

12

**Architectural Proposals;
Purpose Built Student Accommodation**

12.1 Brief



Aerial view from the Northwest

In order for Scottish Opera to realise the consolidation of their operations on the New Rotterdam Wharf site, commercial return from the areas of the site not needed for their own purposes needs to be maximised.

A number of residential uses were explored during the evolution of the scheme, however, through iterative testing it was deemed that delivering high-quality managed Purpose Built Student Accommodation (PBSA) was the best and most suitable solution for the needs of Scottish Opera whilst also delivering substantial public benefits such as a significant improvement in public realm, shared amenity and connectivity with the canal edge.

This PBSA offering will accommodate high-quality student accommodation distributing 700 units into 2 independent buildings.

As referred to in the separate Student Demand analysis report, student numbers in Glasgow have grown steadily over the past 7 years (based on HESA data), which in turn is creating greater demand for managed Purpose Built Student Accommodation (PBSA).

This increase in demand coupled with the lack of supply has increased competition for private rented accommodation and put additional pressure on the housing market.

This site is ideally located for a PBSA development and is within easy walking and cycling distance of a number of higher and further education establishments within the city.

The proposals will introduce active and publicly accessible uses at all 3 ground floor levels that bridge the level change between Edington Street and the canal edge whilst also contributing to significant enhancement of public realm, urban greenspace and connectivity around the site - all in line with GCC policy.

12.2 Design Inspiration

The new PBSA blocks take inspiration from the powerful Victorian industrial architecture that was historically located on the site and its surroundings, including the Port Dundas Electricity Generating Station (1) that was demolished in the early 1970's and the converted granary buildings on Speirs Wharf (2) (3).

There are three main principles that we can follow from this type of buildings:

Powerful and muscular architecture.

At macro scale, these type of buildings sat powerfully in their context, creating strong markers within their neighbourhoods and the city. For example, the Port Dundas Electricity Generating Station (1) would have marked its presence through its central tower and its three large cooling chimneys to the canal side (demolished in the photograph).

Functional and honest architecture.

At meso scale, these buildings dealt with the articulation of their volumes and facades with a functionality and efficiency-first approach. Volumes responded to the industry space requirements whilst opening scale and number covered access, ventilation, and lighting requirements in the most economic way, both from a quantity and a construction point of view.

For instance, the warehouse buildings on Speirs Wharf (2,3) present a long homogenous backdrop to the canal articulated by a regular rhythm of openings, that would have been determined by access to the grain stores and the requirement for uniform ventilation.

Ornate and economical architecture.

At a personal scale, this type of architecture used ornamentation as a way to soften the muscular and functional aspects of the buildings. Introducing different treatments of a single material, utilising an economical material such as brick and a variety of colours and finishes or introducing softer geometry's into otherwise very rigid openings and corners.

There are a number of examples in Glasgow that perfectly encapsulate this approach, from the utilitarian wall of the bakery on Sawmillfield Street (4) or the remaining wall of Collegelands Station on Duke Street (5), to the very ornate Templeton Carpet Factory in Glasgow Green (6).



12.3 Massing and organisation

The PBSA blocks 'bookend' the site and are orientated east-west to minimise the visual impact on the setting of Spiers Wharf behind. These blocks frame the view of Spiers Wharf from the west. They form natural edges to Sawmillfield Street and Corn Street.

Both blocks span from Edington Street through to the canal towpath (3 storeys higher) and take advantage of the site topography, allowing access to the buildings at three different levels, and creating an active frontage to the streets and the courtyards.

The buildings are set back from the eastern boundary retaining wall to avoid any complicated interface issues with the Forth and Clyde Canal Scheduled Monument.

Both blocks are organised on a narrow linear plan to minimise the impact on Spiers Wharf. To avoid creating a slab block, the blocks break in plan at their centre where the main core is located.

