8.0 Reflected Ceiling Plan - Ground Floor

Proposed Design:

No new proposed ceilings are introduced into the original building, all existing suspedned ceiling are to be removed.

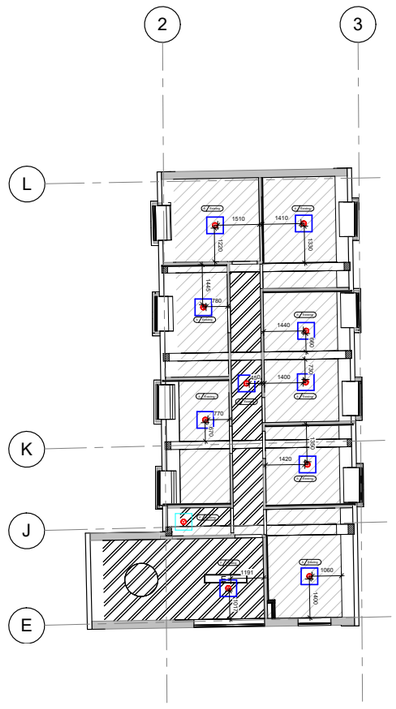
Due to electrical wires and minimal interventions required, Boxing out for the routes might be required, however, none of the boxing out is to impact the existing listed features of the existing ceiling.

Furthermore, new proposed suspended ceilings to be introduced within the building, all new ceilings are highlighted with the Reflected ceiling plans with the types of ceilings to accommodate the use of the space

8.0 Reflected Ceiling Plan - First and Second Floor

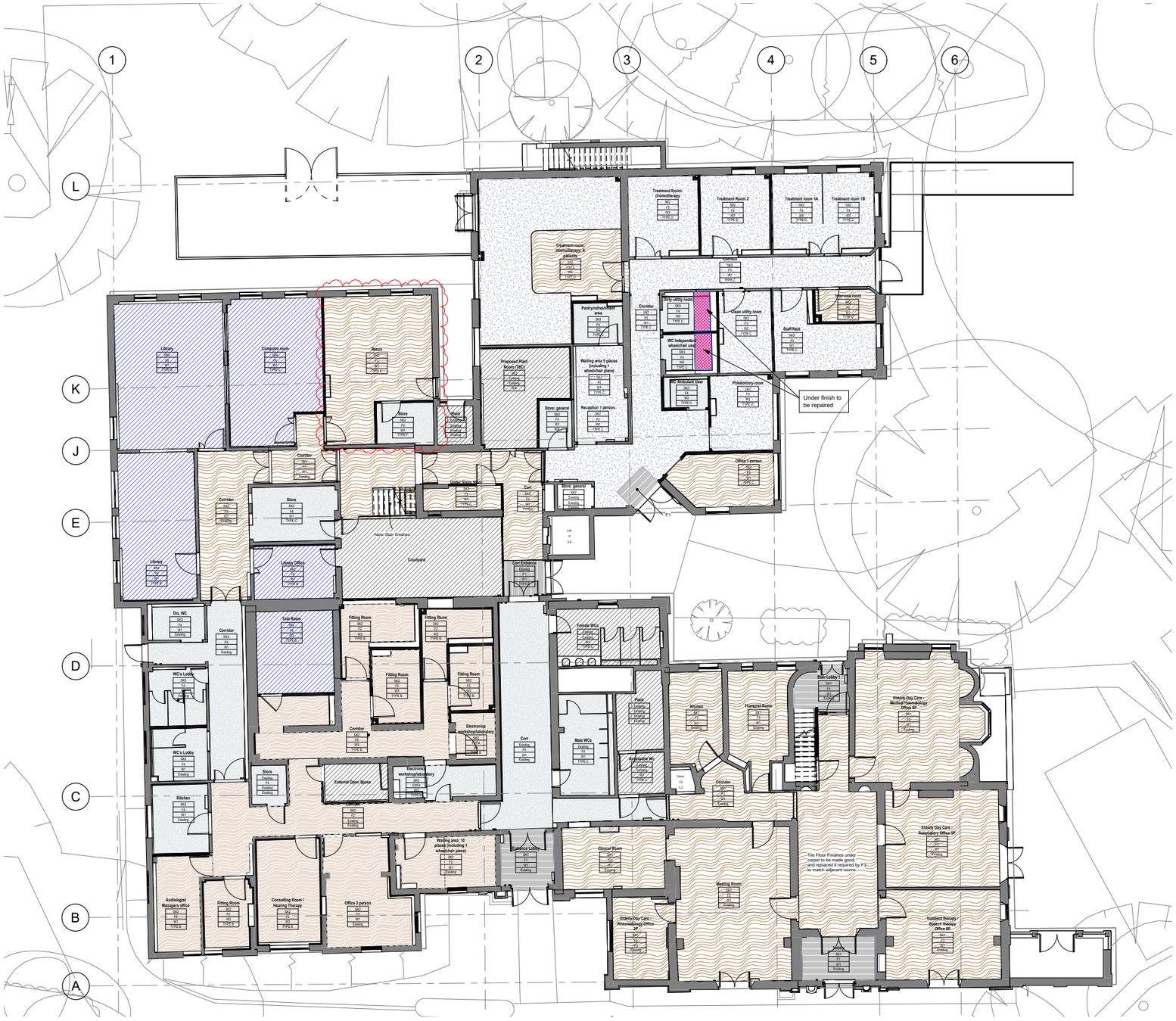
FIRST FLOOR

SECOND FLOOR



5m

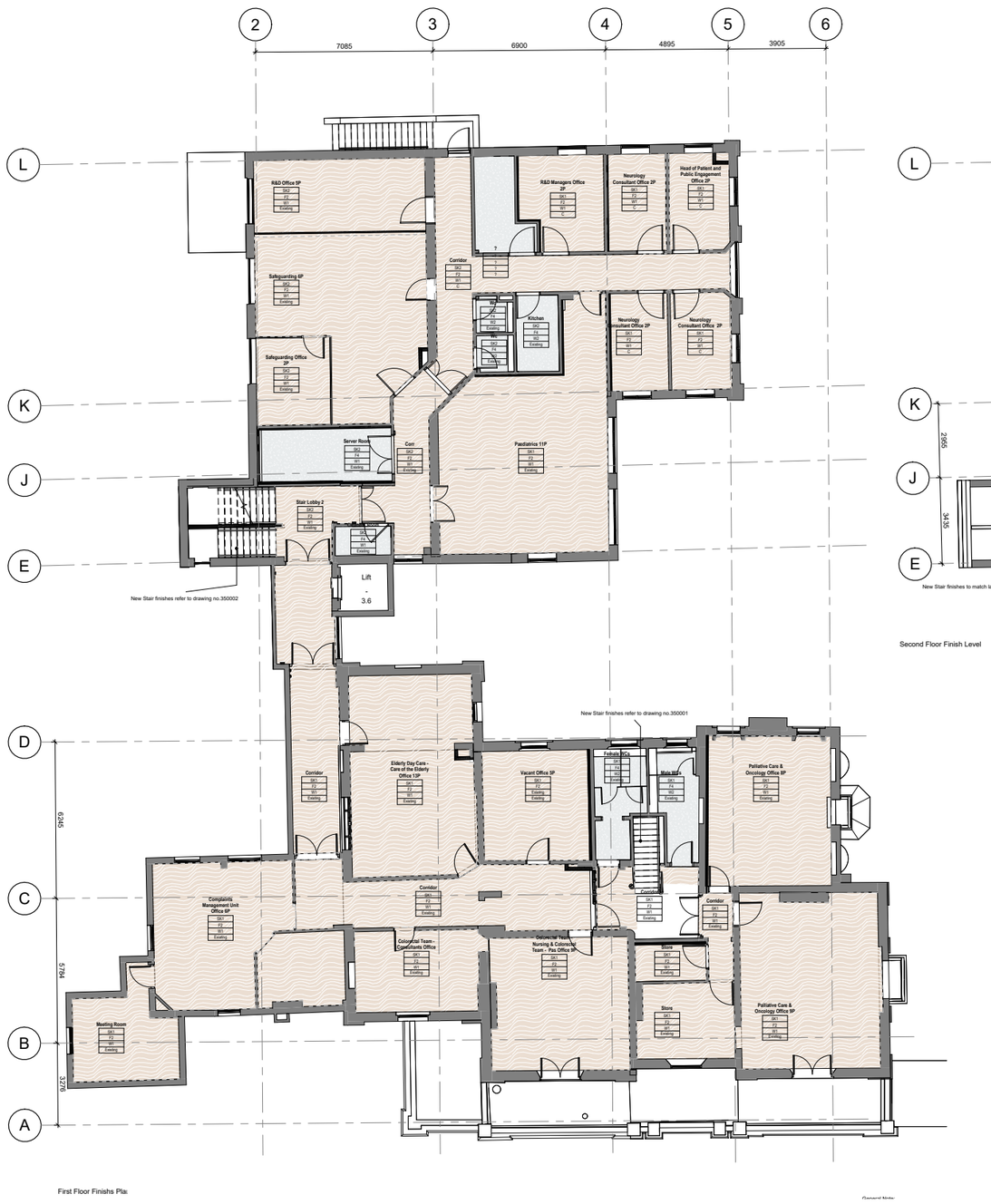
8.2 Floor Finish Plan - Ground Floor



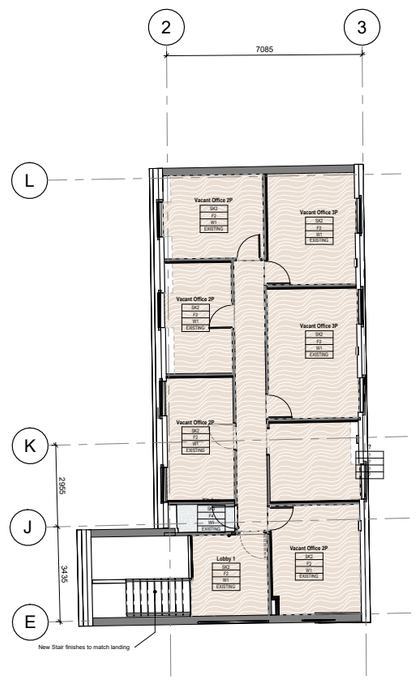
5m

8.3 Floor Finish Plan - First and Second Floor

FIRST FLOOR



SECOND FLOOR



5m

9.0 Design Amendments

Proposed Design:

The first-floor has been assigned to the clinical admin. Changes to the Floor Plan.

