

7.2 Layout and internal arrangement

SBM

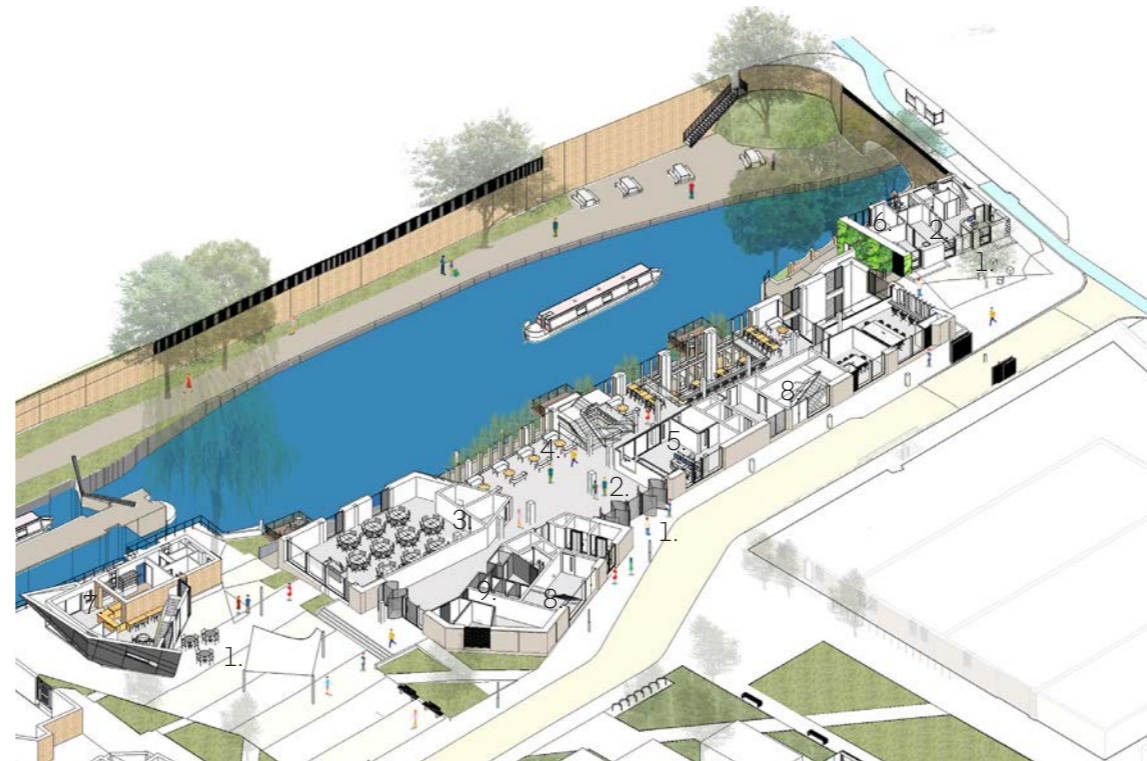
The lower two floors of the building are inextricably linked. A series of double height voids along the east of the plan connect the two levels allowing light down into the partially buried lower ground floor. An open staircase rises through the building, connecting the lower floors with the social learning and teaching spaces above.

The main entrance sits at the centre of the ground floor plan. Located on Westfield Way, the SBM entrance position has been informed by pedestrian movement routes from the Mile End Road and east to west across the campus. The main entrance opens onto a large foyer space with views over the canal and park beyond. A secondary entrance is located on the north of the plan, connecting the building with Lock Keepers Square and the proposed café within the Lock Keepers Cottage. A 60 person teaching space at is situated at the north east of the ground floor with views out over the Lock Keepers and canal.

Along the southern wing is a mix of open plan administrative office, meeting rooms and ancillary accommodation including WC's. The administration office includes a help desk which over looks the entrance foyer, providing passive supervision and a contact point for the SBM.

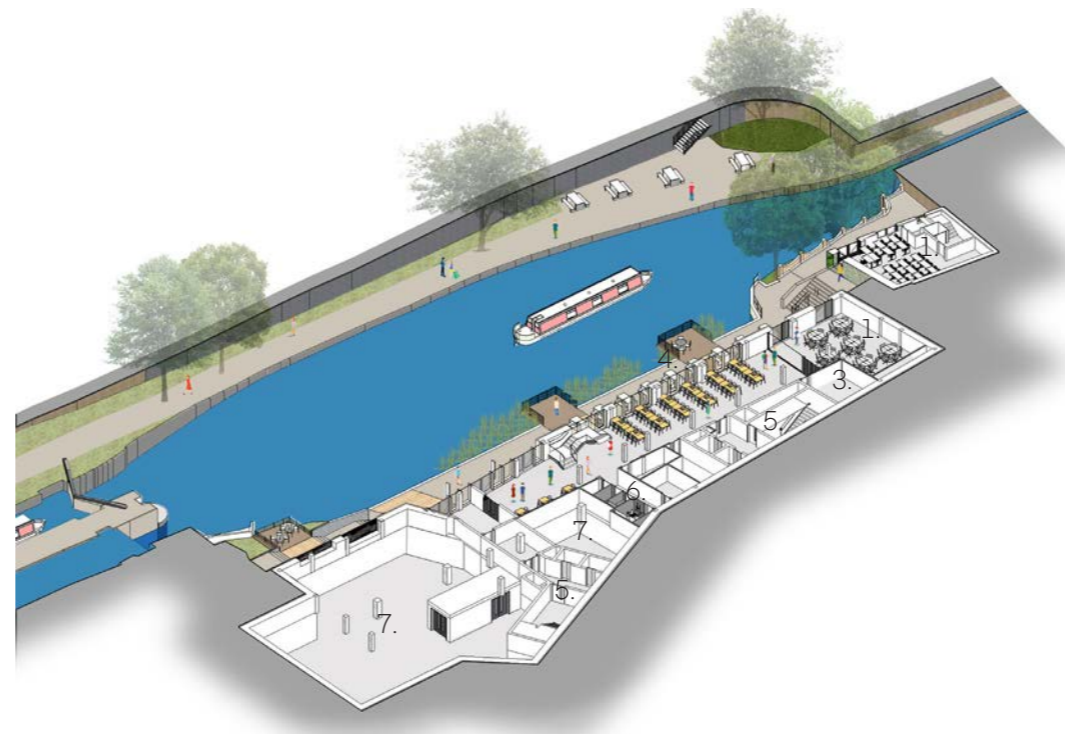
The lower ground level provides study spaces which connects to the canal edge. A smaller teaching space is located at the southern end of the plan. The two floors are public, open, and designed to suit a variety of uses. The teaching spaces, student social and study spaces can be used individually or as combination for conferences, events, and exhibitions.