This core also splits the volume of the block into two distinctive elements: a taller element to Edington street marking the main entrances, and a lower one to the Canal, responding to the scale of Spiers Wharf opposite

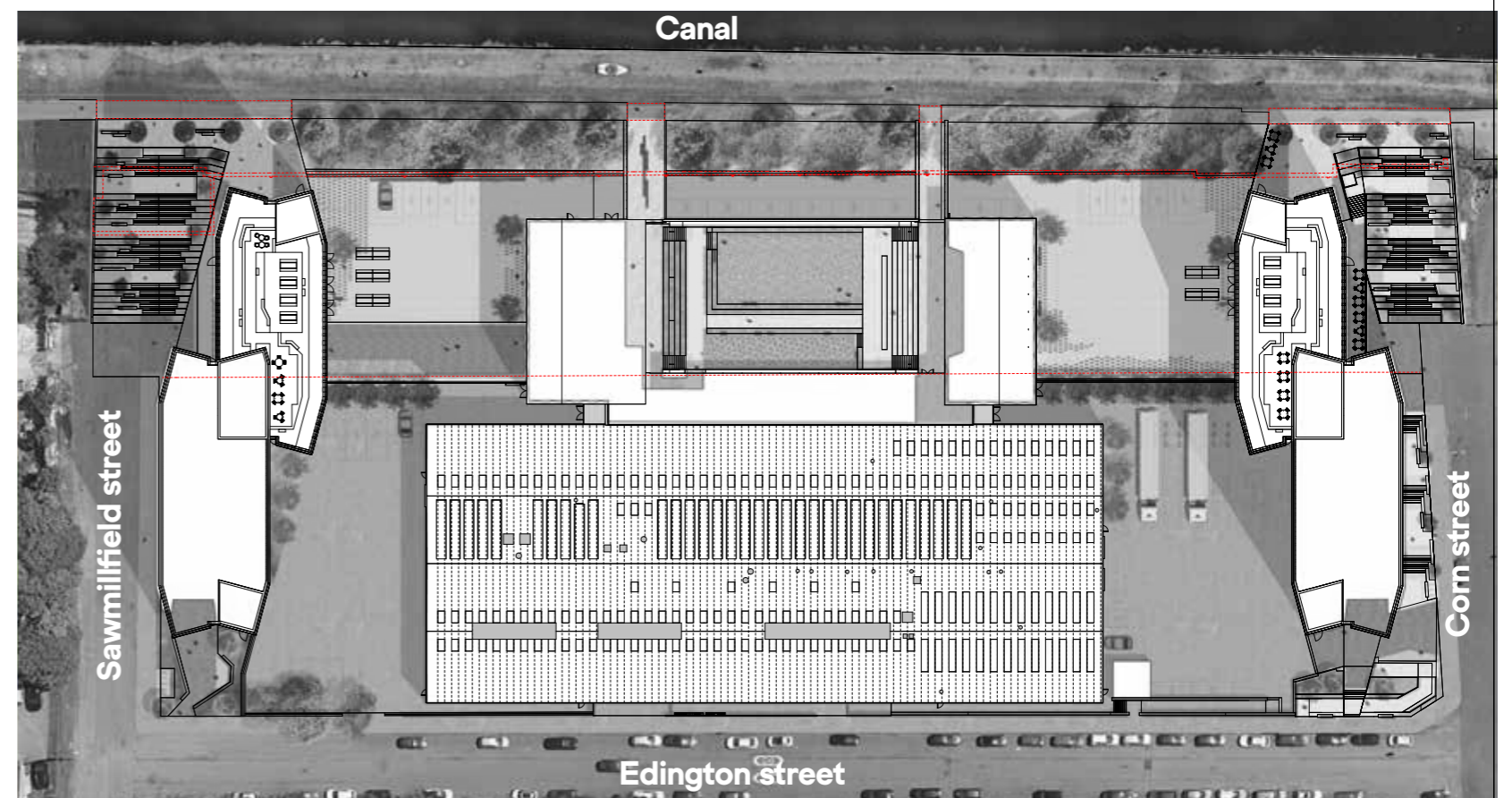
In both blocks, the taller element of the building is located towards the western edge of the site, resulting in a symmetrical disposition of the blocks as 'bookends' to the development.