Original Building:

- Shaft wall added to Stair Core 1 for fire compartmentation.
- Shaft walls added to Rooms 28, 25, 29, and between Corridors 2 and 3.
- 120-minute raiser wall added.
- Ceiling repairs in Room 17 and Corridor 2.
- Replacement of Sill from Stone Sill to Timber Sills

Extensions:

- Fire lining added to all compartmented rooms to comply with the fire strategy.
- Acoustic lining added to rooms requiring acoustic ratings, in accordance with the acoustic report and HTM-08-0.
- 120-minute raiser wall added.
- Some walls demolished and replaced with acoustic walls.
- Room EDT 0.5 changed from an office to a resus training room, which falls under the same department of education and training.
- Door ED-HAE-05 to be replaced with a fire/acoustic door.
- Window W-00-18 to be replaced with a double-glazed window, with cladding and dampers fitted to the ducts to ensure fire compliance (see drawings THHFP1-LDW-ZZ-ZZ-DR-A-210006 and THHFP1-LDW-ZZ-00-DR-A-800009 for details).
- Door ED-00-CY-02 to be replaced with a new external fire door to meet fire strategy requirements (see drawing THHFP1-LDW-ZZ-ZZ-DR-A-000213 for details).
- Plant Room:
- Louvers added to the plant room. For further details, see drawing THHFP1-LDW-ZZ-00-DR-A-700017.
- Replacement of Sill from Stone Sill to Timber Sills.

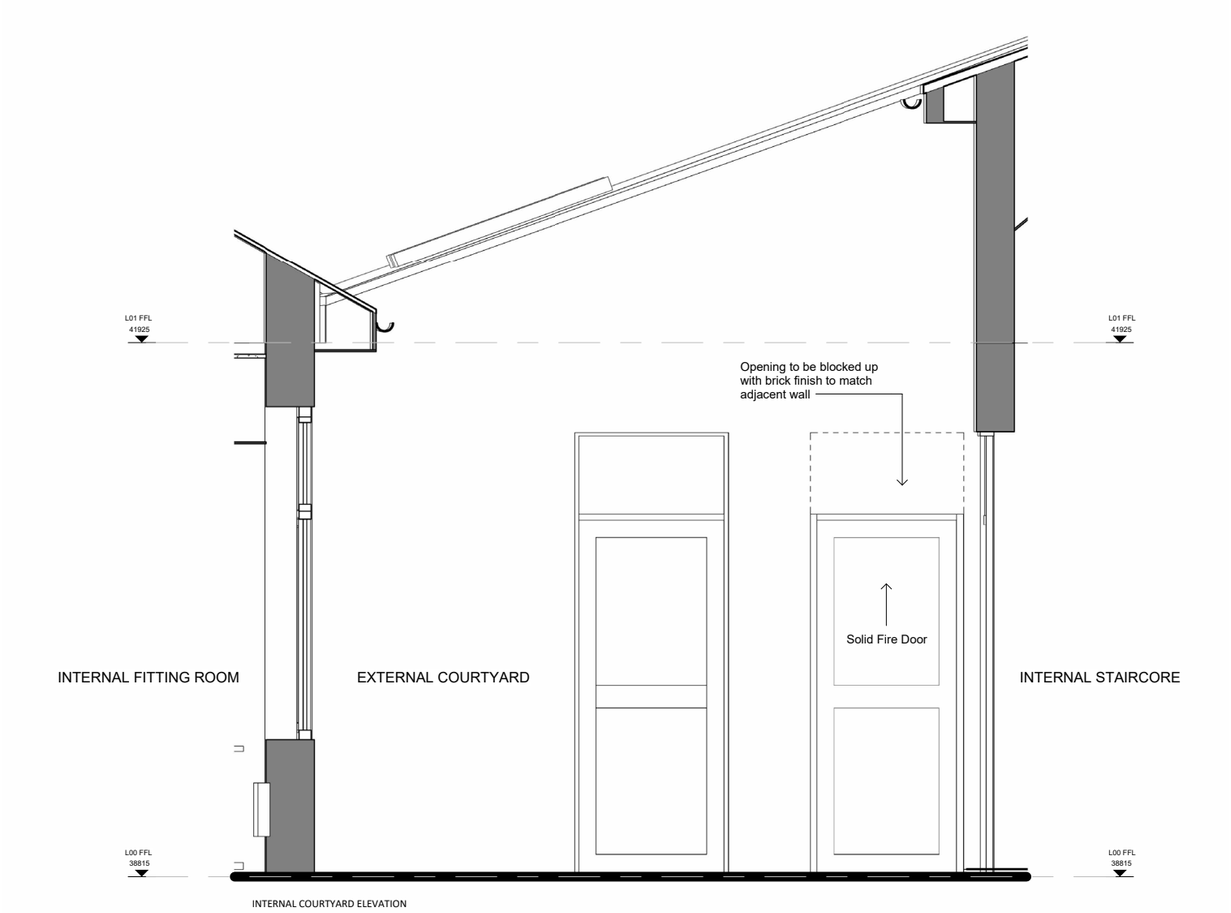
Roof:

- All pitched roofs: Strip the perimeter of the slate roof back to the original substrate and treat with a compatible waterproof membrane, following Listed Building Consent. The upstands around the perimeter will also be treated to ensure a watertight gully, allowing rainwater to flow freely to the external drainage and hoppers.

Flat Roof:

- Strip back the liquid applied membrane to the lead roof and upstands, restoring them to the original lead finish. Remove all flashing details into the upstands and replace with new, ensuring compliance with current building standards for upstand/threshold allowances. All mortar and lead sealant will be replaced and chased to provide a watertight seal between the parapet mortar and the lead roof.
- Any areas beyond repair will be replaced with new materials.

9.1 New Replacements



INTERNAL COURTYARD ELEVATION

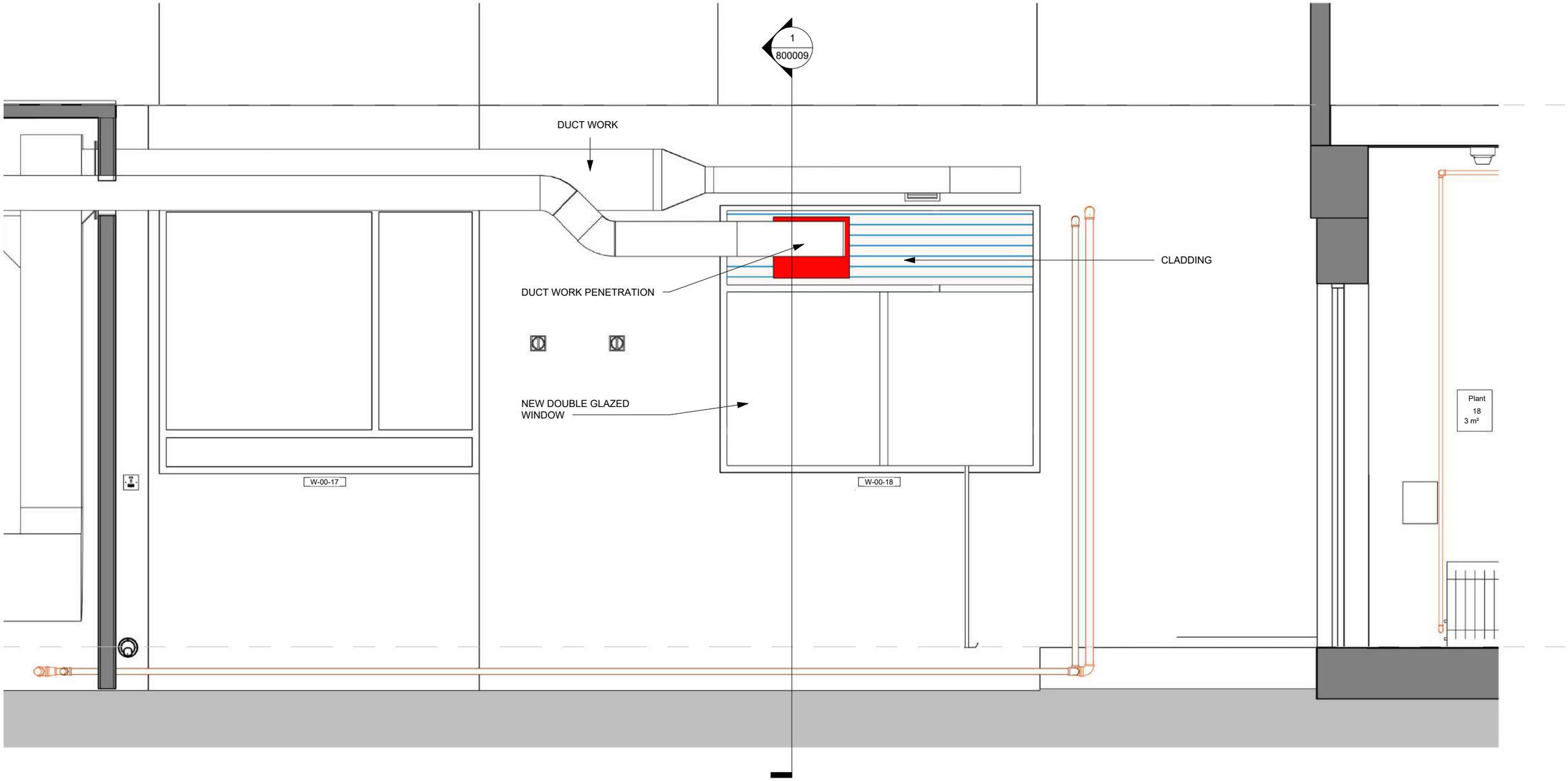
Proposed Design:

