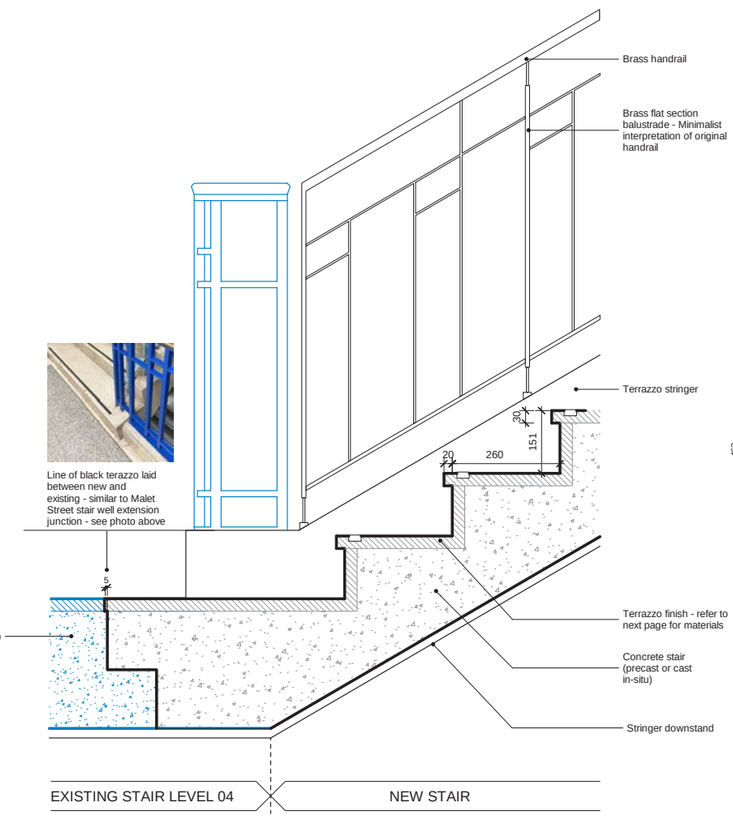
- Radiused corners to the stair well
- Terrazzo stringer upstand to well and terrazzo skirting to wall.
- Painted plaster soffit to the under side of the flights and landings.
- Flat section brass balustrading with the spacing of the balusters matching the existing.
- Brass handrail to both sides of the stair.

The Gower stair extension is designed to meet the current building regulations.

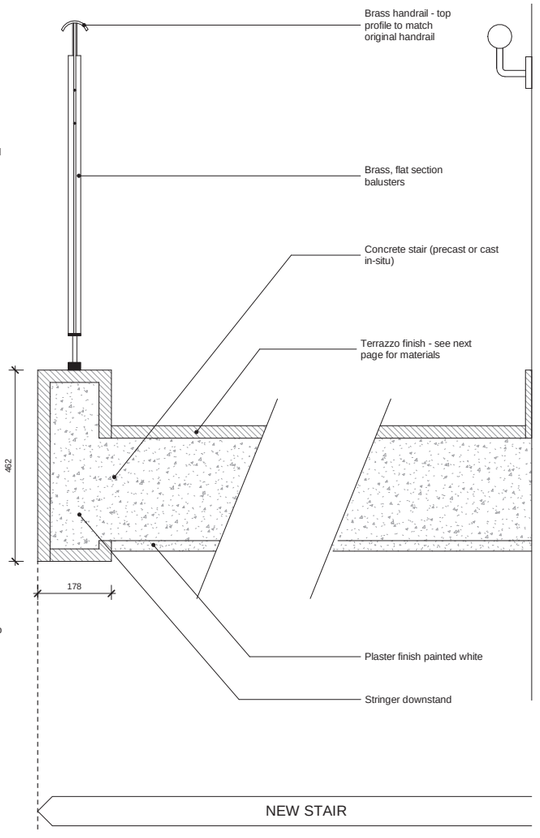




Join between existing balustrade at level 4 and proposed

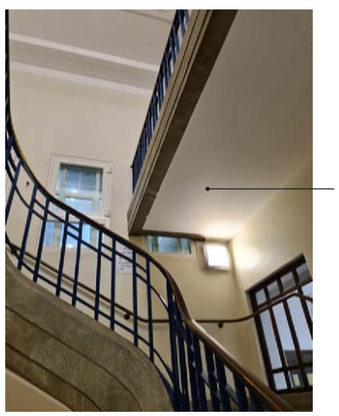


Proposed balustrade between level 4 & level 6



Proposed stringer between level 4 & level 6

Existing balustrade at level 4



The existing landing will be demolished and the third window will be reactivated, bringing additional borrowed light into the stairwell.

Profile of existing stairwell between level 0 & level 4

6.9 Gower Street Stairwell: Materials

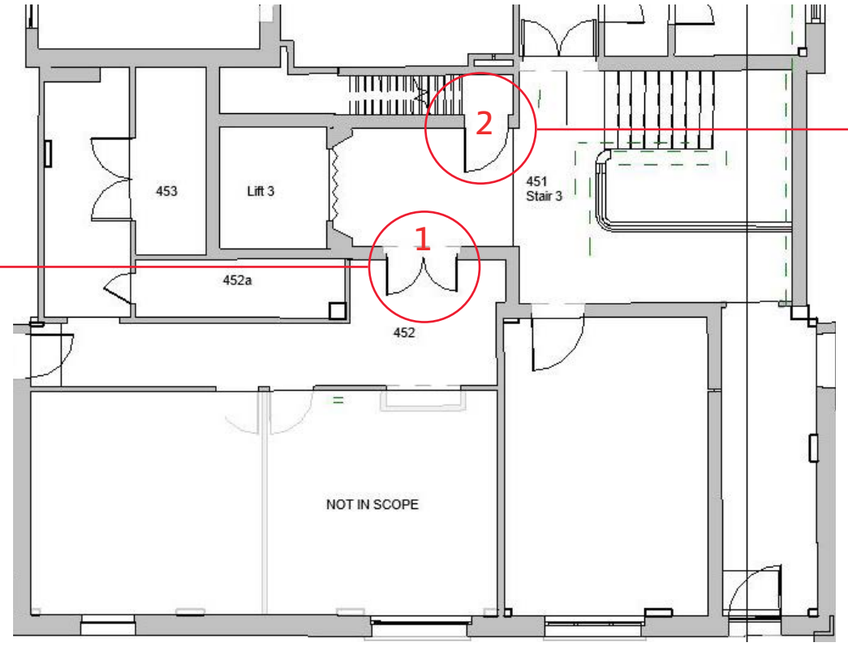
Existing - Gower and Malet Street Stairwells

1. Gower Street original terrazzo stair and blue balustrading
2. Gower Street stair extension - terrazzo stringer profile
3. Gower Stair Terrazzo finish close up
4. Gower Stair projecting nosings
5. Malet Stair balustrade handrail - Original and Extension