The north block rises 20 storeys above Edington Street at its western side, whilst at the eastern side the lower volume is 13 storeys high - albeit with the 3 storey difference in height between Edington Street and the canal towpath, this north eastern volume only rises 10 storeys above the level of the canal towpath.

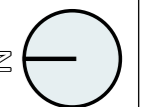
The south block rises 15 storeys above Edington Street at its western side, whilst at the eastern side the lower volume is 10 storeys high - albeit with the 3 storey difference in height between Edington Street and the canal towpath, this south eastern volume only rises 7 storeys above the level of the canal towpath.



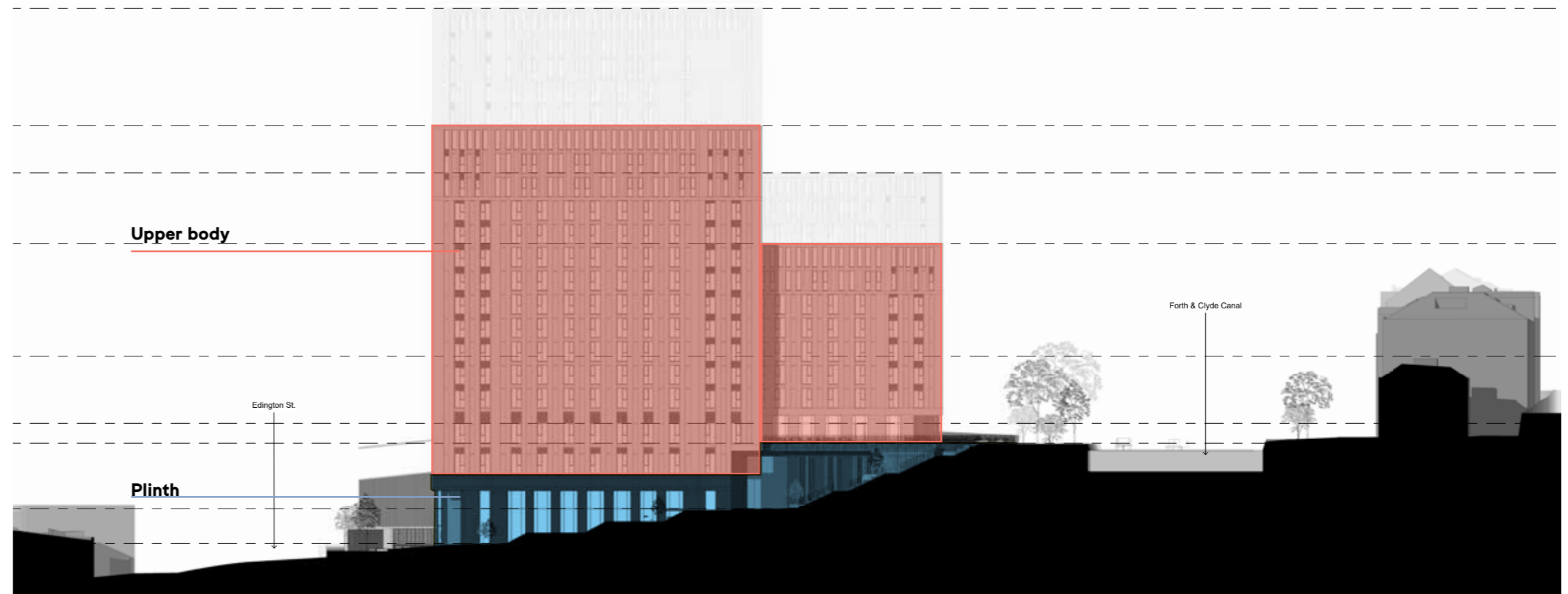
Elevation to Edington Street



General plan of the development



12.3 Massing and organisation

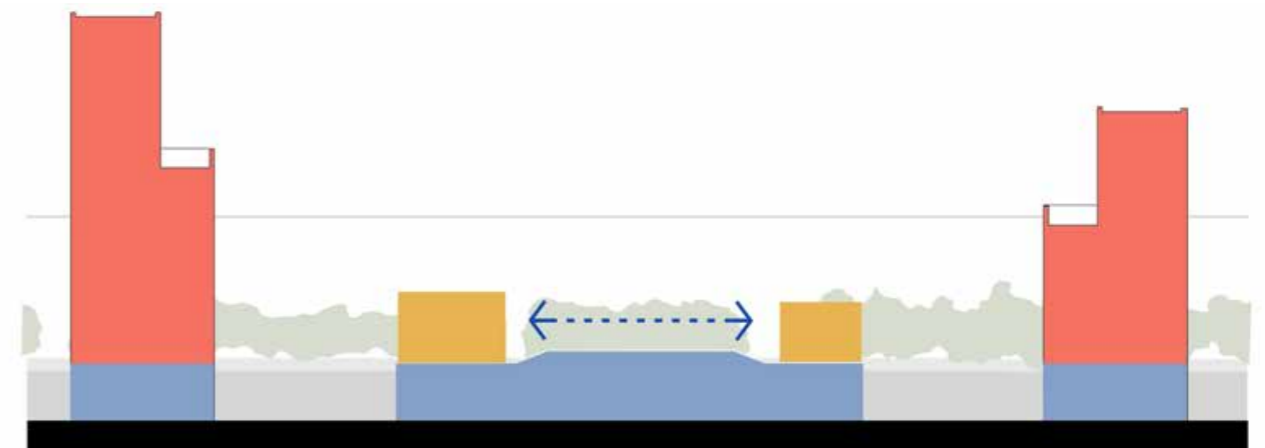


South Elevation

The PBSA blocks follow the architectural principles of the site development (described earlier) and are therefore articulated into a lower area of plinth, that accommodates public amenity spaces, and an upper area of accommodation.

This plinth spans from Edington street to the towpath level taking advantage of the site topography, framing access to the buildings at three different levels, and creating an active frontage to the streets and the courtyards.

The upper body of the building grows from this plinth and accommodates the student rooms.



12.4 Plan development. Typical upper plan

The geometry of the slender blocks is derived from the efficient arrangement of rooms in the upper part of the building.

A double sided corridor (1) giving access to the residences, with a main core (2) at its centre and secondary stair cores (3) at each end.