Door ED-00-CY-02 to be replaced with a new external fire door to meet fire strategy requirements (see drawing THHFP1-LDW-ZZ-ZZ-DR-A-000213 for details).


Proposed Elevation


Existing Elevation

9.1 New Replacements



9.2 Roof remedial work

Roof Work

Roof Survey Summary and Recommendations

A survey of the building's roof identified several areas needing repair or replacement. Here’s a simplified summary of the findings and recommendations:

1. Lead Roof Terrace
Issues:

Cracks and splits in the fiberglass-reinforced liquid membrane applied to the lead roof.
Water infiltration due to the liquid membrane being incompatible with lead's thermal expansion.
Recommendations:

Remove the liquid membrane to expose the original lead roof.
Replace all flashings on the upstands to meet current building standards.
Replace and seal mortar and lead joints for a watertight finish.
Clean the gully, inspect for damage, and replace any defective parts.
2. Main Roof (Above Front Entrance)
Issues:

Repairs to slates, parapets, and chimneys show signs of deterioration.
Water ingress, particularly in Room 40.0, caused by the failure of a liquid membrane applied to the slates and upstands.
Recommendations:

Room 9.4 Inspection:

Open the ceiling of Room 9.4 to inspect the roof structure.
Decide whether to repair or fully replace the roof based on the extent of damage.
Roof Cleaning:

Clean the lower section of the roof to check for coating or debris.
Remove any coating to restore the original lead surface.
Flashing and Sealant Replacement:

Replace all flashings to meet modern standards.
Seal and secure all mortar and lead joints to prevent leaks.

See drawing THHFP1-LDW-ZZ-RF-DR-A-000123 for further information.

9.3 Fire Intgerity Strategy

Fire Integrity Survey and Compliance Recommendations

Following a comprehensive Fire Integrity Survey, many existing walls were found to be non-compliant with Fire Regulations, including Part B of the Building Regulations (Fire Safety) and the Fire Safety Act. In response to these findings, Llewelyn Davies has implemented the recommendations from the survey to ensure the building complies with all statutory fire safety policies.

A key challenge in this process was achieving compliance without compromising the integrity of the Listed Building. The following options were considered to address the identified risks:
Demolishing the partitions and replacing with Fire-Rated Partitions

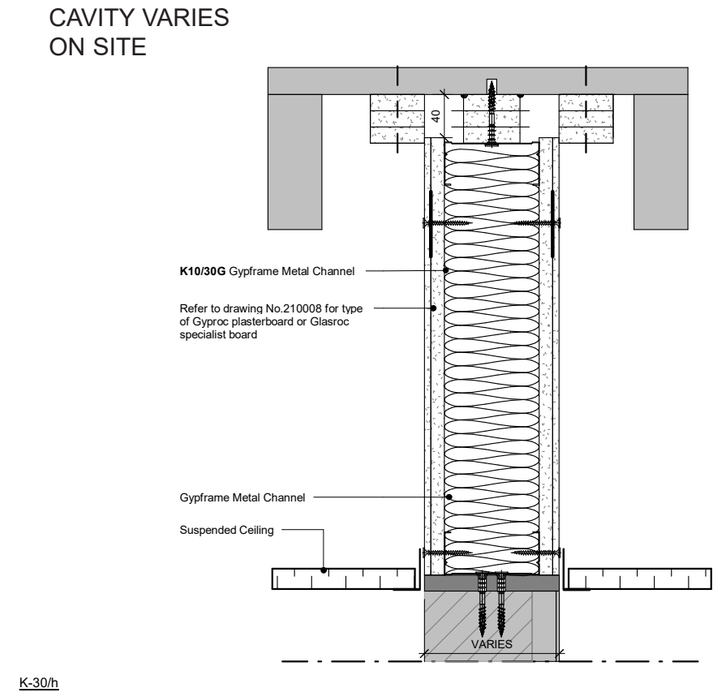
This option was deemed unsuitable as it would have significantly impacted the internal historic lath-and-plaster ceilings and decorative cornices.
Adding a New Dry-Lining Fixed to the Original Wall
This alternative was also deemed unsuitable due to its potential adverse impact on the historic lath-and-plaster ceilings and cornices.

Installing a Fire-Rated Shaft Wall Partition
This solution involves positioning a fire-rated shaft wall partition approximately 50mm away from the existing wall. This method ensures compliance with fire compartmentation requirements while minimising the impact on the building's historic features.
Repairing Existing Walls

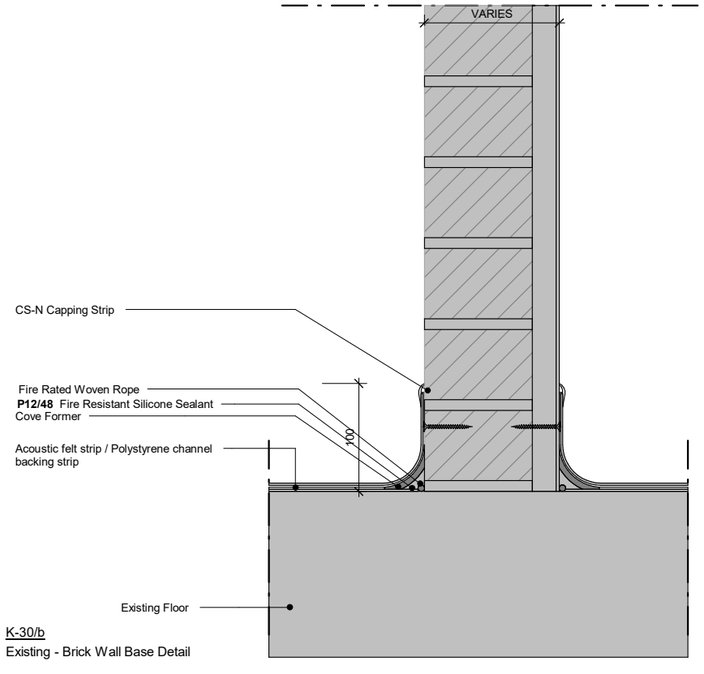
In certain cases, repairing the existing walls was deemed sufficient. This approach includes applying fire-stopping measures and fixing dry lining to the existing walls, extending to the underside of the roof or slab to maintain compliance.

Through careful evaluation of these options, Llewelyn Davies has prioritised solutions that meet Fire Safety Standards, while preserving the building's historic character.