Proposed Gower Street Stairwell Extension | Precedents

1. Balustrade and handrail electroplated with unlacquered brass finish - Brass providing anti-microbial qualities
2. Precast stair with Terrazzo stringer profile - simplified immitation of original stair stringer
3. Grey Terrazzo with dark blue, light blue and sandy beige flecks to reflect Gower and Malet stair Terrazzo and balustrade detailing (to match grain sizes of existing Terrazzo in Gower and Malet core)
4. Terrazzo stair with projecting nosings
5. Curved brass handrail - top profile to match existing Gower Core handrail to keep continuity

6.10 Removal of Original Doors

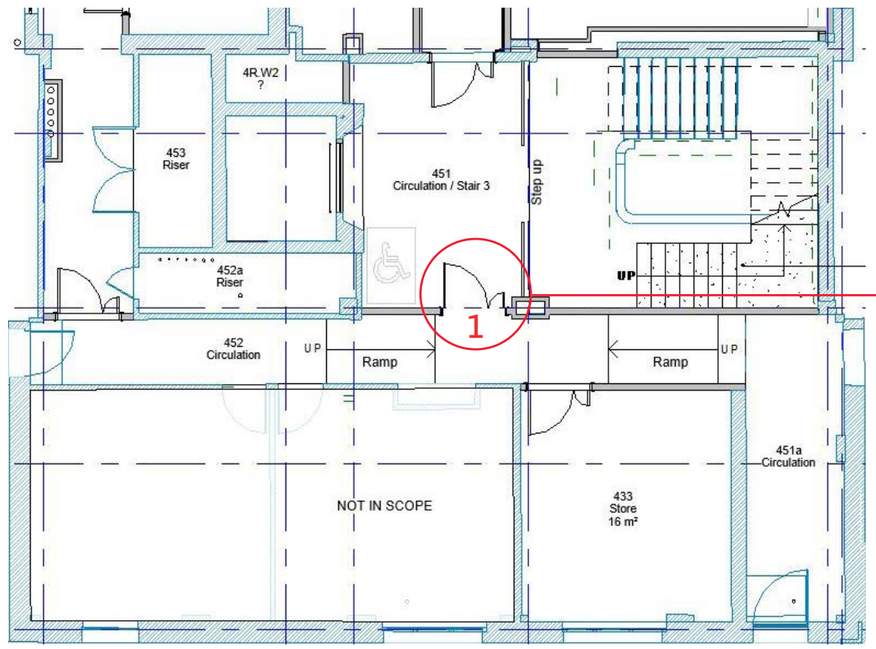


Existing Level 4 - Gower Stair Core

To accommodate the Gower Street Stairwell extension, the landing to Level 04 requires refurbishment works to upgrade the core to current building regulations, particularly Part B, Fire. For this reason, 2 doorsets in Gower Street Core, which appear to be original, need to be demolished.

Door '1'
-Does not meet current building regulations, particularly Part B, Fire.
- the wall it sits in is to be demolished as part of the landing reconfiguration therefore door is now redundant
-Door is of poor condition and cannot be used elsewhere

Door '2'
-servescurrent fire escape stairs from Level 05 and is now redundant as the stair and its enclosure is to be demolished as part of landing and core reconfiguration
-Door does not meet current standards and is of poor condition therefore cannot be used elsewhere



Proposed Level 4 - Gower Stair Core

The Proposal intends to introduce a door and a leaf within the new reconfigurated core which meets Part B Fire Regulations to create a 30 minutre Fire enclosure within the Gower Core as per the LSHTM Fire Strategy.

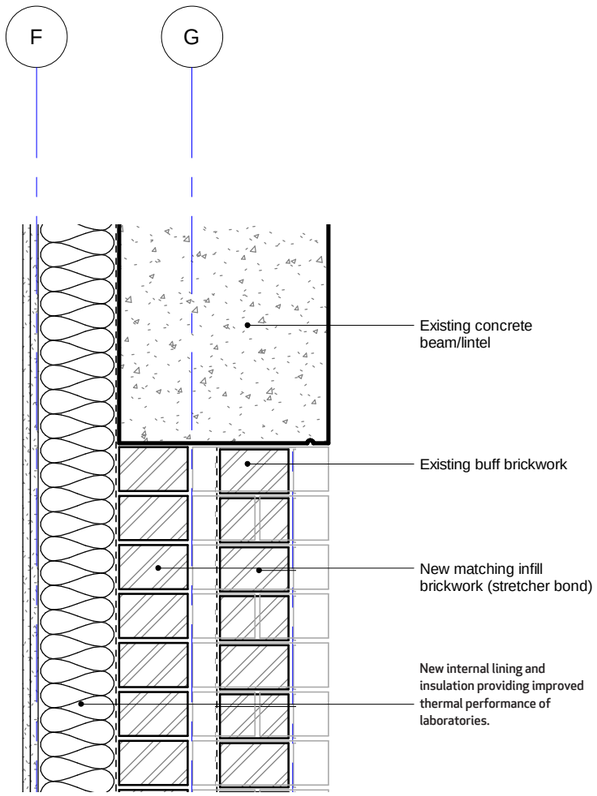
The style of this door will be an appropriate heritage style as per the example below, another upgraded fire door within LSHTM cores.

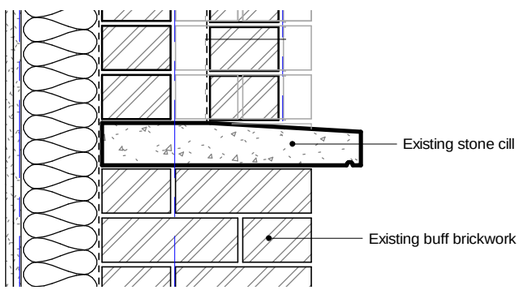
6.11 Infilling of Windows to South Courtyard

An internal lining of insulation is proposed to all laboratories within Levels 4, 5 & 6 to improve the poor thermal properties of this early 20th Century building, to upgrade the envelope to meet current building regulations and satisfy research laboratory requirements.

The existing windows on Levels 4, 5 & 6, facing the South courtyard, will be brick infilled to achieve this.

The depth reveal of the new brick infills will match those of the existing windows which have been infilled as per the recommendations of the Pre-App advise, the depth reveal ranges from 20mm on L6 to 60mm on L4 and L5 (to suit existing wall types) please see Section Detail and images adjacent and P19 / Appendix A for proposed Southern Elevation drawings.





Existing windows facing the South Courtyard

Examples of other bricked up windows in the north courtyard

6.12 Infilling of Windows to Malet Street, Level 05

Existing windows to Level 05 will also be demolished , however these openings will be infilled with portland stone to match the existing facade with a reveal depth that retains the articulation of the existing windows (similar to detail on previous page).

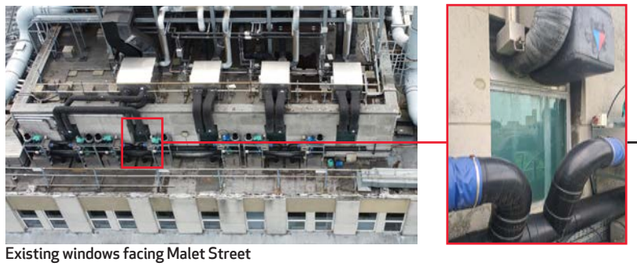
Whilst we recognise the feedback received by Camden council was to retain the windows to Level 05 Malet Street facade, we are unable to follow this advise for the following reasons:

- The existing windows to Level 5 Malet Street are Aluminium framed and double glazed, and, as can be seen from the photos below, they are of poor condition with cracks and panels missing.
- The liklihood of condensation with existing windows retained is high and will inevitably lead to mould and create a difficult to maintain and unacceptable environment for these specialised spaces for LSHTM.
- 21st Century research laboratories require temperature and humidity controlled environments to function, which is not possible to be achieved with windows retained.