A double height plant room is located north of the lower ground floor. Two circulation cores are located on the northwest and southwest of the plan. The circulation cores



Ground floor

1. Main entrance
2. Help desk & Entrance foyer
3. Teaching
4. Social Study
5. Admin Offices
6. Meeting room
7. Cafe
8. Stair core
9. WC core



Lower Ground floor

1. Teaching
2. Social Study
3. Catering
4. Canal side seating
5. Stair core
6. WC core
7. Plant

Eastern campus entrance view

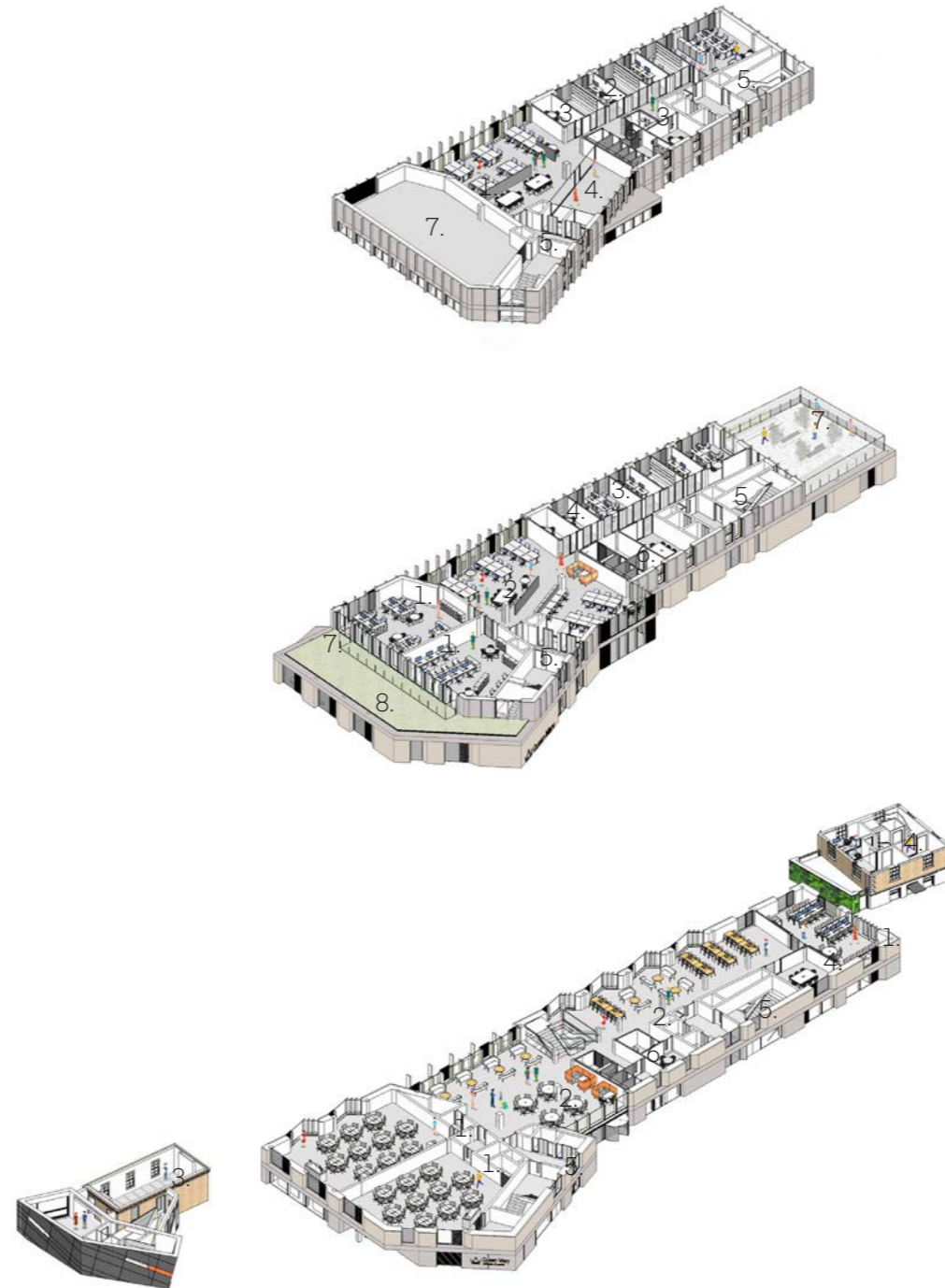
contain firefighting stairs and lifts and provide access to all levels of the building.

Levels 01 and 02 follow a similar arrangement. Two 60 person teaching spaces are located at the north of the plan. These are accessed off a student study space at the centre of the building. Additional study space is located along the east elevation similar to ground and lower ground arrangement A computer teaching rooms is located at the southern end of the plan overlooking the Mile End Road.

Level 03 serves both teaching and academic workspace. The north of the building accommodates one 60 person teaching space and a large open plan administration workspace. The southern end of the building provides a mix of cellular and open plan academic workspace overlooking the canal and the Mile End Road.

Levels 04 and 05 are devoted to workspace and will be secured via access control from the levels below. On these floors the central area will provide workspace for the post graduate research. North and south of the building will provide a mix of cellular offices, meeting rooms and open plan academic workspace,

In addition to the plant rooms at lower ground and ground floor, there are two roof-top plant enclosures for air handling plant. In addition there are PV's on the upper roof. Outside of these enclosures, the roof is either brown to support biodiversity and help buffer rain water run off or paved to provide access for maintenance and cleaning. There is also two roof terraces at level 04 for SBM staff.