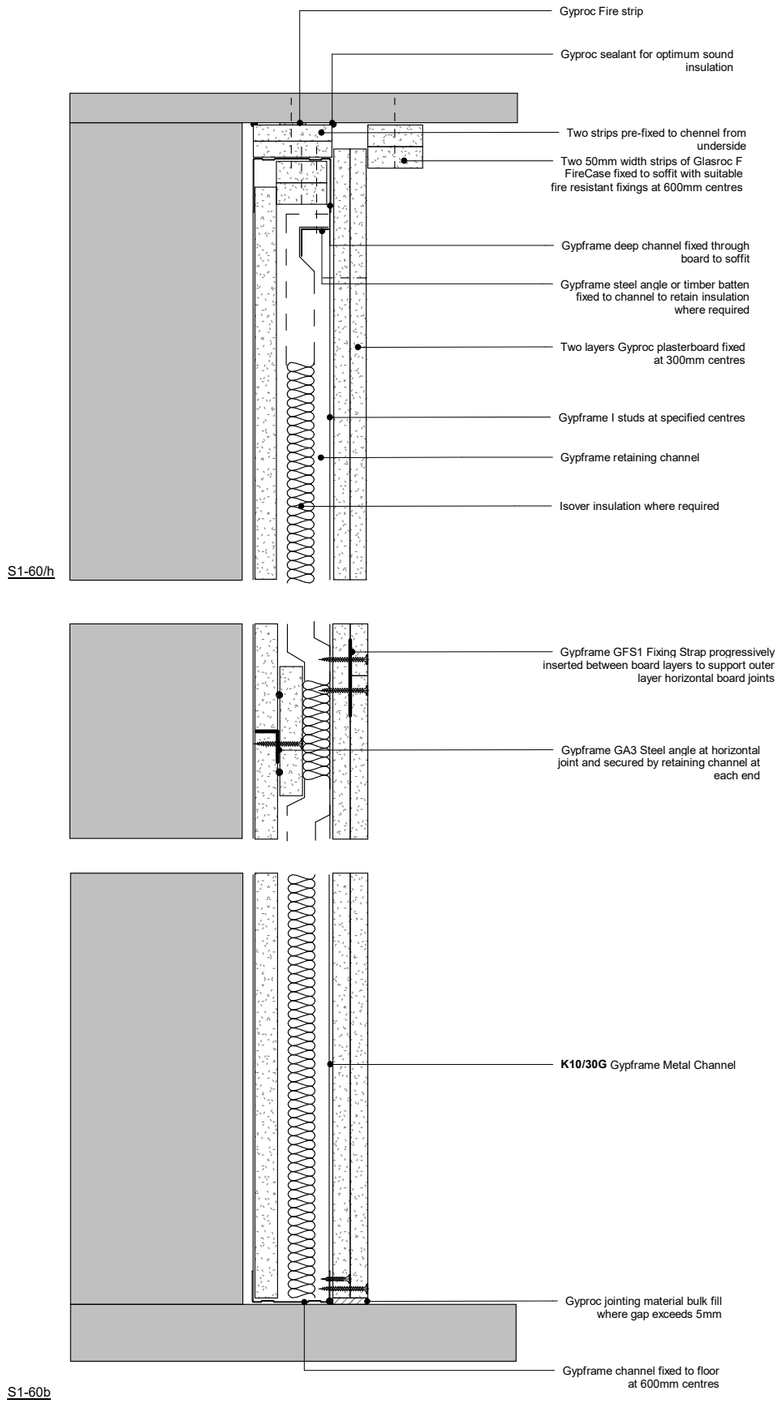
To be read in conjunction with the following drawings:
1. THHFP1-LDW-ZZ-00-DR-A-210016
2. THHFP1-LDW-ZZ-ZZ-DR-A-210017
3. THHFP1-LDW-ZZ-ZZ-SH-A-210018



K-30/h
Existing - Metal Stud Roof Detail



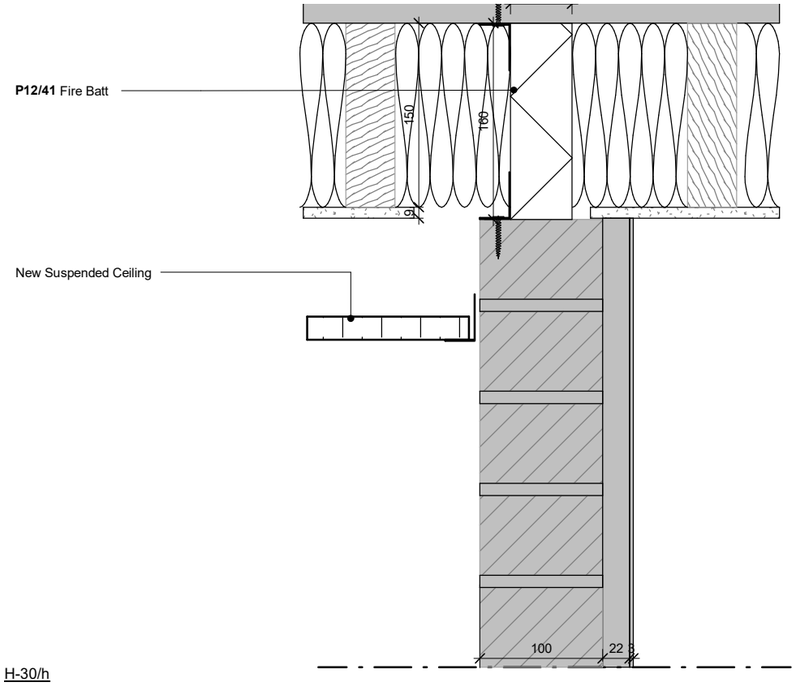
K-30/b
Existing - Brick Wall Base Detail



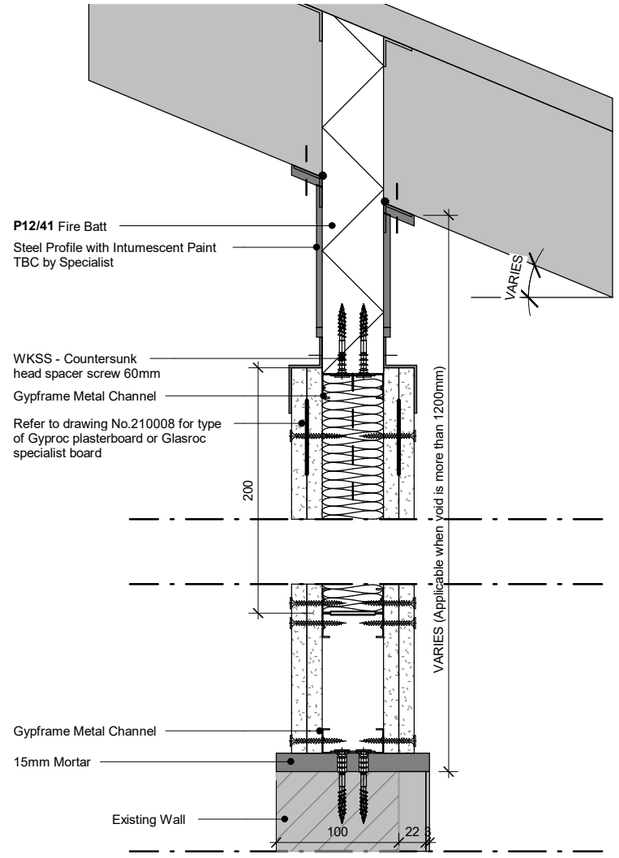
S1-60/h

S1-60b

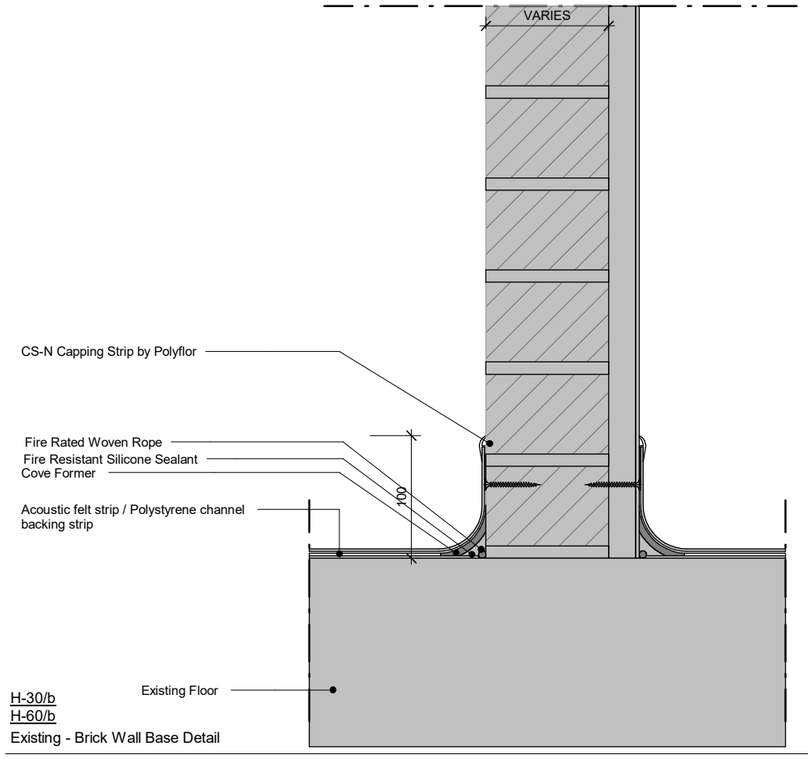
9.3 Fire Intgerity Strategy



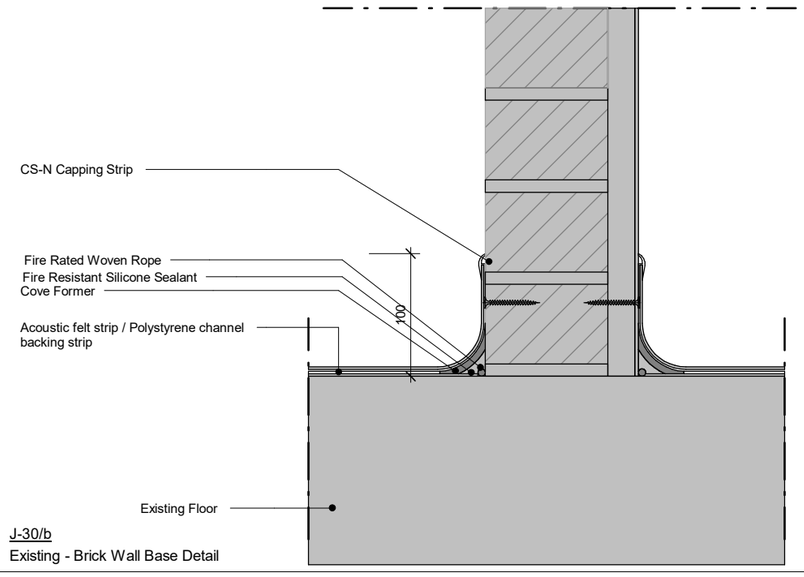
H-30/h
H-60/h
Existing - Brick Wall Head Detail