The overall impact to the facade will be minimal as:

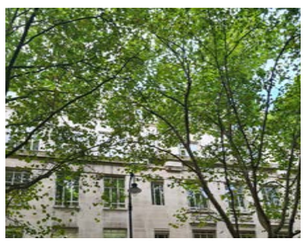
- This portion of the facade is heavily obscured with mechanical equipment and penetrations, as can be seen in photo below. As part of these works this equipment is to be demolished, positively impacting the facade.
- The view to Level 5 Malet Street windows from street level is limited due to the set back at this height. However by retaining the articulation of windows via the portland stone infill, the general appearance of the facade will appear uneffected from street view. See Elevation adjacent and 6.16 for views from street level.

Existing windows in poor condition and obstructed by Mechanical equipment



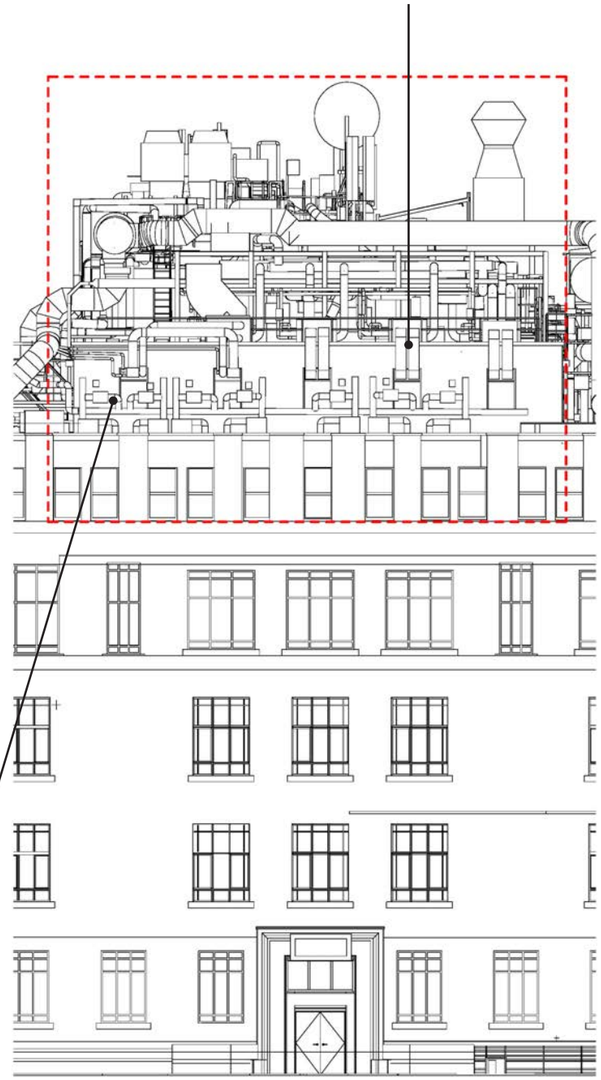
Existing windows facing Malet Street

View from L5 Malet Street windows



Street View on Malet Street looking towards L5 windows

Existing mechanical equipment on Level 05 facing Malet street to be demolished, improving Malet Street elevation



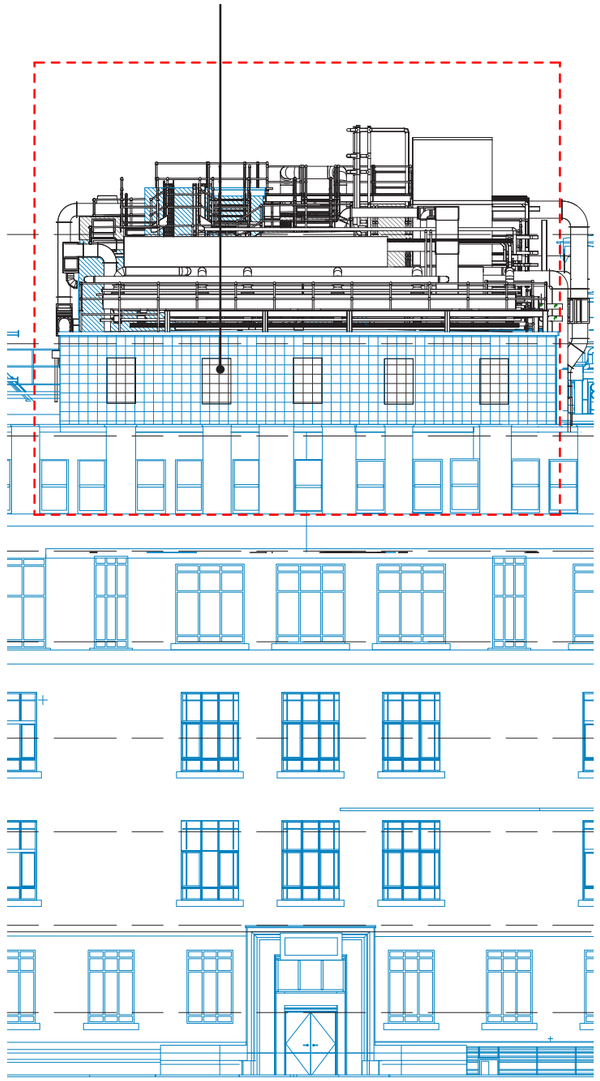
Existing windows facing Malet Street

Portland stone infills to windows with depth reveal to retain window articulation

Key:

Existing

Proposed



Proposal of removing MEP equipment and infilling windows

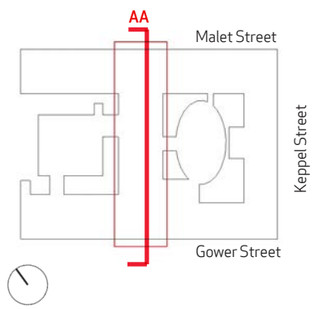
6.13 Roof Proposal: Strategy for impact mitigation

The works to the roof on the Central Wing include:

- The proposed 6th floor extension, which accommodates the extended stair and lift to Gower Stairwell
- Strip out of existing plant to Level 05 and 06 roof replaced by mechanical plant to support LSHTM's proposed research laboratories to the central wing of Level 5 and 6 roof.
- Demolition of the dormer windows to the mansard roof