Levels 05

1. PGR / Co-working
2. Academic Offices
3. Meeting
4. Common Room
5. Stair Core
6. WC Core
7. Plant Enclosure

Levels 04

1. Academic workspace
2. PGR / Co-working
3. Academic Offices
4. Meeting
5. Stair Core
6. WC Core
7. Roof Terrace
8. Brown roof

Levels 01 - 03

1. Teaching
2. Social Study
3. Event Space
4. Office
5. Stair Core
6. WC Core

357 Mile End Road



Internal view of Ground floor study space



View from the lower ground floor looking north-east



View from canal side towards proposed new entrance



View from the lower ground floor looking north-east



View from canalside of proposed extensions to No.357 Mile End Road

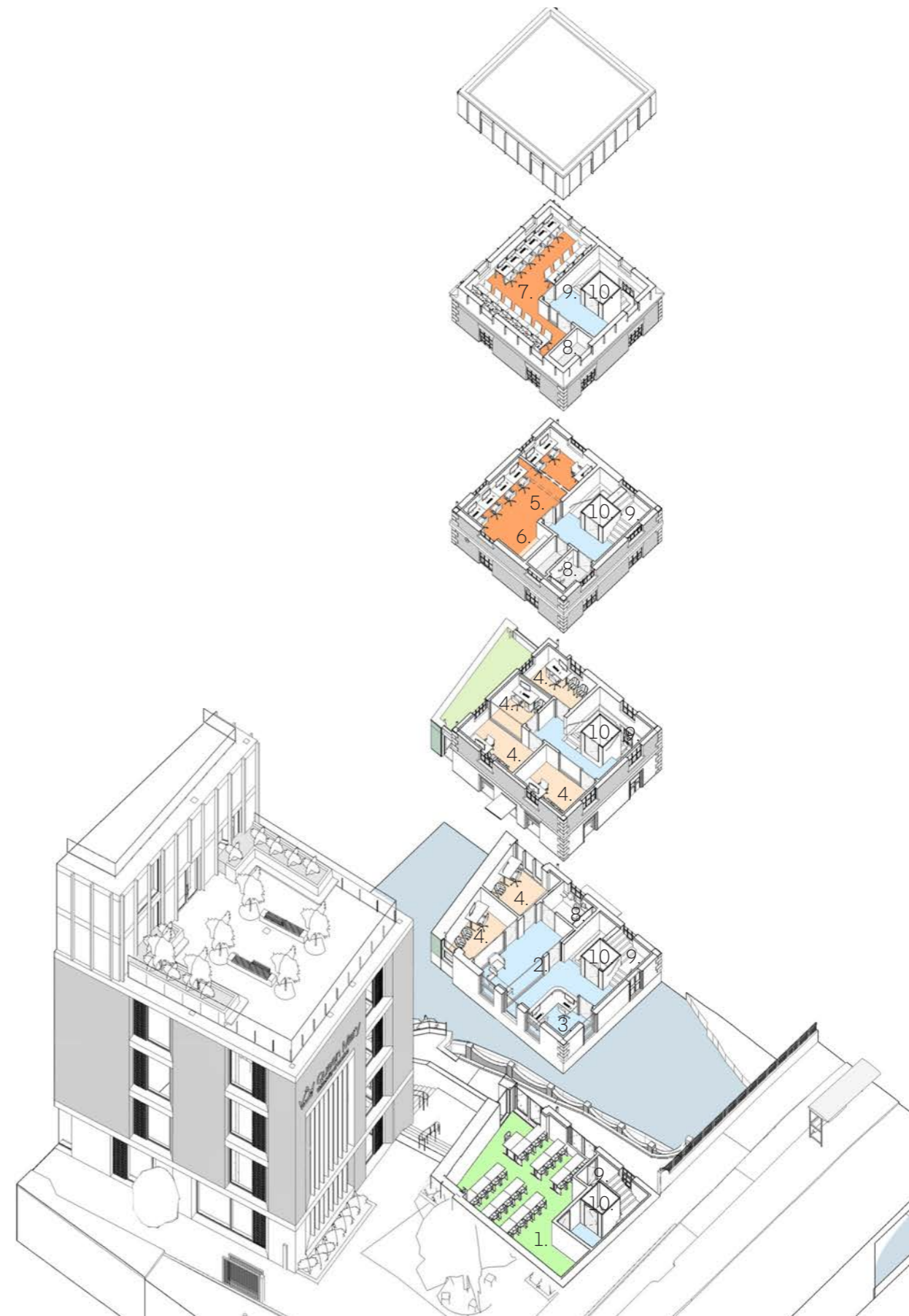
Accommodation is arranged across four floors with publicly accessible spaces at lower levels and more private office and workspace further up the building. Vertical circulation in the form of stair and platform lift are in the south-east corner of the plan. The buildings main entrance is located at ground floor. A new entrance door on the west façade allows access from a new public space set back from the Mile End Road. The lower ground floor is occupied by a 30-person multi-functional space. Two sets of double doors open onto a canal-side terrace. A designated storage area creates flexibility and allows for furniture to be cleared. The ground floor is occupied by a reception and waiting area. The staircase and platform lift are open and are clearly visible from this space. Two meeting rooms are located directly off the waiting area for consultation use.

The first floor is occupied by four meeting rooms. Meeting rooms are sized to accommodate four people. Their proximity to the reception and waiting area at ground floor means they can be used as consultation room for community sessions. The second floor is occupied by an open plan administrative office and ancillary accommodation including WC's and a small kitchenette. The open plan office is sized to accommodate seven people. An operable wall allows for flexibility and sub-division of the space for the purpose of meetings. The third floor is occupied by an open plan student workspace, sized to accommodate seventeen people.

Lock Keepers Cottage

Key

1. Multi-functional space
2. Waiting area
3. Reception
4. Consultation room
5. Admin workspace
6. Kitchenette
7. Student workspace
8. WC
9. Stair
10. Platform lift



Axo showing internal layout of No. 357 Mile End Road

Accommodation within the Lock Keepers cottage is arranged over two levels. A café and seating area will be located on the ground floor. An open social room and two bookable event spaces will occupy the first floor. The two levels are connected by a double height foyer space which contains the stairs and a platform lift. The existing WC location at ground floor will be retained.

To accommodate a café within the existing Lock Keepers, several minor interventions are necessary. It is proposed that the existing ground floor side wall and chimney breast (separating the historic building from the modern extension) be removed to house the café preparation and servery area. The existing partition adjacent to the lift will also be removed, connecting the café space to the double height circulation/foyer space.

At first floor level, new doors are proposed to connect the bookable event rooms. The existing seminar above the entrance door will be opened up to create a social space that looks onto the foyer. A glazed roof light is proposed over the double height foyer.