J-30/h
Existing - Metal Stud Roof Detail



H-30/b
H-60/b
Existing - Brick Wall Base Detail

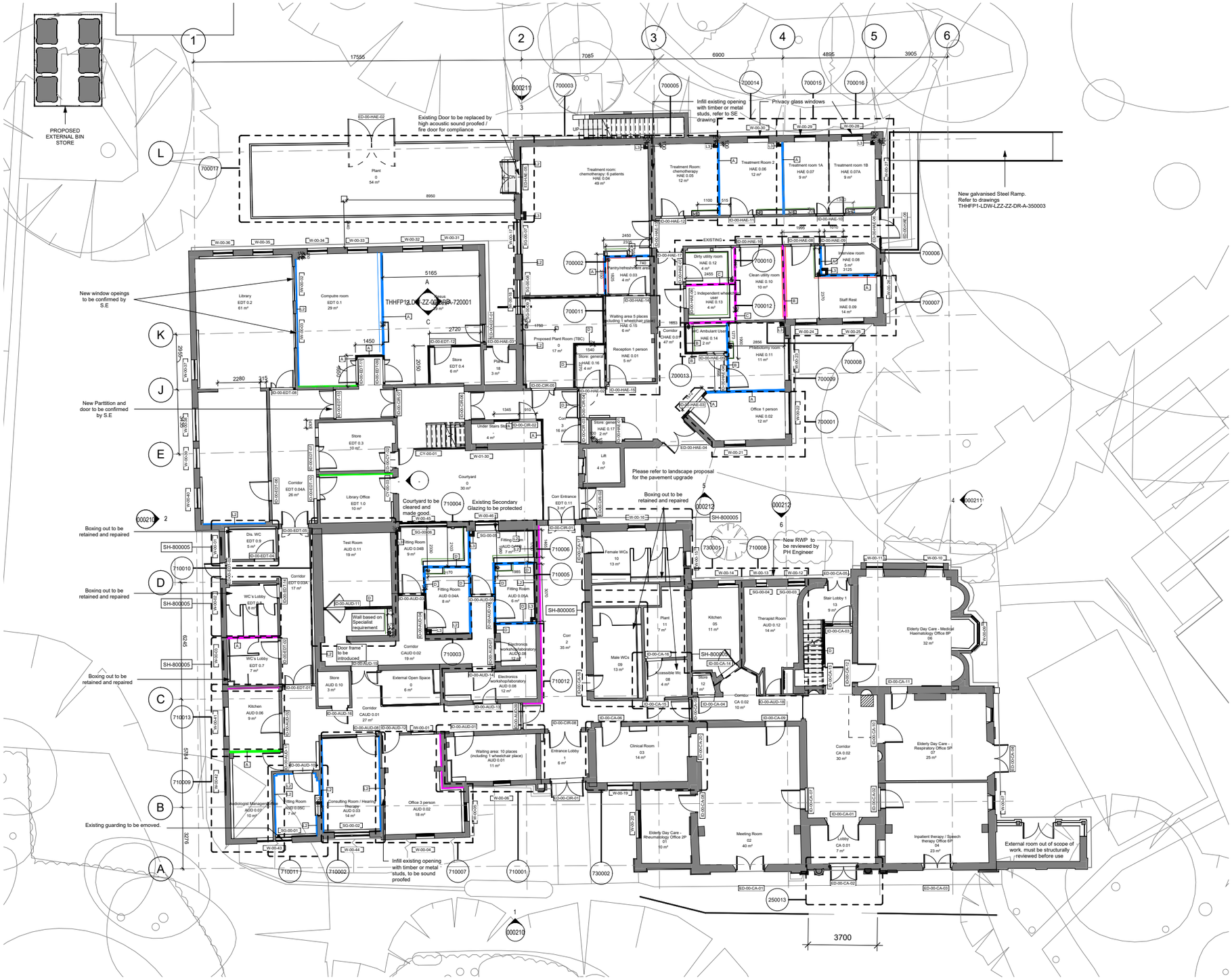


J-30/b
Existing - Brick Wall Base Detail

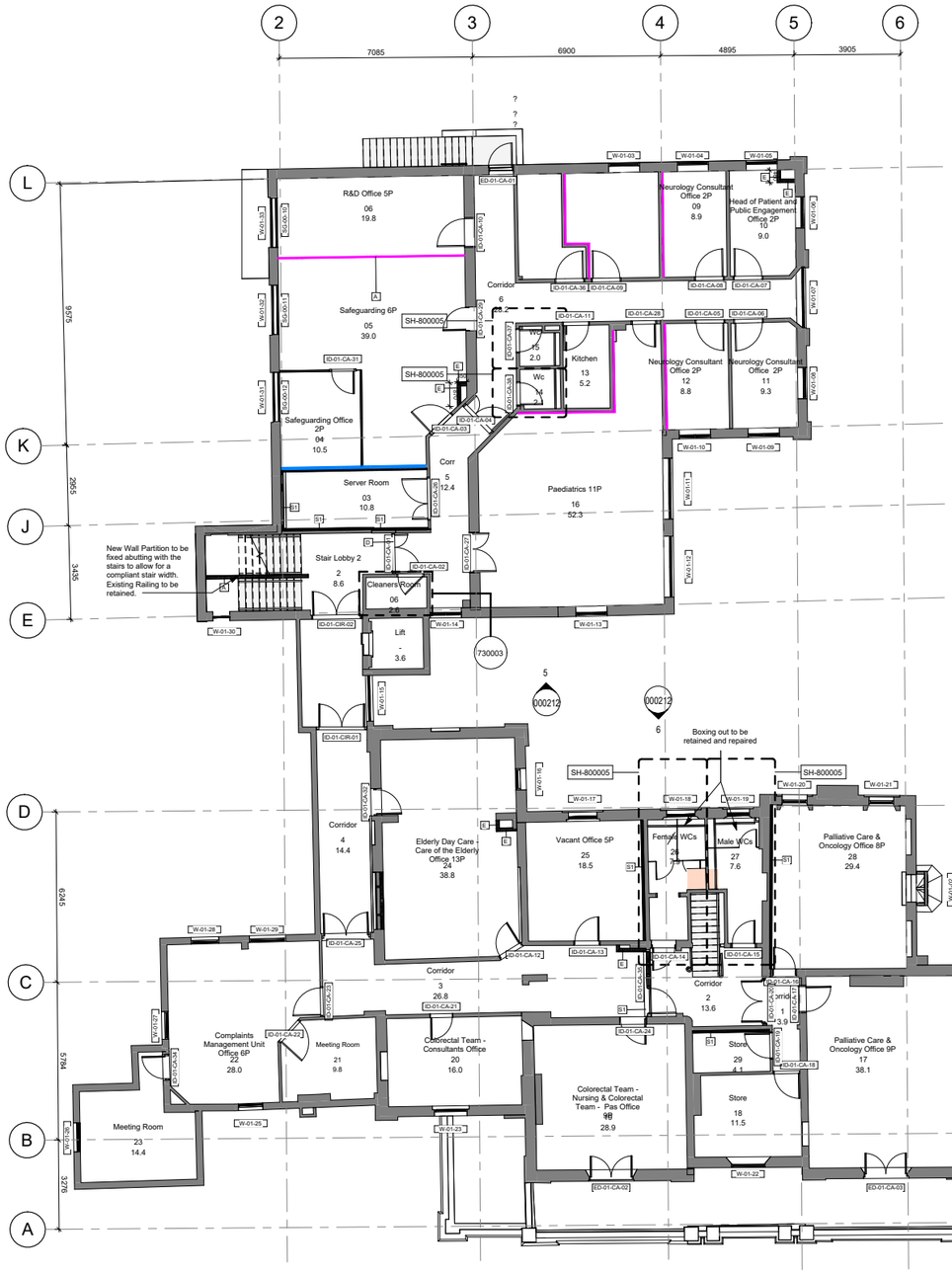
9.4 Acoustic Strategy

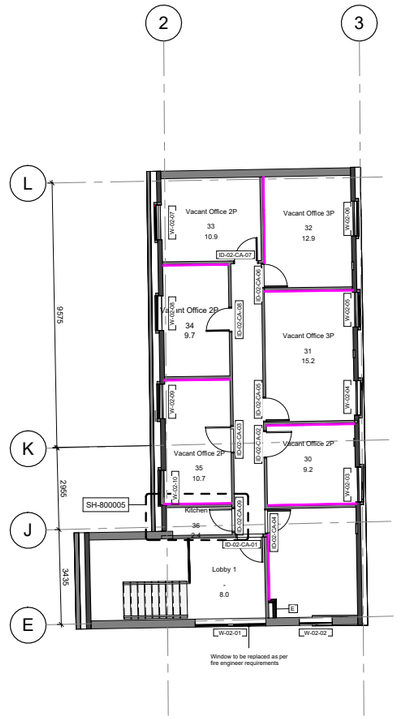
Acoustic Design Proposal

To meet the BREEAM requirements for achieving a "Very Good" rating, the building's acoustic performance needs to be upgraded. Following a comprehensive survey by Acoustic Engineers, the areas with the lowest acoustic ratings were identified, and modifications were made accordingly. The original structure of the building remains unaffected by these upgrades; however, the extension involved additional lining and the demolition of a few walls to comply with the acoustic recommendations