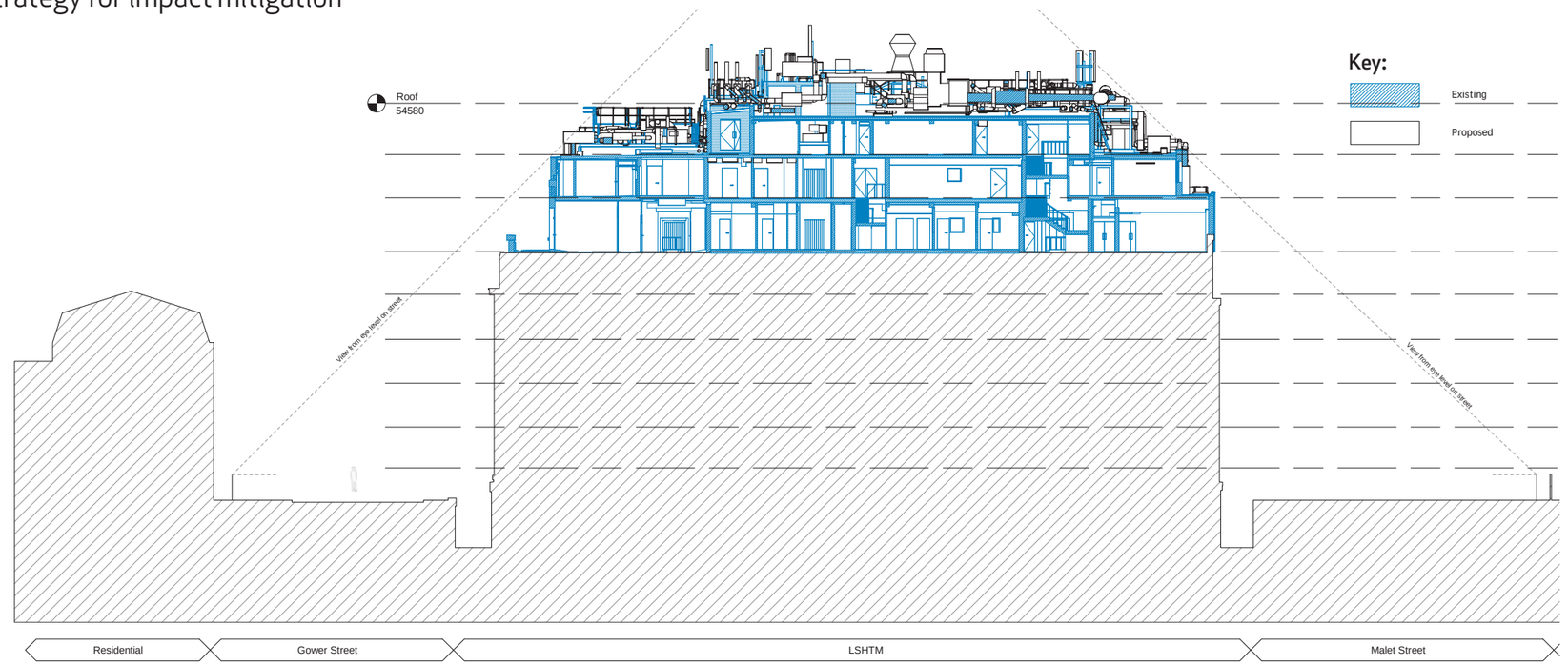
See adjacent, contextual sections indiciating the massing to the roof as existing and proposed and sight lines from the street.

See following sheets for further views and details.

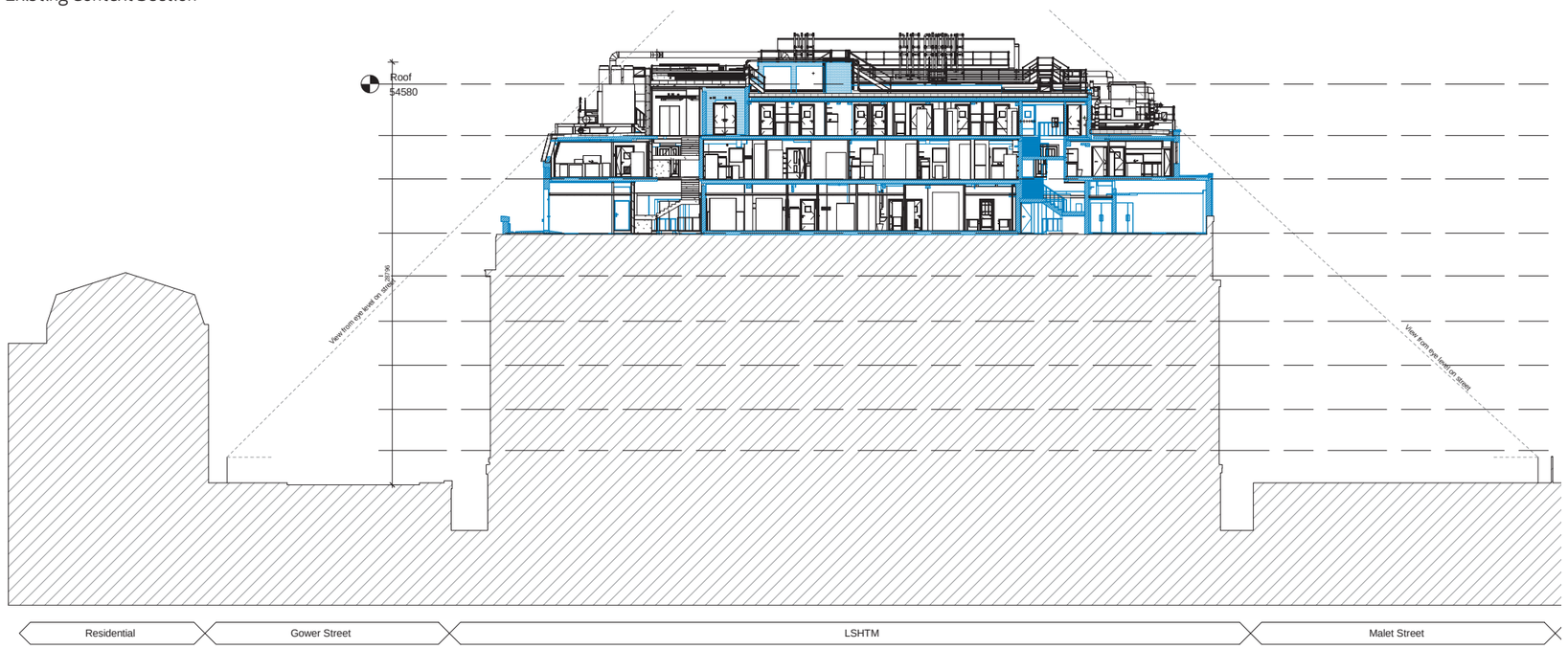


The Pre-App advise suggested Camden council are keen to improve the street view of the Mansard roof on Gower Street, which is currently very prominent, not in keeping with the local area and further disrupted by mechanical plant above each dormer. With this taken into consideration we have made the following design decisions:

- The proposed 6th floor extension, which accommodates the extended stair and lift, is set back from the main facade, limiting any visibility from street level.
- The plant directly above dormer windows is demolished to improve building skyline.
- Demolition of prominent dormer windows to create a more subtle ptiched roof which slopes away from the street and is more in keeping with local mansard roof design
- The proposed plant to the roof of the Central wing is rationalised and concentrated to reduce its impact on the building.