7.3 Scale and massing

The proposed SBM building is six storeys high from Westfield Way and seven storeys high from the lower canal side path. Whilst bigger than the building it replaces, the scale is appropriate for both the building's purpose and setting. As mentioned previously, the smaller scale Lock Keepers Cottage and 357 Mile End Road form heritage book ends to the north and south of the new SBM building. This transition in scale is achieved in three ways:

- The SBM footprint is pulled back from the heritage assets to the north and south. This creates space between the buildings and allows for visual and physical connections between the campus and Regent's canal.
- The top two stories of the SBM are set back on the north



View of servery from canal entrance



View of seating area towards the canal



View from stair landing on first floor towards social space

and south, reducing the buildings mass and height against the heritage assets.

- The addition of a new top floor to 357 Mile End Road relieves the difference in scale when approached from Mile End Road.

At six storeys and with the transition measures outlined above, the new SBM building has sufficient presence whilst responding sensitively to its surroundings.

The building is divided horizontally into three: the lower ground and ground floor (opening onto the canal), the middle three storeys (grouped together by feature bay windows facing the canal) and the top two storeys (set back on the north and south and recessed slightly on the east and west). A change in facade treatment is also used to distinguish the top two storeys. Precast infill panels and fins are used to unify the floors and suggest a crown. As a result, the overall height of the building feels lower.

A variety of facade treatments reflect the different spaces behind and are used to break down the massing of the SBM building along its length. The central student learning areas are highly glazed. Student learning areas to the south along the canalside (levels 00 to 02) have large uninterrupted openings. The openings to level 03 are broken into two in response to the private academic offices behind. At levels 04 and 05, this is broken down further with alternating solid precast infill. The projecting bay windows and precast fins previously mentioned add another layer of detail to the facade. At the northern end of the building, punched opening with chamfered reveals are used signifying the teaching spaces. As a consequence, the building feels smaller, because it is constantly changing and because its mass has been reduced to a human scale.

7.4 Appearance and materiality



Axonometric view of proposal looking north west

SBM

The design of the SBM façade has been influenced by the canal side context and it has sought to respond to the lower scale of the neighbouring buildings by employing design strategies to break up the mass. There are four primary materials proposed; brick, precast concrete, aluminium and glass.

Precast horizontal banding is used to express the floor slabs at first and fourth floor to reinforce the proportion of base-middle-top. This breaks down the vertical mass of the building. Brickwork and glazing are used as infill from lower ground to level 03 on the canalside and a precast base is used to the north, south and west to breakdown the scale and height. The use of brick is prevalent within the local vicinity and has been chosen because it is a robust material, which needs little maintenance or cleaning. This is particularly important given that access to the building will be difficult due to its prominent position and its adjacency to the canal.

The brick proposed is buff in colour with a light natural mortar. This colour complements nearby heritage assets and Queen Mary University's Arts 1 building. The colour sits comfortably with the London stock brick.

Feature bay windows are proposed along the eastern elevation. These are angled, projecting over the canal side and directing views toward Mile End Park. Vertical fins shade and direct the views to the south. The window bays introduce dynamism and animate the façade along the canal. Brick window reveals on the north and west of the building are splayed, referencing the cranked form of the bay windows.

All metalwork is bronze coloured aluminium, which complements the buff brick. This includes window frames and sills, curtain walling mullions and transoms, door frames, some door panels and plant louvres, decorative metal screens to all opening windows and ventilation intakes/exhausts. This allows



Proposed Development - Mile End Road elevation



Proposed Development - Lock Keepers Square elevation



Proposed Development - Canal side elevation



Proposed Development - Westfield Way elevation

Glazed balustrade

Precast vertical fin

Precast infill panels

Opening light with perforated metal screen

Feature shading vertical fins

Honeycomb bond brick

Full height bronze coloured metal window system

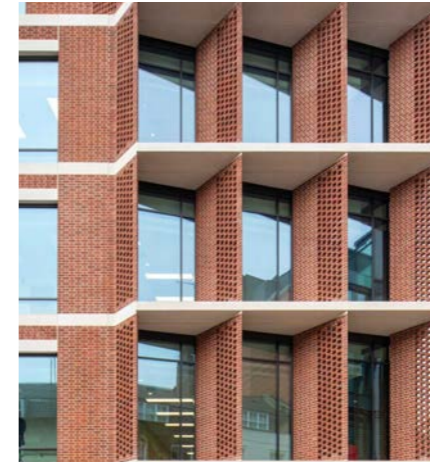
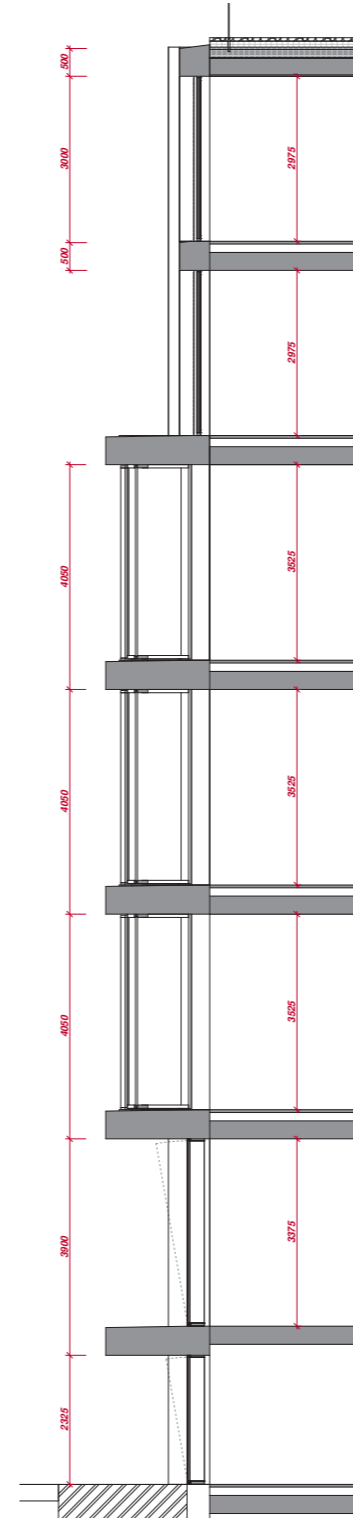
Precast horizontal banding