9.4 Acoustic Strategy





1 Proposed 02 Second Floor Acoustic
1 : 100

10.0 Landscape

10.1 Ecological Context

Ecological Context: Bats Roosting

In July, an evaluation of the overall Hillingdon Hospital site was conducted to assess its suitability for supporting roosting bats. The Furze structure stands out as highly suitable habitat due to its proximity to watercourses, vegetation, and secure inaccessible roofing. The pitched slate and clay tile roofing present numerous gaps ideal for bats.

Ecological surveys conducted recorded significant bat activity in the tree canopies post-sunset, with the calls suggesting the presence of mothers and juveniles (maternity roosts) in July. These roosts were observed high in the trees, approximately 8 meters and above.

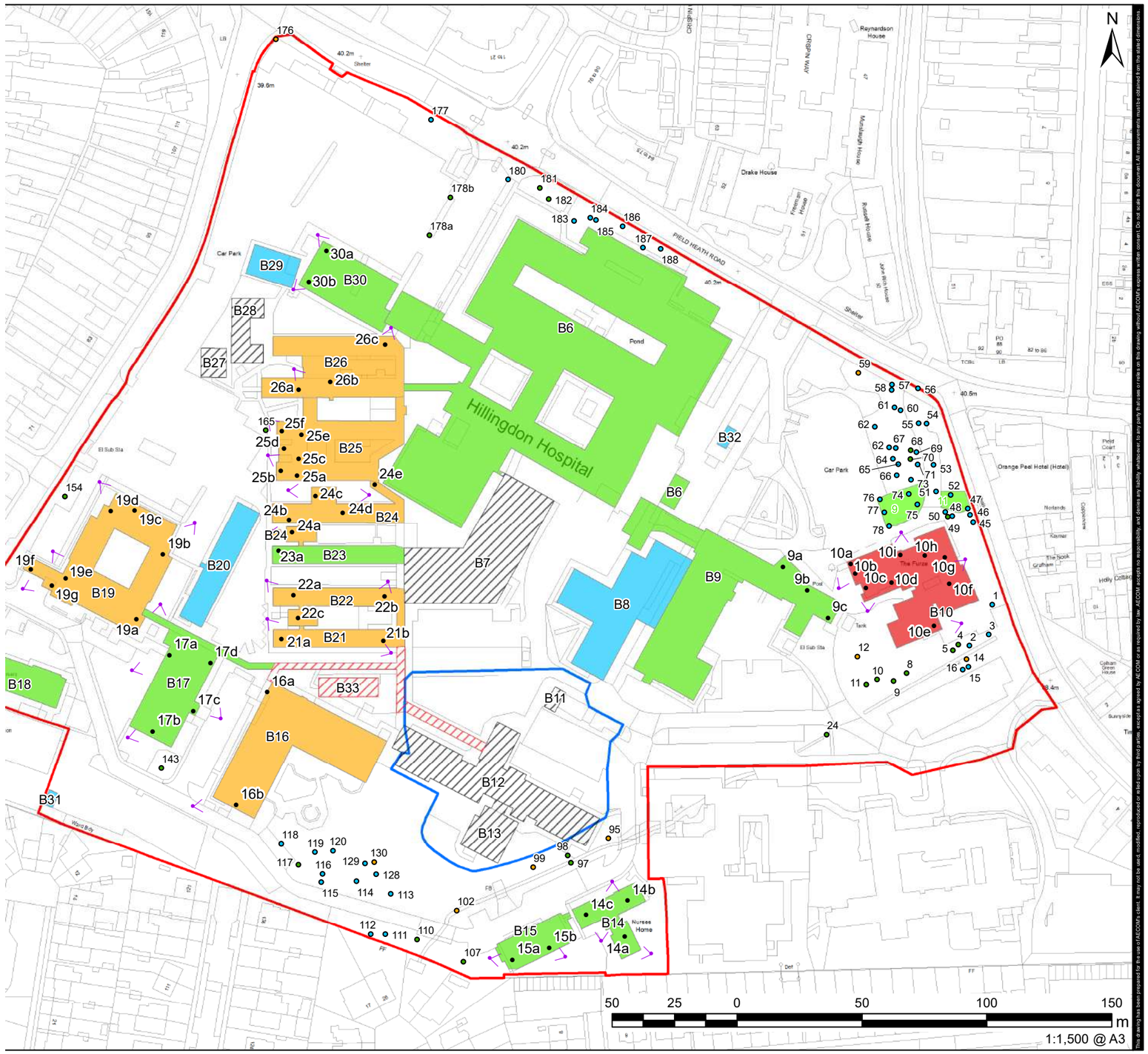
The design team has developed an appropriate design to ensure no disruptions to the bats . via lights and miminal work round the location.

The recommendations provided aim to minimize upward light spill and unnecessary illumination, suggesting the use of short columns and warm lighting.

For Example 1 (EX1) with Thorlux Mercian lights at a height of 2.5 meters, it is advised to use warm white (3000K) or amber (1700K) lighting, with a shield installed above the light to prevent upward light spill. and dimming and turning off the lights during the early morning hours is recommended, especially if the area experiences low traffic (e.g., not the A&E entrance).

The same recommendations apply to Example 1 (EX1) with Thorlux Mercian lights at a height of 1.5 meters.

For Example 2 (EX2) with Whitecroft Kolo bollards at a height of 1 meter, it is suggested to use a shorter height (0.8 meters) and warm white (3000K) or amber (1700K) lighting. Time clock settings should be adjusted to gradually dim the lights after sunset, eventually turning them off during the early morning hours.



AECOM

PROJECT
Hillingdon Hospital

CLIENT
The Hillingdon Hospitals NHS Foundation Trust

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LEGEND
- Red Line Boundary
- Existing Construction Boundary
- Potential Roost Features on Buildings
- Proposed Surveyor Locations

Suitability for Bat Roost
- Moderate
- Low
- Negligible

Bat Roost Potential
- High
- Moderate
- Low
- Negligible
- Demolished
- Inaccessible

NOTES

ISSUE PURPOSE
FOR INFORMATION

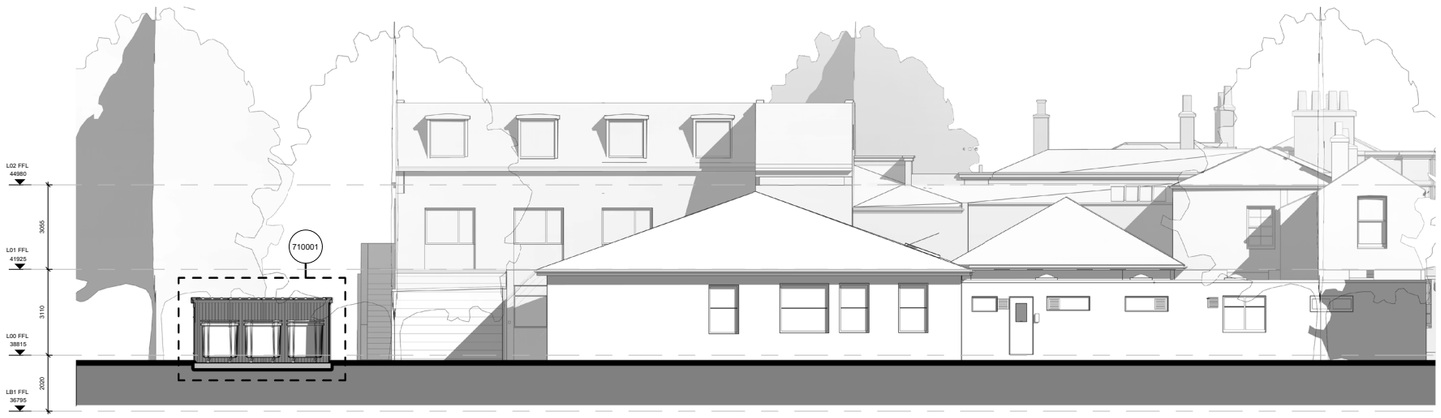
PROJECT NUMBER
60642181

SHEET TITLE
Bat Roost Suitability Assessment

SHEET NUMBER
Figure 02

10.2 External Waste Hold

Proposed Elevation 03 - Waste Elevation



Proposed Elevation 02 - Waste Elevation

External Waste Hold

The new external bin store has been proposed to safeguard the internal layout of the listed building. To minimize disruption, the existing location had the current bin store has been repurposed; enlarging its dimensions to adhere to HTMs and client requirements. This involved establishing a clear access route between the collection point and waste disposal area, thereby preserving the site's overall arrangement. In addition to this, the lighting along the path leading to the bin store has been carefully designed to illuminate in dark hours while being sensitive to the local bat population.