Existing Context Section



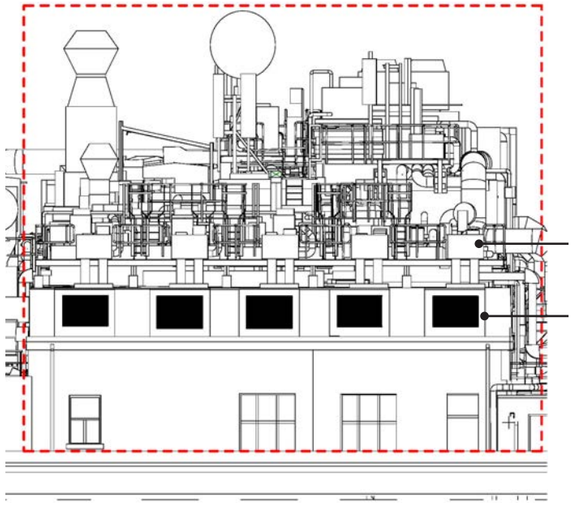
Proposed Context Section

6.15 Roof Proposal: Gower Street Mansard Roof Visual Improvement

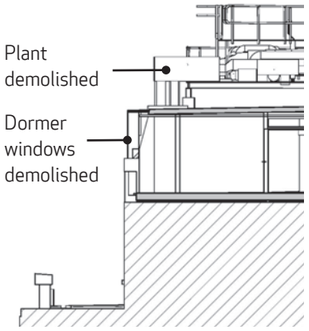
As part of the re-roofing of the Central Wing, we have allowed for the refinement of the mansard roof appearance to Gower Street as per the Pre-App recommendations:

This includes:

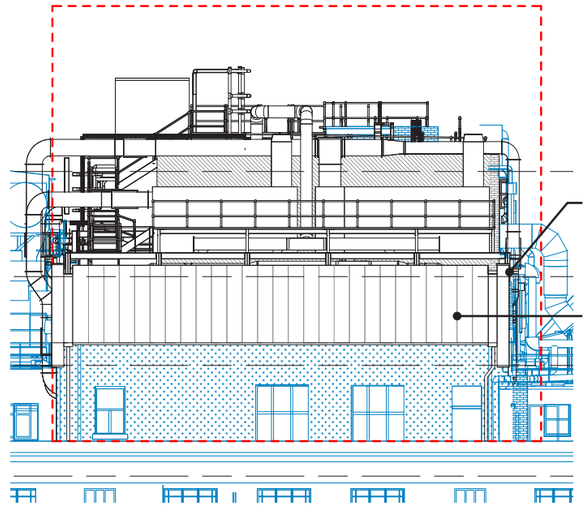
- Demolition of protruding dormer windows - currently painted black and very prominent from the street view
- Infill of dormer windows with a sloping roof (away from street following current pitch of roof).
- Re-roofing with a bituminous asphalt roofing system with a charcoal grey finish to give a more roof like appearance.



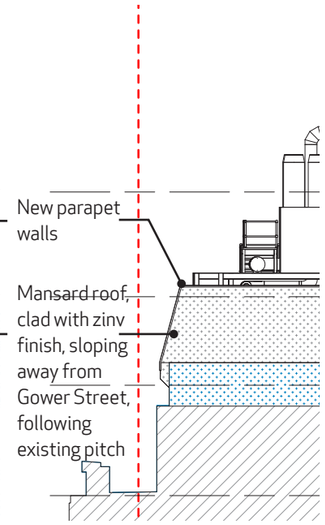
Existing Gower Street Mansard Roof Elevation



Existing Gower Street Mansard Roof Section

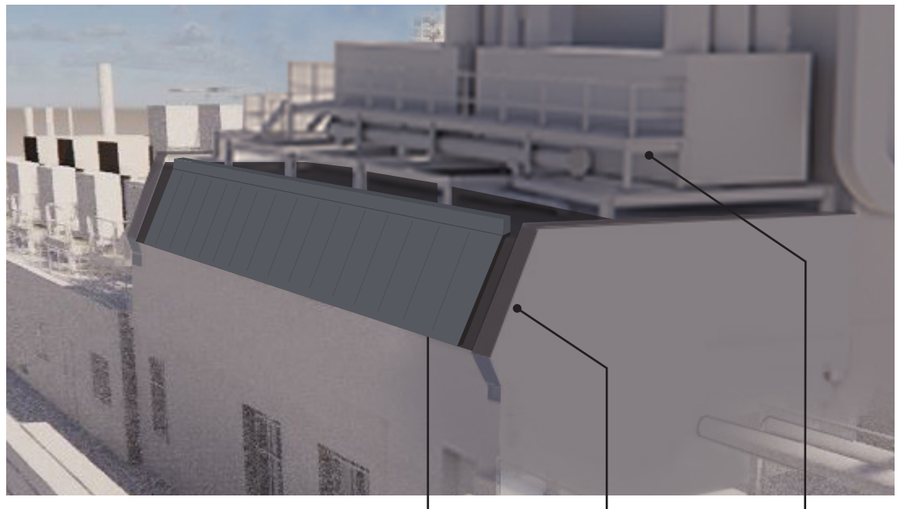


Proposed Gower Street Mansard Roof Elevation



Proposed Gower Street Mansard Roof Section

Existing photo of Gower Street Mansard Roof



Proposed visual of Gower Street Mansard Roof

Reconfigured and clad mansard roof with azinc finish , sloping away from Gower Street, following existing pitch.

New parapet walls

New access platform for plant on roof, pushed away from facade, to provide safe access to LSHTM maintenance team.

6.14 Roof Proposal: Gower Street impact mitigation

The images to the right show the existing street views from Gower Street and visuals of the proposal.

View A: The roof in this view will be visible in the winter months, due to the trees. The protrusive plant work shown in the Existing View A is to be demolished in these works. The proposed mechanical plant is consolidated and set further back to reduce the overall impact on the street view, as seen in Proposed View A.

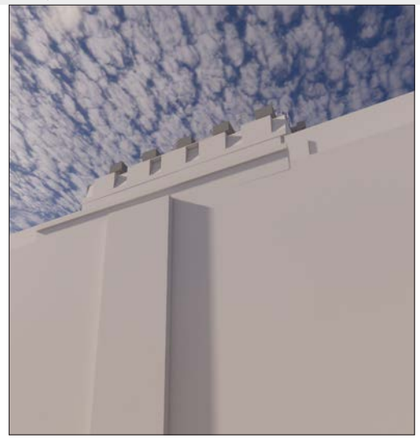
Street View A

Existing View A

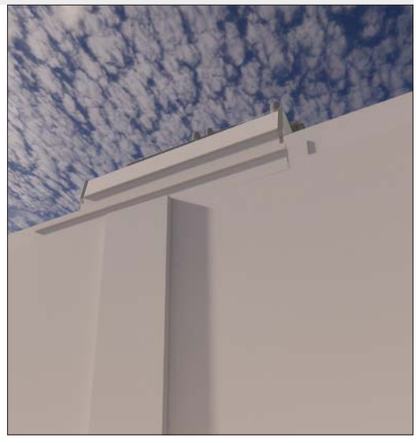
Proposed View A

View B: The dominant plant is particularly visible in this view, disrupting the facade and building skyline. The proposal minimises the visibility of the plant as it is set further back from the street as can be seen in Proposed View B. The demolition of the dormer windows - currently dark and prominent, also reduces the attention to this element of the building, positively impacting the facade.