Brick chamfered window reveal

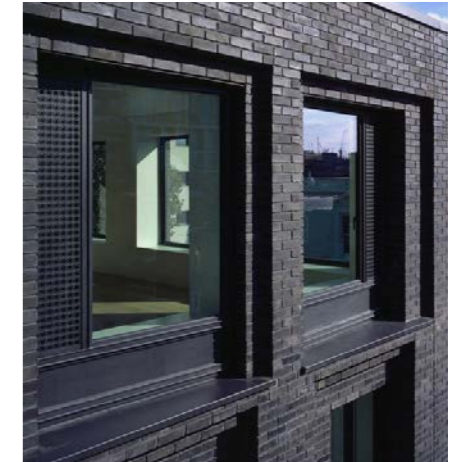
Buff brick piers



Canal side projecting bay elevation and section study



Window elements creating depth on the facade



Full-height fixed glazing with adjacent opening window



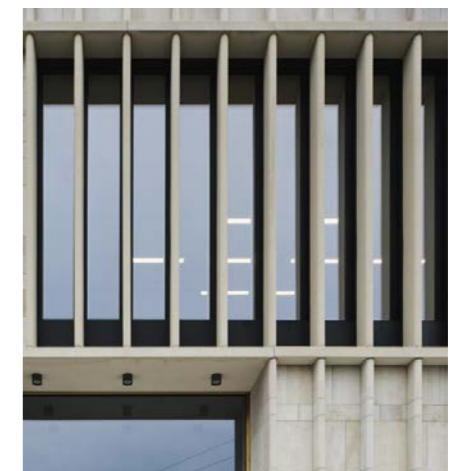
Chamfered brick window reveals



Horizontal precast banding



Buff brick



Vertical fins at top floors



Precast crown to building top

the facade treatment to remain visually consistent.

Precast panels are proposed as wall infill on levels 04 and 05. This change to a lighter homogeneous material unifies the building top. Reveals to window reveals will be chamfered, referencing the form of the projecting feature bay windows below.

Vertical precast fins are proposed in order to break down the mass of the building top. The top floors are set back slightly to allow the fins to align with the external walls below. This articulation helps lighten the top, emphasising it as a crown. As mentioned in Section 7.2, the centre of the building contains open plan student study and PGR workspace. The open nature of these spaces is reflected in the treatment of the facade and used as a device for breaking up the facade. The central area is highly glazed. Curtain glazing is set back from the facade, breaking down the horizontal mass and

responding to the SPD canalside design principles. The buff facing brick of the main facade returns to meet the recessed glazing,

The horizontal precast banding continues across the recess at levels 1 and 4. The depth of the precast at these points, emphasises the depth of recess and provides solar shading. Vertical fins provide further shading. Based on the width of the adjacent projecting bays, full, half and quarter module spacing are used to create hierarchy and reflect the public / private nature of the spaces beyond.

On the western facade, the mass of the building pushes out from levels 02 to 04. This signifies the building entrance across the campus and from the Mile End Road. This also gains valuable floor area for the student learning and post graduate research space on these floors.

The extruded form presents itself as a glazed and metal clad object. The double height entrance glazing at ground and first



Feature bay windows facing the canal side



Double height entrance with projecting bay above and precast concrete base surrounding

Glazed balustrade

Precast vertical fin
(Quarter module spacing:
Levels 04 & 05)

Precast infill panels

Precast vertical fin
(Half module spacing:
Levels 01 & 03)

Buff brick reveals

'Inflection' - Curtain glazing
to central area is set back
from facade line

Bronze coloured metal
spandrels

Bronze coloured metal
curtain glazing system

Precast horizontal banding

Precast vertical fin
(Single module spacing:
Levels 01 & 03)

Buff facing brick

Bronze coloured metal
glazed doors



Glazed central area elevation study



Feature brick work and signage to southern elevation



Opening with perforated metal screen and chamfered reveal



Main entrance elevation study

floor steps back under the extrusion, providing shelter and emphasising the main entrance. The object breaks the brick and precast datum at level 04 and unifies the facade. Ground floor elevation to north of the entrance is precast. The use of precast at this level wraps around the stair and ancillary spaces to the north west and links the main entrance off Westfield Way with secondary entrance facing the Lock Keepers square.

A second entrance to SBM is located on the north west corner of the building. The secondary nature of this entrance is

reflected by it's single storey scale. The entrance is recessed to provide necessary shelter for students, staff and visitors when entering and exiting the building.

357 Mile End Road

As mentioned in section 7.1, the proposed development will comprise the retention, refurbishment and extension of No. 357 Mile End Road for the Queen Mary Legal Advice Centre. The refurbishment of No. 357 Mile End Road will entail the demolition of the existing two and the three storey rear



Secondary entrance facing student plaza

extensions. A smaller, more modest two storey extension and external will be constructed between the retained section of no. 357 and the new SBM building. Vertical glazed strips on the eastern and western facades will separate the new from the existing. A green living wall is proposed against the new canal side steps to the north, creating a green link between the new arrival space off the Mile End Road and the canal.

Above this, the façade steps back onto the line of the existing building. It is proposed that this piece of elevation is constructed in a similar language to the existing facades, with yellow stock brick in Flemish bond and sash windows equally spaced.

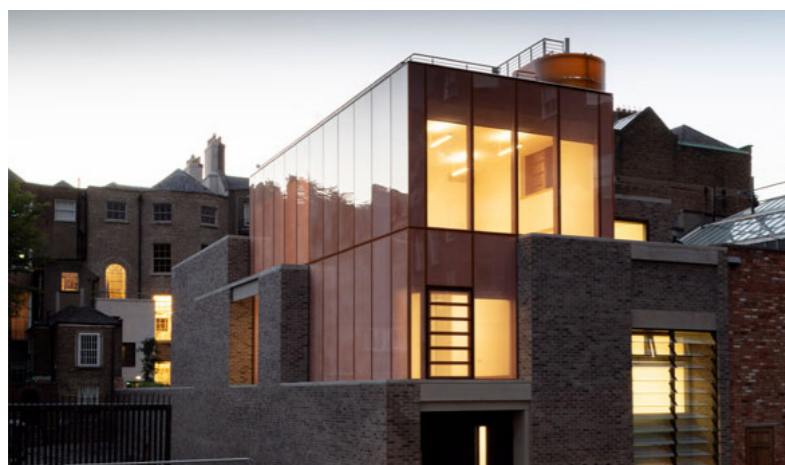
It is proposed that the existing elevations are sensitively restored. The existing metal railings and grillage to windows to be removed. The existing yellow stock brick will be cleaned and re-pointed. The existing stucco to the ground floor south and west elevations, stucco quoins, banding and window detailing will be repaired. The existing sash windows will be upgraded to have better acoustic and thermal performance. The existing entrance door on the south elevation will be changed to a window. Two windows on the west elevation will be dropped and a new main entrance door inserted between them. The east elevation will be rationalized, with fenestration arranged symmetrically. This will result in a cleaner and neater façade, more in-keeping with the character of the southern and western facades.