The pathway will be built using permeable material paving, which will minimize any disturbance to the tree roots in the vicinity. This deliberate choice reflects our commitment to both contemporary functionality and the preservation of Furze's historical and environmental significance.

5m

10.3 Path - Materials

Planting Zones

There are roof protection zones across much of the area. These extend beneath the existing hard surfaces, and the introduction of permeable paving will improve this situation. The new bin route passes over the RPZ for the Cedar of Lebanon and will be created using a non-dig construction and a fully permeable paving solution.

Surface Materials

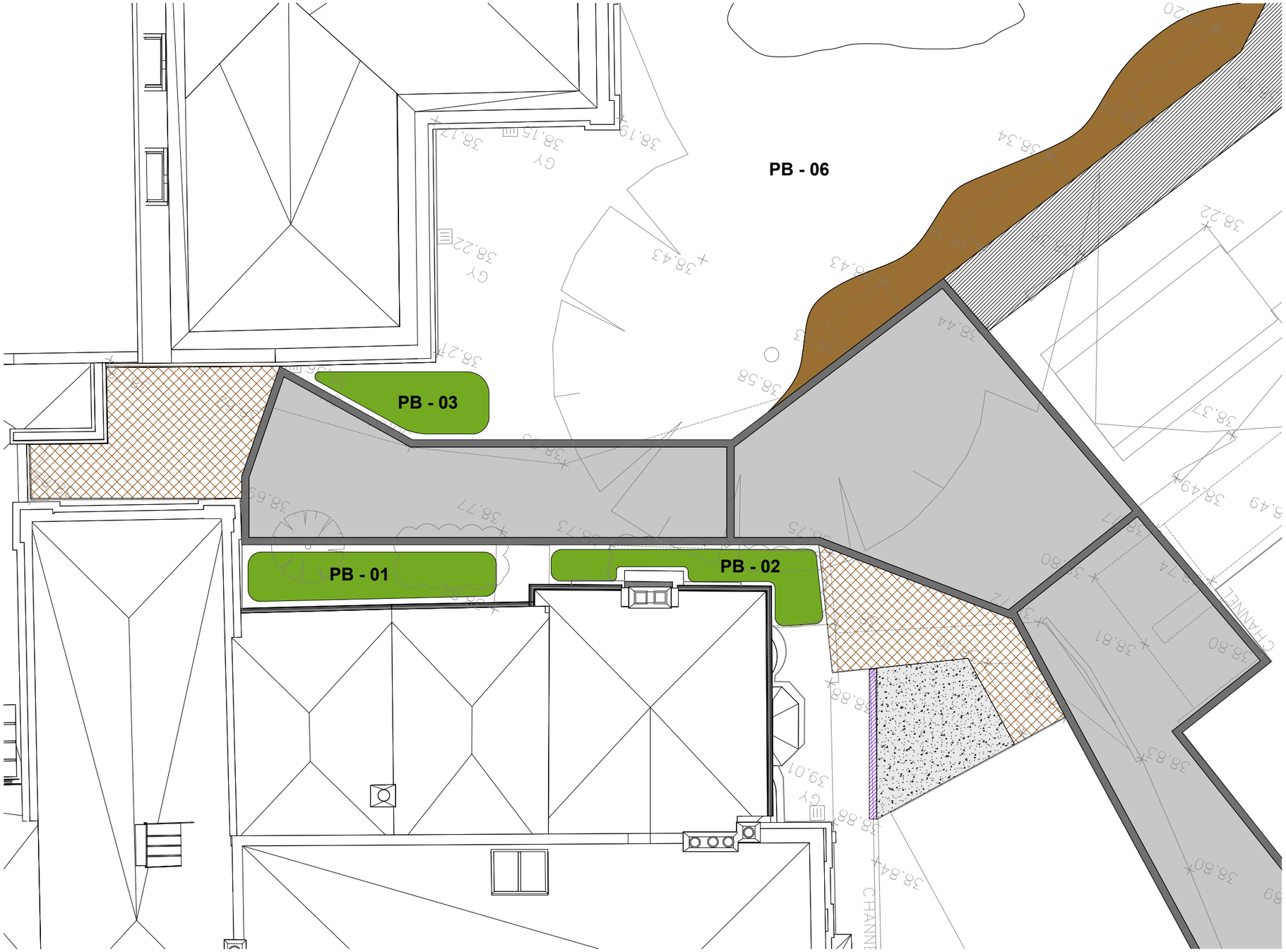
A simple palette of appropriate materials has been selected. The main bed route will be paved with herringbone laid over existing layers in two sizes and colors. Ancillary areas where more simple slopes/graveling is required will use a permeable bound gravel finish The new pathway over the RPZ will be in Trailflex (A-4) with a timber edging.

Site Levels

There are numerous adjacent levels and thresholds that new paving must align with. In order to achieve this, the existing site levels will be maintained throughout. Materials selected for simple areas, such as in front of the cycle store, have a greater inherent flexibility for surface leveling to ensure that all level criteria can be met.

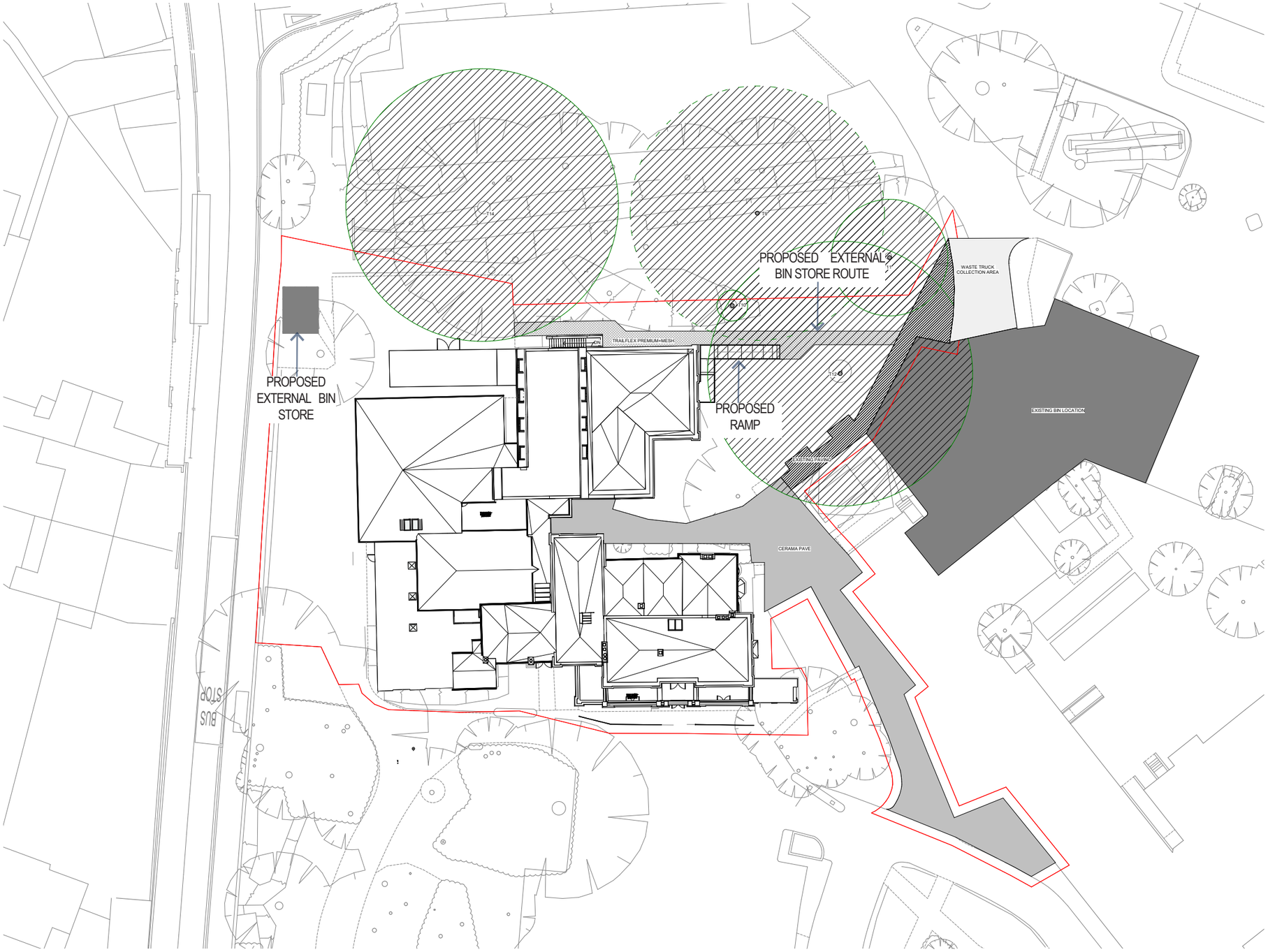
Demolition

There are many incongruous features in the existing landscape that will be permanently removed. These include kerbs, fixed bollards, and removable bollards. Additionally, there are existing signs which will be temporarily removed, and set aside for probable re-installation.