Street View B



Existing View B



Proposed View B

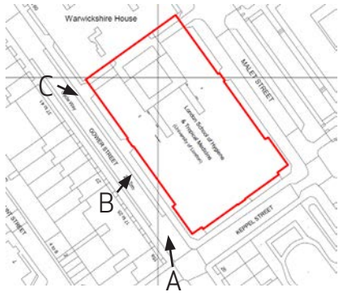
View C: The roof in this view will be visible in the winter months, due to the trees. Similar to View A, the plant has been consolidated and set further back to reduce impact on street level.

Street View C

Existing View C

Proposed View C

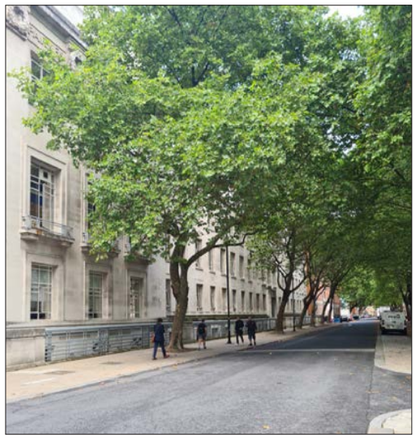
Existing / Proposed Mechanical plant



6.16 Roof Proposal: Malet Street impact mitigation

The images to the right show the existing street views from Malet Street and visuals of the proposal.

View D: The roof in this view is only partially visible in the year due to the trees in the summer months. The plant covering the level 05 facade is to be demolished in these works. The proposed mechanical plant is consolidated and set further up on level 05 roof to reduce the overall impact on the street view as can be seen in Proposed view D.

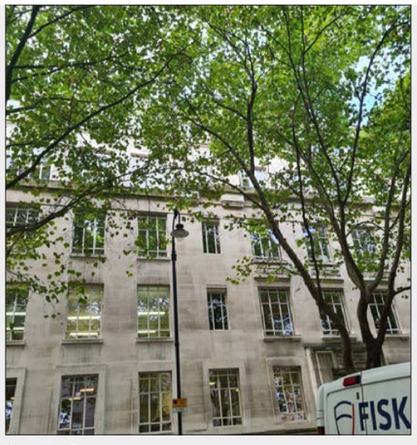


Street View D

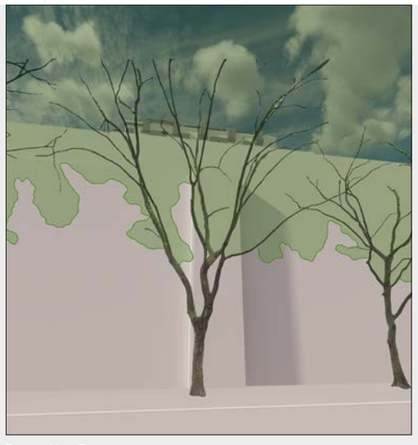
Existing View D

Proposed View D

View E: The existing mechanical plant is visible in this view, particularly in winter months when the trees are bare, disrupting the facade. The proposal demolishes the plant on this element of the facade and pushes any proposed plant onto Level 05 roof instead. The infill of the windows with portland stone have a reveal depth which retains the articulation of the windows from street view as can be seen from Proposed View E.



Street View E



Existing View E

Proposed View E

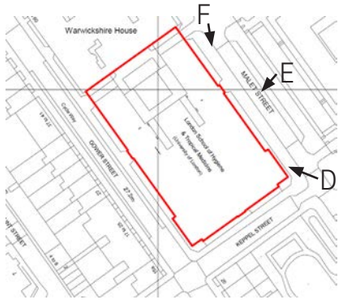
View F: Level 05 is minimally visible in this view, however as can be seen in Existing View F the existing mechanical plant is visible whereas windows are not. In the proposal only the balustrading to level 05 roof appears to be visible, as the mechanical plant to Level 05 facade is demolished and windows are not visible.

Street View F

Existing View F

Proposed View F

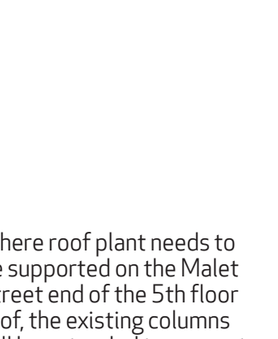
Existing / Proposed Mechanical plant



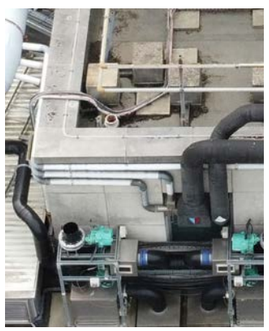
6.17 Roof Proposal: Treatment of Malet Street Parapets

Where roof plant needs to be supported on the Malet Street end of the 5th floor roof, the existing columns will be extended to support beams running horizontally above roof level. These beams will intersect with the existing coping stones.

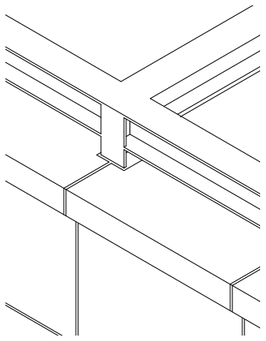
The coping stones affected are not part of the original buildingand as such are not noted as 'significant' or 'highly significant' in the Richard Griffiths Conservation Management Report.