It is proposed that the existing double hipped roof be removed, and a top floor extension added. The proposed extension will act as a crown for the building. The extension will have contemporary appearance and contrast against the existing building.

Setback from the existing parapet, the extension will be clad in a glass rainscreen cladding with the potential to be lit at



View from Mile End Road



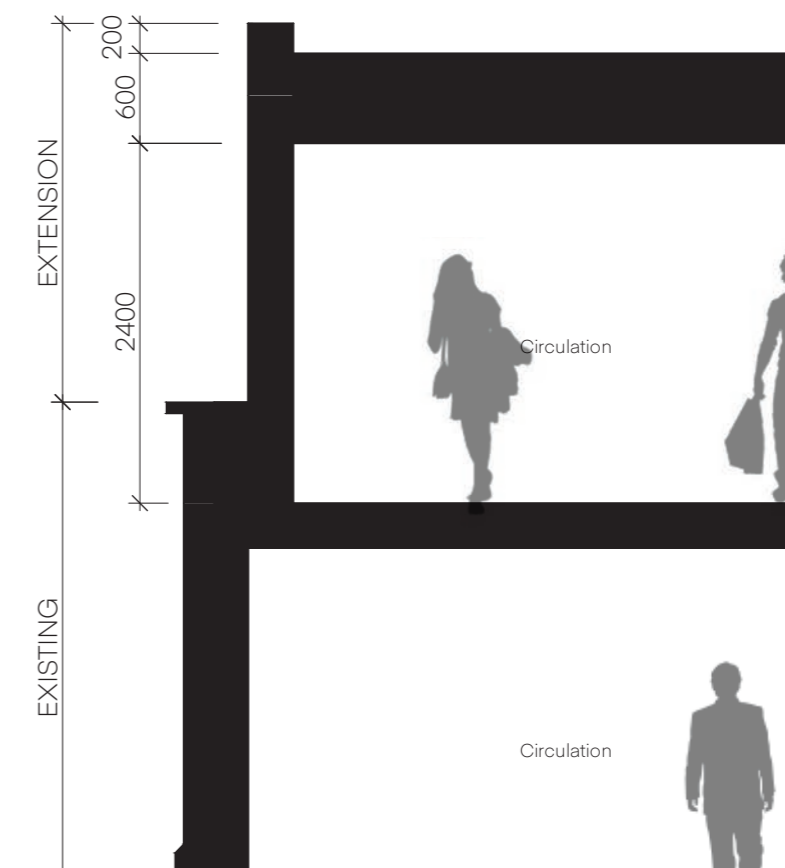
Glazed roof extension precedents

night. Flush windows will be integrated and align with the existing openings below. The height of the additional storey has been minimised so that the proportion of the mass is not unbalanced relative to the existing building.

An QMUL archive photograph discovered recently shows 357 Mile End Road (as glimpsed behind the Mile End bridge from the canal) illustrates that white painted stucco effect quoins had previously run up to the parapet on the front elevation. The quoins currently run up to the second floor level stucco band and it is therefore proposed to reintroduce these features to three corners of the building (except to the NE corner)

Lock Keepers Cottage

The extent of the main alterations to the Lock Keepers



Section through the top level extension

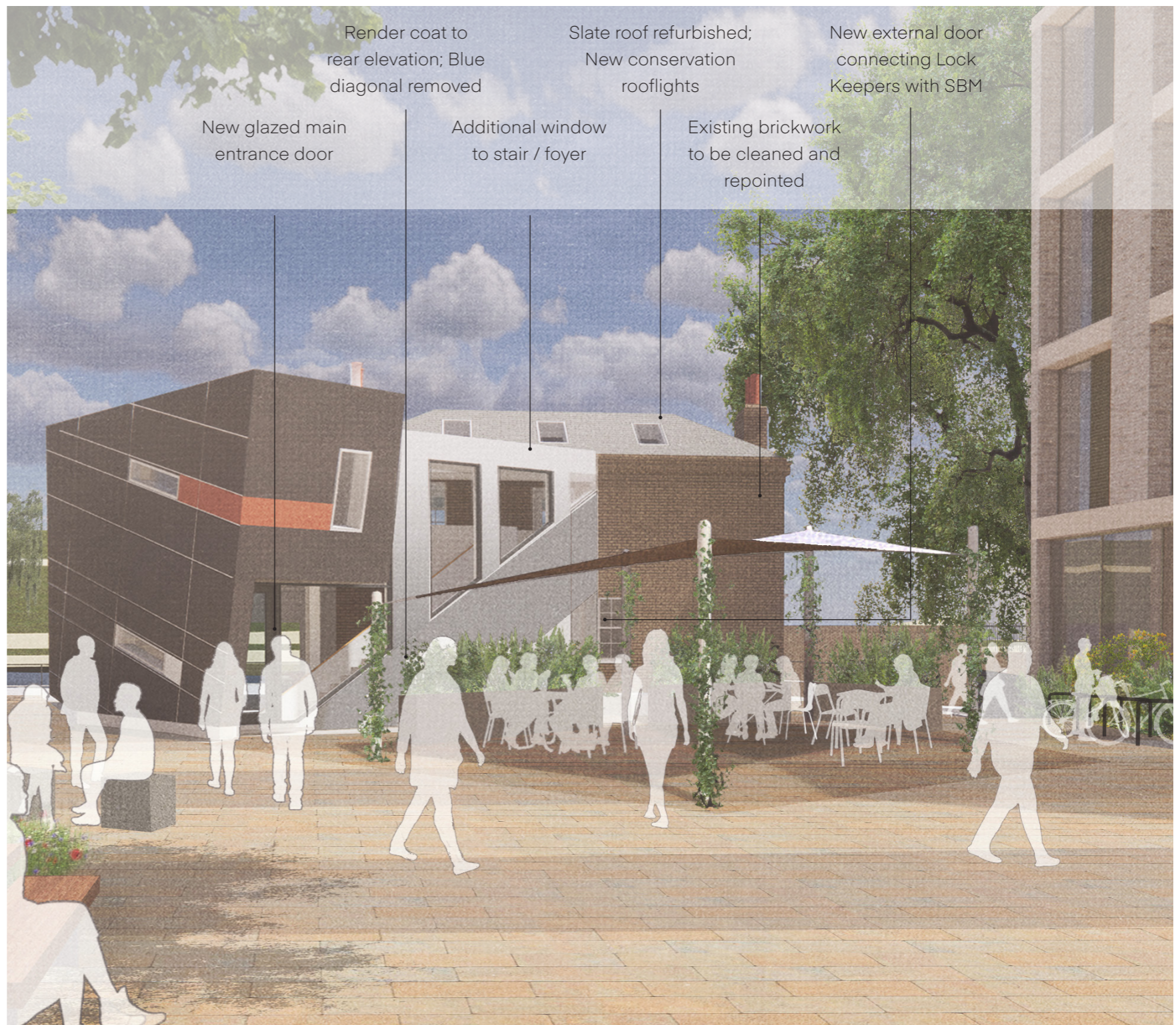
appearance relate to the more recent winged extension. The existing entrance door on the approach from lock keepers square is solid with a narrow vision panel. It is proposed that this be replaced with a larger double glazed aluminium framed door. This will make the entrance more notable and inviting.