10m

10.4 External Landscape



Planting Areas

There are very limited areas for planting within the site's area. As part of the removal of the turning head, a new planting opportunity has arisen with all our limited new native shrubs and ground cover to be planted (PB-04). Existing planting areas at the entrances to the force will need to be replanted due to the need to remove plants for all-way access for building repair works. A total of 3 small areas for planting have been identified near the entrances (PB01 to PB03). Additionally, it is proposed to plant a small area of the lawn with flowering bulbs (PB-05) and to overseed most of the lawn with native wildflowers (PB-06). This will, in time, provide some visual delight for users, as well as contributing to biodiversity.

GENERAL NOTES:

SITE BOUNDARY

TREE ROOT PROTECTION

TRAILFLEX PREMIUM+MESH

GEO-TEX LE MEMBRANE, OVERLAID
WITH PREMIUM+ MESH WITH 50MM
TRAILFLEXCOLOUR: THUNDER AND STORM
COLOUR: AMBER

CERAMA PAVE

CERAMA PAVE
55MM X 197MM X 97MM PAVERS
COLOUR: THUNDER AND STORM

10m

10.5 Access (Ramp)

The Ramp Design

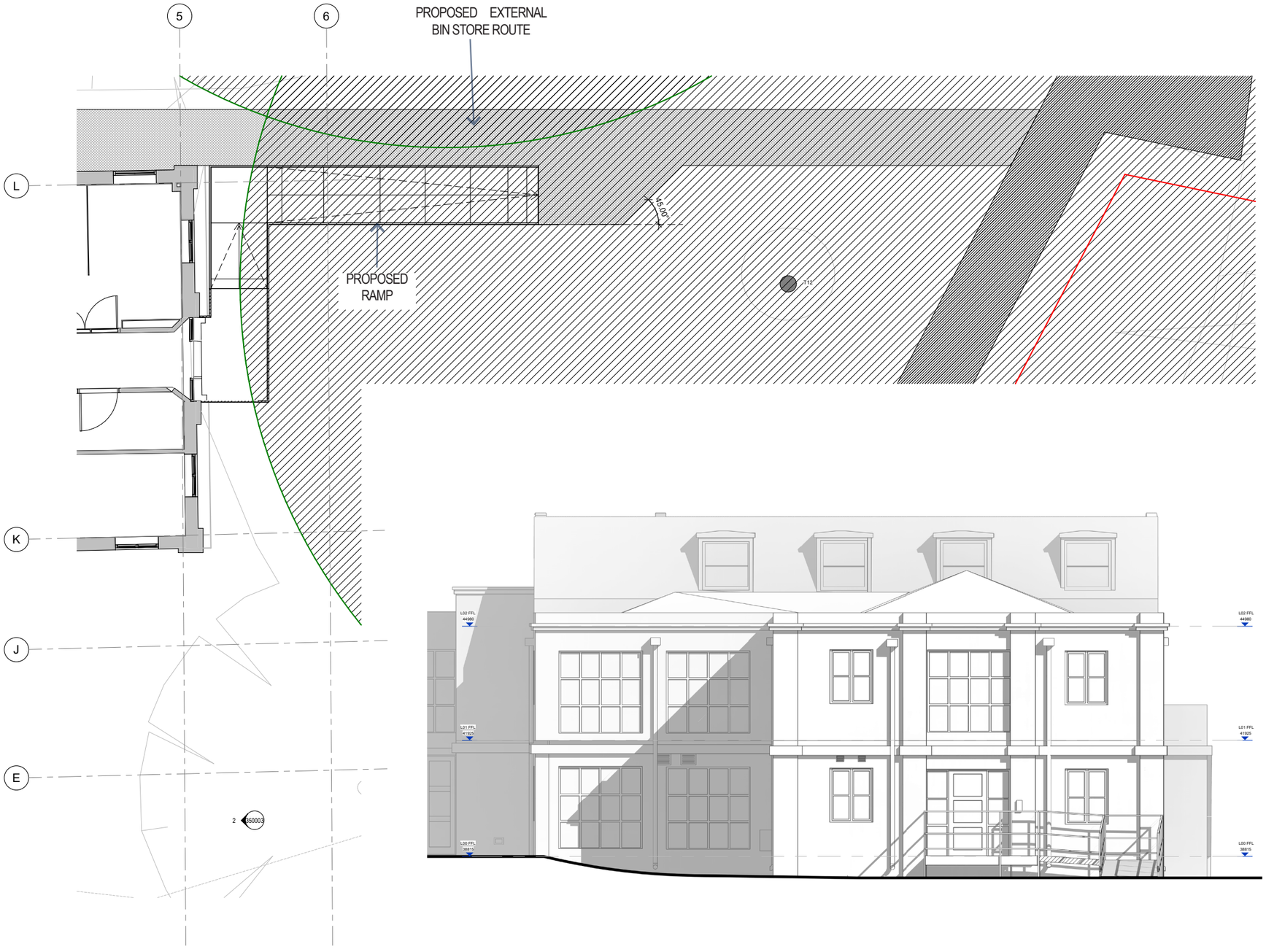
The Furze Building offers step-free access. However, the secondary access within the Haematology department is provided through a solid concrete ramp that leads toward a water ditch and vegetation. This setup poses health and safety concerns and does not comply with Part M and Part B regulations.

The existing ramp's landing is not directly in front of the door. The slope begins in front of the door, which may hinder access for disabled individuals. The current landing at the head of the ramp measures 1354mm, whereas landings are required to have a minimum width of 1200mm. Furthermore, there is no landing at the foot of the ramp, only soft landscaping (grass), which could pose a danger to users in case of an emergency exit.

The design team has proposed introducing a new metal ramp on top of the existing concrete ramp. This solution has fewer implications for the existing structure and relocates the ramp's end away from the slip hazard at the exit.

To ensure compliance, the ramp's length must not exceed 10 meters before including a level resting platform of at least 1.5 meters in length. A single ramp with a 500cm rise would have a maximum gradient of 1:20 and a maximum length of 10 meters. Therefore, a ramp of 550mm would require a landing halfway.

A minimum 100mm high kerb may be necessary along the edge of the ramp, and handrails must be provided on either side of the ramp.



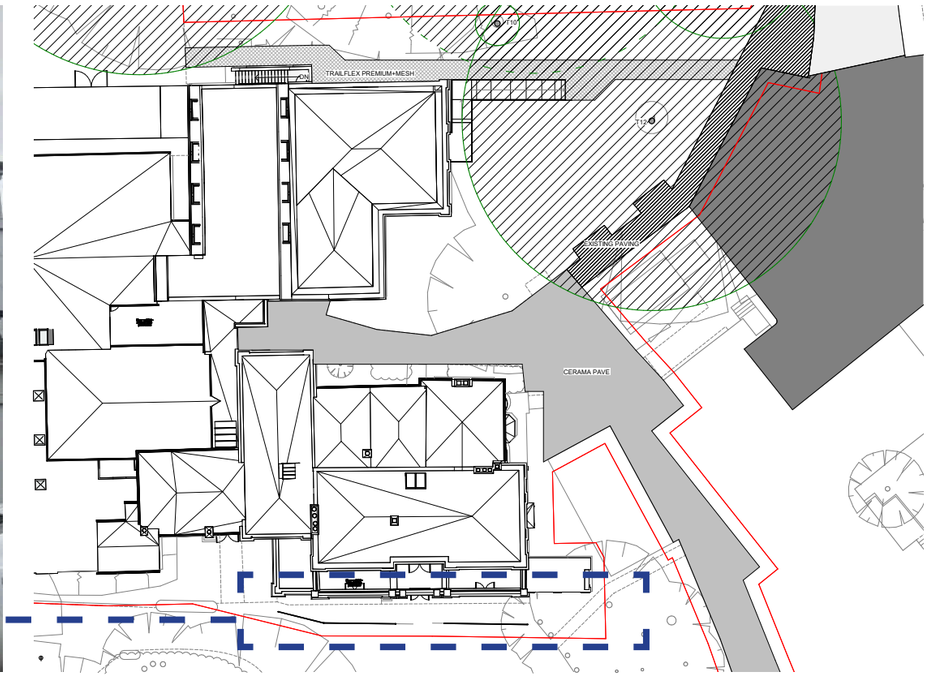
Ramp Plan
1 : 50

Ramp Elevation
1 : 50

3m

10.6 External Guarding

Existing Railing



New Guarding:

Due to the poor condition of the guardrail at the front of the Furze building, we would need to replace it with a new one. The design team has explored the design options and came to the conclusion that the best option would be to replace it like-for-like. We propose to match it with the adjacent guardrail within the Furze (yellow guard-rail as shown in the images).

The guardrail is necessary for pedestrian safety and to prevent any parking in front of the Furze, which would enhance the safety of the façade.

Proposed Railing

Proposed Elevation

10m

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