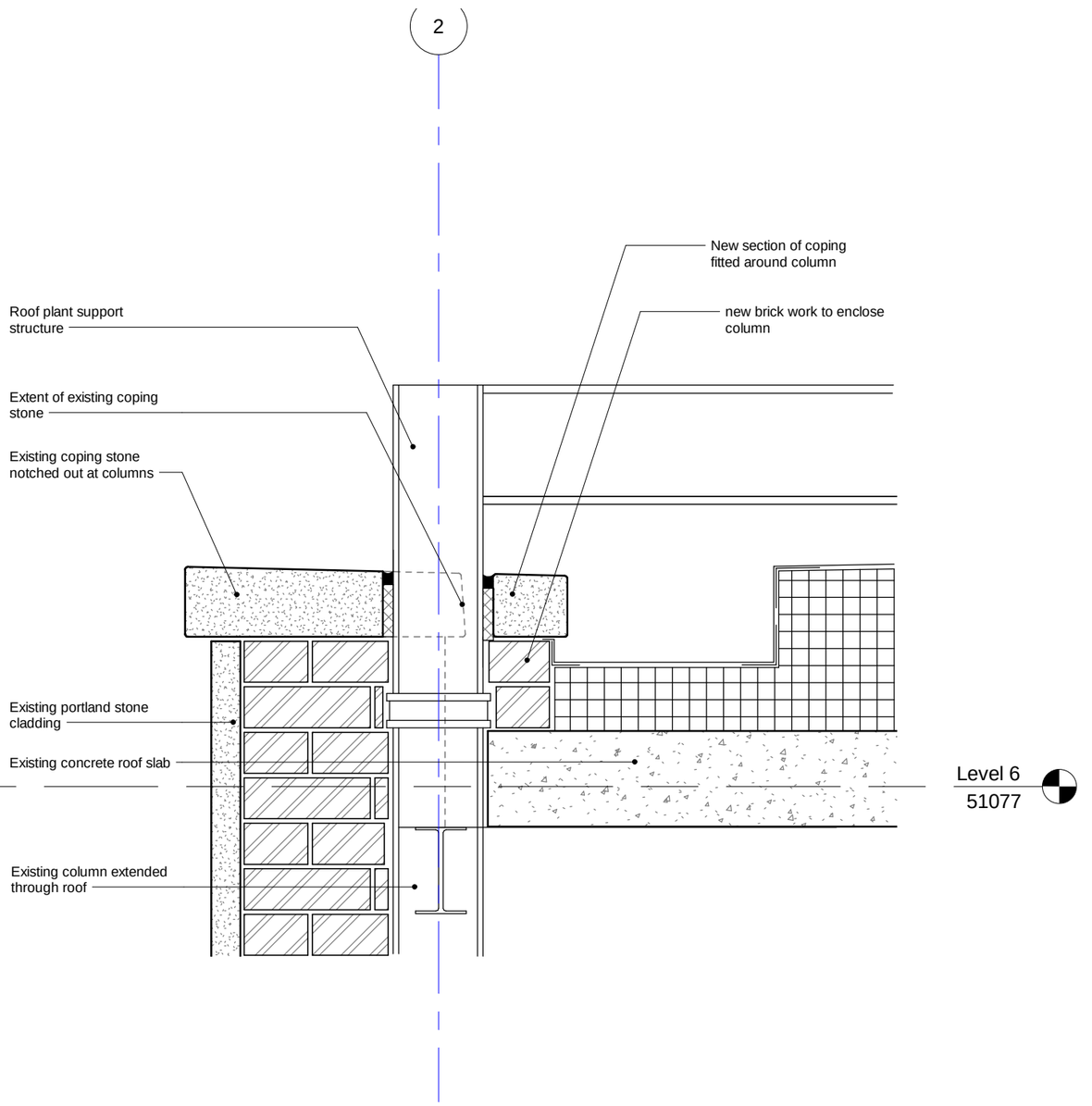


Proposed plant support structure



Existing condition of parapet





7.0 MEP, Structure & Additional Information

7.1 MEP Overview

Please refer to **Appendix B** provided by MG Paternship which provides the proposed narrative for the M&E works for this project.

7.2 Structural Overview

The statement below has been provided by Baker Hicks, the structural engineers on this project, which provides the narrative of structural works for this project:

The LSHTM campus is a Grade II listed seven storey building, including a single basement level, and is an early example of steel frame construction and concrete floor slabs completed with a classically styled stone façade. Over the years extensive extension, renovation and alteration works have been completed throughout the campus.

During the initial phases of this project, desk studies of the existing building was carried out from historic records. Due to the age of building and that it has been refurbished and extended separately over time, some of the design records have either been lost or deteriorated and no longer legible. Visual on-site inspections were carried out to verify these records as far as possible, though it is important to note that the vast majority of the structure is concealed by finishes or encased in concrete. Hence the steelwork and floor conditions have been proposed throughout to be exposed and further investigated at the next stage of design.

It is known that deleterious materials, including asbestos and hollow clay pot floor slabs, have been used either during the original construction or later works. The implication of these materials will only be fully understood following the investigations.

The proposed floor plans for level 4, 5 & 6, have been generally re-planned throughout and almost all internal partition walls have been relocated along the floor plates, yet they are sympathetic to the existing primary steelworks. As such it is anticipated that the primary columns can be retained and there will not be the requirement for extensive use of new transfer structure for primary elements. With majority of the existing internal partition walls relocated, leaving only the external walls of the building during demolition, structurally it is important to confirm if there are any potential risk of destabilising these external walls during demolition. Investigations for these have been planned for the next design stage, however it is feasible that the works can be completed with either a sequential approach or with localised props to the external walls.

It is not anticipated that structural strengthening works will be required for the proposed floor loading generally. It is likely that new steelworks will be required for heavy / dense partition walls, and trimming steelworks will also be required, to form new floor openings, service voids and risers. There are isolated rooms where there will be heavier equipment on level 4, namely the Fishery Breeding room and the Cage Wash room, until proven otherwise by the proposed investigation works, additional steelworks should be allowed for under these two areas.

There is an existing masonry wall running along the north-western elevation on level 4 and 5 that separates the internal lab space and the external plant space which is proposed as being removed to form the larger laboratory space on the two levels. For these extensions, the existing plant room constructed from industrial lightweight louvered external façade and steel durbar plates for the level 5 plant room will also be completely removed and replaced with new warm space construction.

Whilst it is anticipated most of the plant room primary steelworks will be retained, due to the different floor construction, it is likely they have different top of primary steel levels to those of the internal steelworks, potentially creating a level difference with the proposed floor constructions and finishes. These level differences and any secondary structures to facilitate this remodelling will be determined at the next stage of design after the completion of the investigation works.

At level 6 external roof plant space, the proposed works entails remodelling of all M&E equipment and replacement of all roof finishes. Detailed review of the roof construction has been carried out along the north-western elevation over the existing level 5 plant space noted above. It is constructed with standard industrial profiled steel sheetings supported by the primary steelworks. As such the entire roof, with the exception of the primary roof steelworks over this area will be replaced with new, including any secondary support structures, railings and access platforms for the roof level M&E equipment. Any strengthening works to the primary steelworks will be reviewed with new M&E equipment. At this stage we advise that new strengthening steelworks should be allowed for to support heavy equipment. In addition, it may be necessary to have local service penetrations through some of the primary steelworks.

The existing stairs and lift will also be extended to level 6 to increase vertical circulation. Whilst demolishing the floor and remodelling of the level 5 & 6 primary support structure may be required, the increased loads due to the vertical extension is not expected to require any significant strengthening works to the lower levels or floor plate. It has been discussed, that the existing goods lift to the south-western wing, towards the Gower Street, will be extended and replaced with a part goods and part passenger lift, i.e. the imposed loads will not be significantly increased overall.

7.3 Fire, Access & Security

Fire and Access

The proposed Gower Street stairwell extension is to provide Part B fire escapes to Level 5 & 6 to convert all spaces on these floors into occupiable laboratory spaces for LSHTM.

This will improve building efficiency, functionality, and future proof the existing Level 5 and 6 spaces within the Central Wing of the building.

Several options have been reviewed with LSHTM and Fire Engineer consultants to produce the best access and escape to Levels 5 & 6. However it has been determined that the existing connections between 5 & 6 are non compliant and do not allow future flexibility and functionality of spaces.

It was concluded the current proposal of Gower Street stairwell extension is the best proposal to rationalise access and fire escape and future proof the building.