The rear elevation of the extension relates to the existing landscape proposals. It is proposed that the diagonal painted blue band is removed and that additional windows and vertical recesses are introduced to break up the horizontality of the façade. It is proposed that the structural glazing where the extension meets the existing cottage is modified to include an external glazed door, creating a link with the SBM and Canalside.

It is proposed that the existing horizontal glazed window facing the canal is lower and replaced with sliding doors and glazed side lights, connecting the café with the canal and lock gates. A new rooflight is proposed above the entrance foyer.

It is proposed that the envelope of the existing cottage building is restored. The existing yellow stock brickwork has been patch repaired over time. In some locations cement mortar has been used. It is proposed that the brickwork is cleaned, mortar joints cut back and repointed with a permeable lime mortar that matches the colour, texture and profile of any surviving lime pointing. The existing stucco pediments above the windows are to be repaired and repainted. The existing slate roof to be repaired and conservation roof lights to be installed into the rear roof

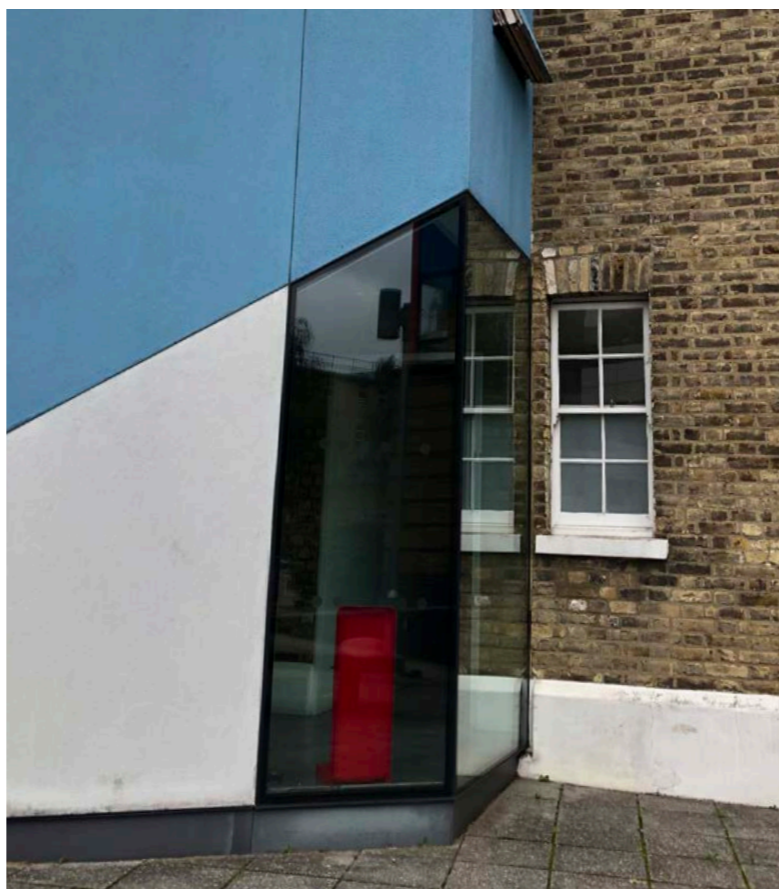
7.5 Key views



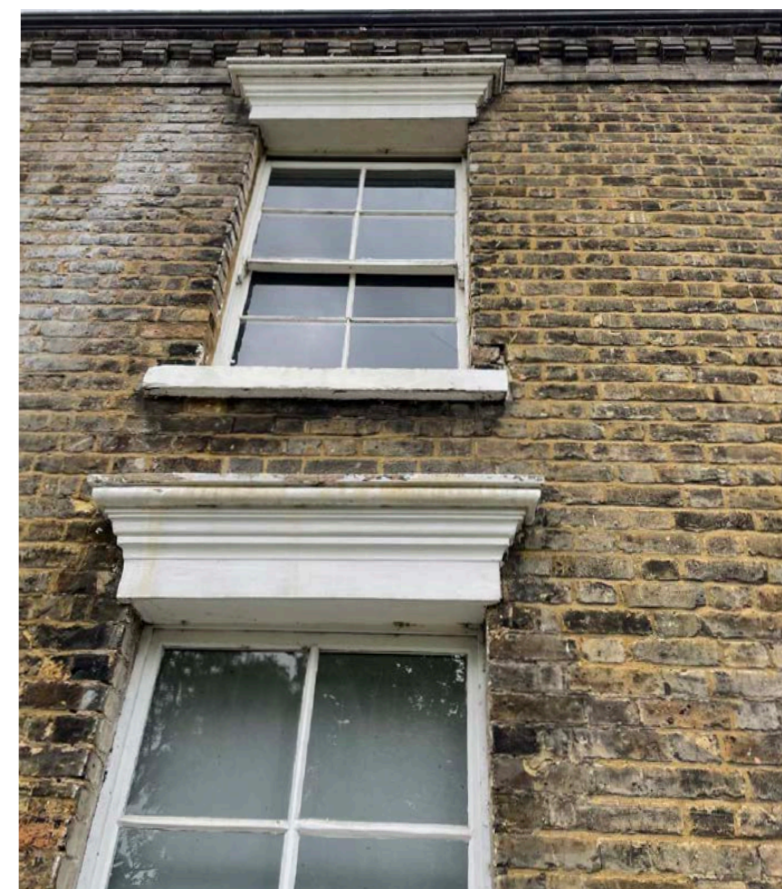
Illustrative view of Lock Keepers and SBM building