In addition to this, the lift on Gower Street stairwell is proposed to be extended to Level 6 to provide efficient level access from Lower Ground level to Level 6. This will provide level, Part M compliant access for occupants and deliveries to all levels in the central wing .

Security

LSHTM lab spaces are required to meet CTSA (Counter Terrorism Security Advisor) and Home Office security regulations, Rock Townsend and LSHTM are working with the relevant parties to position labs within secure areas and specify the required materials for walls and doors to meet these requirements.

8.0 Sustainability

8.0 Sustainability

The design team are helping the school on their journey to achieving net zero emissions by 2030, by making sure this project uses the correct materials, systems and strategies to help reduce the 3 elements of carbon footprint; Operational energy, Embodied carbon and Whole life carbon.

Opportunities & Constraints

Due to strict security and environmental requirements within the labs there are particular limitations to the application of all sustainability targets. Particularly due to the need for the labs to be maintained at generally a high environmental quality 24/7 - specifically for fully controlled mechanical ventilation for the safety of the users.

Opportunities being integrated into the proposal include:

- **Roof & External walls,** Achieving or bettering the regulation u-values & insulation requirements of existing roof and proposed walls and roofs
- **Lighting** - low energy, LED, motion detection, increasing amount of daylight to North facade on L5
- **Surface finishes**, low embodied carbon impact, low VOC where possible
- **Water,** limiting water with water saving technology taps, aeration etc
- **Waste,** suitable disposal & recycling

We aim to achieve these goals for this project by using an energy assessment tool such as SKA (Silver as a minimum).

to assess the embodied carbon impacts from the product and construction stages and measuring the offset at practical completion - please see **Appendix. E**.

MEP Sustainability Statement

The proposed development will incorporate the following sustainability strategies all of which represent improvements over the existing MEP installations that support the BSF:

1. All lighting and small power distribution boards will be separately metered
2. Air change rates to holding areas will be reduced from 20 per hour to 12 per hour
3. Heat/Coolth reclaim will be provided between exhaust and discharge air streams
4. All domestic water outlets will be flow regulated to reduce water consumption
5. LED lighting will be used throughout with a minimum efficacy of 125 lumens/circuit watt
6. Lighting control systems incorporating movement detection and daylight compensation will be provided as appropriate
7. Motive drives will incorporate IE4 standard motors
8. EC drives will be incorporated where possible
9. Variable speed drives shall be provided for all pumps and motors
10. RO system will be re-used

9.0 Summary & Conclusion

This proposal for the refurbishment of the Keppel Street 4th, 5th and 6th floor laboratories and staircases, together with improvements to the Mechanical and Electrical systems and external fabric and associated structural adaptions, is the result of a fully developed brief, a thorough understanding of the heritage significance and context, a fully coordinated set of high quality proposals and a collaborative approach with Camden planning officers via the Pre-Application process and feedback.

The proposals have been carefully detailed and considered to reconciile the needs to be sensitive to the heritage context whilst meeting LSHTMs key objectives and needs for providing additional, space efficient laboratory spaces which improve quality and functionality, whilst upgrading the building envelope, energy efficiency, rationalizing and future proofing of building services to deliver a sustainable solution.

The key drivers to achieve this are:

- The reconfiguration of the building circulation to improve functionality and efficiency throughout and provide level access up to L6 via:
    - o the extension of the Gower Street stairwell to Level 6
    - o the extension of Gower Street goods and passenger lift to Level 6
    - o centralized corridors to Levels 4 & 5
- Improved utilisation of space to provide additional laboratories through:
    - o Demolition of the now redundant staircases and lift within the central wing
    - o New thermally effective fabric envelope to existing Level 5 plant space to convert existing 'cold' plant area into additional laboratory space
    - o Reactivating Level 6 by providing compliant fire escapes stairs through proposed Gower Street stairwell extension to Level 6
- Improving energy efficiency to meet LSHTMs sustainable targets for 2030
    - o rationalizing and upgrading proposed M&E services
    - o replace failing flat roofs to improve insulation build up and energy efficiency
- Introducing new high quality and long lasting robust specifications which are both sustainable and will reduce LSHTM ongoing maintenance and replacement costs

The proposals therefore represent a significant investment by LSHTM in the campus to improve and rationalise services delivery, improvement to Health and Safety, improve inclusive access to parts of the campus, whilst being sensitive to the historical context and legacy of the building, in order to continue to provide a world class research facility for the next chapter of LSHTM school.

10.0 Appendix

A **Architecture - Rock Townsend:**
Ph3B-RTA-ZZ-XX-DR-A-00101 - Location Plan
Ph3B-RTA-ZZ-XX-DR-A-00102 - Block Plan
Ph3B-RTA-ZZ-XX-DR-A-00105 - Scope Context

Ph3B-RTA-ZZ-ZZ-DR-A-00131 - Existing Plans L04&L05
Ph3B-RTA-ZZ-ZZ-DR-A-00132 - Existing Plans L06&Roof
Ph3B-RTA-ZZ-ZZ-DR-A-00133- Demolition Plans L04&L05
Ph3B-RTA-ZZ-ZZ-DR-A-00134 - Demolition Plans L06&Roof

Ph3B-RTA-ZZ-XX-DR-A-00135 - Existing Section A-A
Ph3B-RTA-ZZ-XX-DR-A-00135 - Existing Section B-B
Ph3B-RTA-ZZ-XX-DR-A-00137 - Existing Elevations Gower & Malet Street
Ph3B-RTA-ZZ-XX-DR-A-00138 - Existing South Elevation
Ph3B-RTA-ZZ-XX-DR-A-00138 - Existing North Elevation

Ph3B-RTA-ZZ-ZZ-DR-A-00141 - Proposed Plans L04&L05
Ph3B-RTA-ZZ-ZZ-DR-A-00142 - Proposed Plans L06&Roof
Ph3B-RTA-ZZ-XX-DR-A-00145 - Gower Stair Plans, Sections, Details
Ph3B-RTA-ZZ-XX-DR-A-00165 - Proposed Elevations Gower & Malet Street
Ph3B-RTA-ZZ-XX-DR-A-00166 - Proposed South Elevation
Ph3B-RTA-ZZ-XX-DR-A-00167 - Proposed North Elevation
Ph3B-RTA-ZZ-XX-DR-A-00171 - Context Sections
Ph3B-RTA-ZZ-XX-DR-A-00175 - Proposed Section A-A
Ph3B-RTA-ZZ-XX-DR-A-00176 - Proposed Section B-B

Ph3B-RTA-ZZ-ZZ-DR-A-00195 - Demolition Elevations Gower & Malet Street
Ph3B-RTA-ZZ-ZZ-DR-A-00196 - Demolition South Elevation
Ph3B-RTA-ZZ-ZZ-DR-A-00197 - Demolition North Elevation

B **M&E - MG Partnership:**
Pre planning narrative_A4 rev 01

C **Conservation Management Plan** by Richard Grifiths Architects
LSHTM CMP draft 4 August 2013.

D **Pre-Application Advise**
Submission by Rock Townsend
Response by Camden Council

E **SKA - Sustainability statement**

F **Heritage Statement**
111407_LSHTM_FG_F_COMBINED_20221108