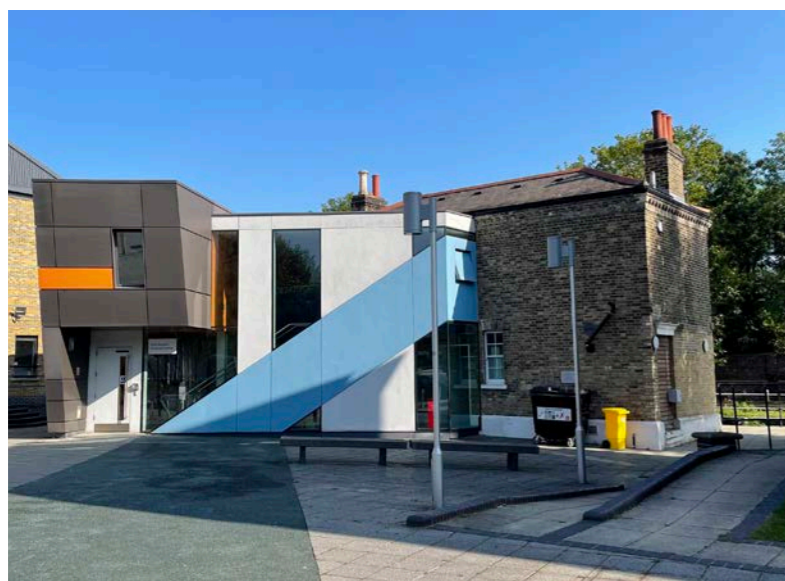
Existing entrance to be door to be replaced



New doorway to be inserted linking Lock keepers with SBM



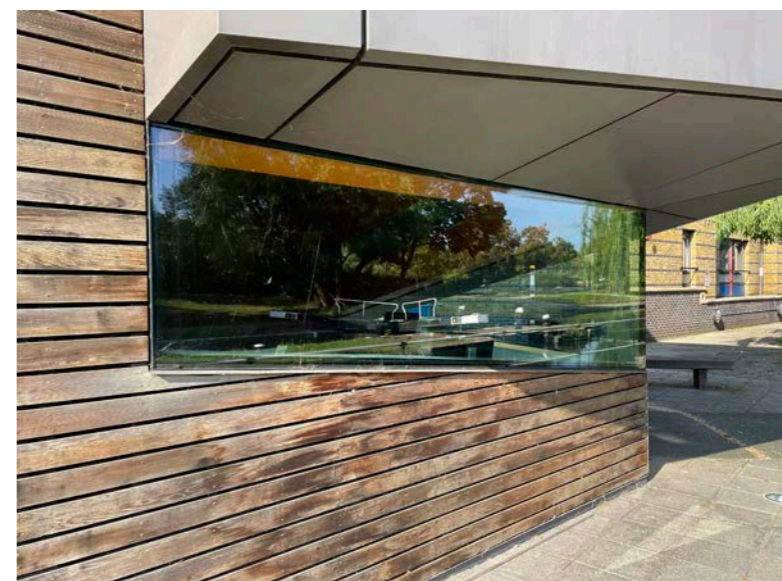
Existing stucco pediments and sash windows to be repaired



Lock Keepers existing rear elevation



Brickwork to be cleaned, repaired and repointed



Existing opening to be lowered and allow for sliding doors

Four key views were established and used for consistency during the pre-application meeting process to review the development of the design. These four views are included on the following pages. An overview of the development of these views up to and including pre-application meeting 3 is included in section 6 of this document.

7.6 Tall building assessment

It has been agreed with LBTH that a tall building assessment is not required with this application, refer to the planning statement for further detail.

7.7 Sustainability

The proposals for the new SBM building strongly emphasise passive design and a fabric first approach to minimise energy usage. Accordingly, the following design principles have been employed:

- High levels of airtightness and low U-values to minimise heat losses from the thermal envelope of the building
- Provision of external shading and window side panels for substantial reduction of cooling demand and control of glare
- Implementation of natural ventilation through window opening, including night-time ventilation in summer to limit overheating in conjunction with exposed thermal mass
- Glazing with optimum g-value and U-value to reduce heat gains and losses
- Optimised window to wall ratio to improve quality and uniformity of daylight

To minimise heating requirements the building façade optimises solid to glazed ratios to maximise daylight whilst balancing the need for good U-Values. The wall U-Values targeted are also feasible with non-combustible insulation (mineral wool) within the façade construction. The window U-Values targeted are good for double-glazing. The roof and

floor also have low U-Values and a good air tightness is being sought.

The eastern façade incorporates projecting angled shading elements. These provide passive solar shading and minimise solar heat gains in the summer. In addition, vertical fins are proposed to the top two storeys and curtain glazed central study area that rises through the building.

Mechanical ventilation with heat recovery is proposed throughout the occupied spaces. This will ensure excellent air quality and thermal comfort for users through the colder winter months while reducing heat loss from the building. The heat recovery system will include a summer by-pass mode, allowing for free cooling using external air during the summer months.

To reduce carbon emissions no gas boilers are proposed. Heating, cooling and hot water will be achieved through air source heat pumps. PV installations will be provided on the SBM roof, on the vertical face of the plant screen and the cycle store roof.

In addition the new building is seeking to meet a minimum BREEAM rating of Excellent, which addresses other environmental concerns such as water usage and indoor air quality. Through the use of BREEAM the selection of materials with strong environmental credentials has been encouraged with preference given to robustly manufactured high performance products that are flexible and resilient for the building's needs. The landscape design seeks to improve biodiversity through a number of enhancements, including the creation of a green ribbon wildlife corridor and new canalside marginal planting. Rainwater run-off will be attenuated through a mix of SUDS measures including brown roofs, planted swale and permeable paving.

QMUL's aspiration is to consider SBM project as LETI Pioneer. A LETI Pioneer project demonstrates a best practice in designing for a net zero-carbon future. The new SBM building will run from zero fossil fuel heating technology so compliance is achievable.

For further information, refer to the Energy and Sustainability statements that accompanies this application.

7.8 Construction and logistics

In order to construct the SBM building the existing Hatton House and rear extensions to 357 Mile End Road need to be demolished. Services within Westfield Way will require relocation before substructure piling can be undertaken. During the main works, access through the East Gate will be limited to emergency vehicles and gas deliveries to the Joseph Priestley building. A construction and logistics plan has been developed which accompanies this application.

Queen Mary
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Opening the
doors of
opportunity



View from Mile End Road