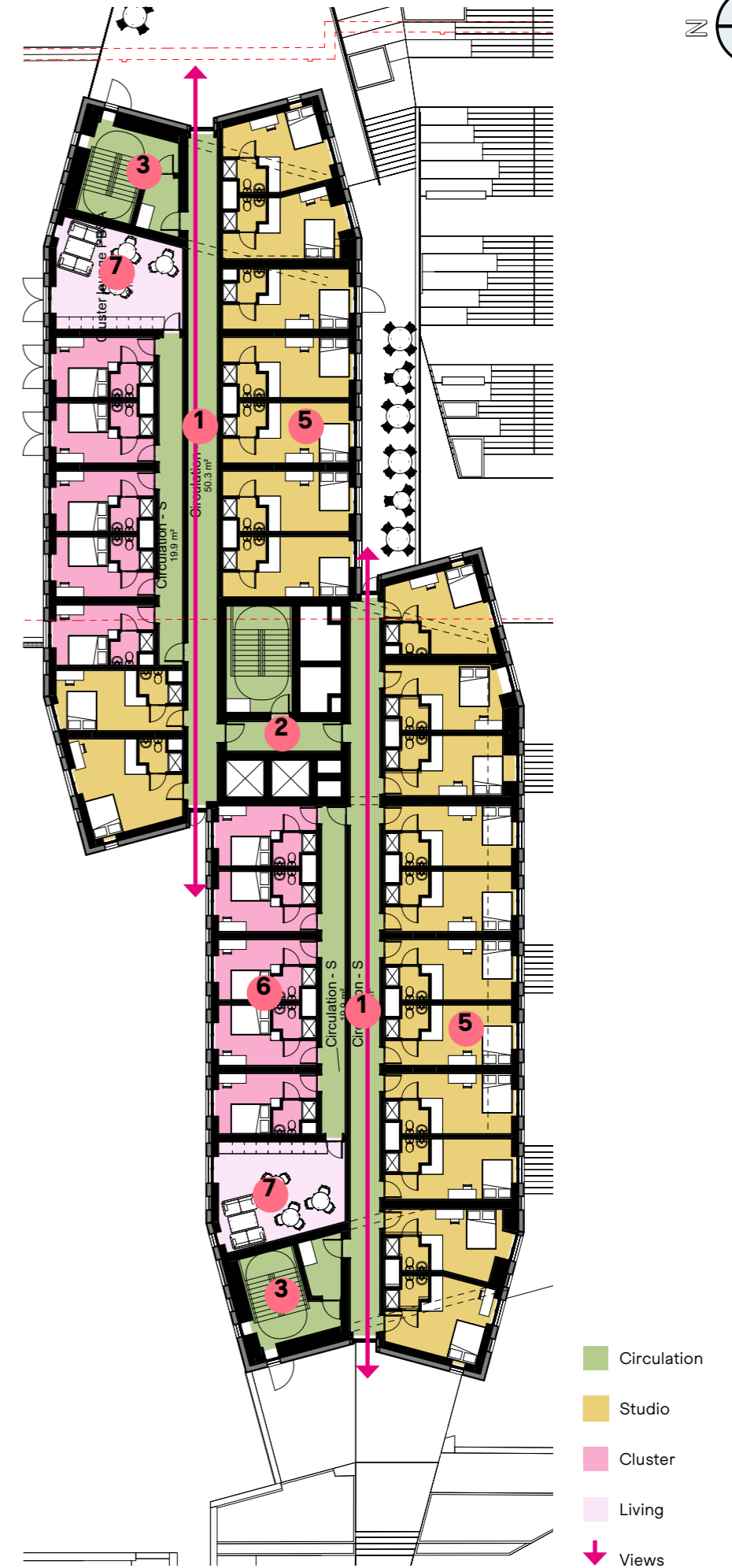
The blocks contain a mix of studios (5), including en-suite and kitchenette, accessible units and clusters of 5 en-suite units (6) sharing a common kitchen and living room (7).

The studio units are mostly south facing with the clusters occupying the north side of the plan. Each unit will benefit from full height windows with opening components to maximise the view and showcase the generous floor to floor height.

The central core accommodates two lifts, a central stair and the main vertical distribution of service, and opens to two distribution corridors with glazed ends, helping with orientation and taking advantage of the views out. This central core provides the required fire fighting provisions.

The secondary stair cores are located at both ends of the plan and are articulated with floor to ceiling windows that will animate the facade at night.

The blocks narrow towards their ends to accentuate their slenderness and to improve visual sightlines past the blocks to and from Speirs Wharf. This symmetric approach to the ends, results in a concave arrangement that will emphasise the sense of verticality of the elevation whilst being reminiscent of the boats moored in the Canal.



Plan development.

Ground and first floor

South block

The ground and first floors of the two blocks form part of the 'plinth' stretching across the development. These levels accommodate much of the shared amenity facilities for the residents.

The south block will be treated as the main entrance to the PBSA development, with the south-west plaza (1) providing level access from the public routes. This plaza will incorporate seating areas and a managed unobstructed vehicle route to the adjacent Scottish Opera service yard. The plaza will contain planting that will assist with site drainage.

By creating a terraced landscape with steps and ramps, the design will provide an accessible route from Edington Street and public space whilst accommodating the existing levels.

In order to mark the entrance, and to allow vehicle movement through the plaza, the building is cut back up to Level 2, creating an overhang over the entrance.

The welcome point (2) to the PBSA is visibly located near the entrance. Around this point a number of social and working spaces are distributed such as a games zone (3), digital rooms (4), cinema (5), and project room (6).

From the entrance, a generous accommodation stair follows the change in level of the external street, creating a raked seating area for the residents (7). The stair connects the ground floor common areas with the rest of the spaces at first floor level. This stair leads directly to the entrance from Level 1 (8) providing controlled access to residents and visitors.

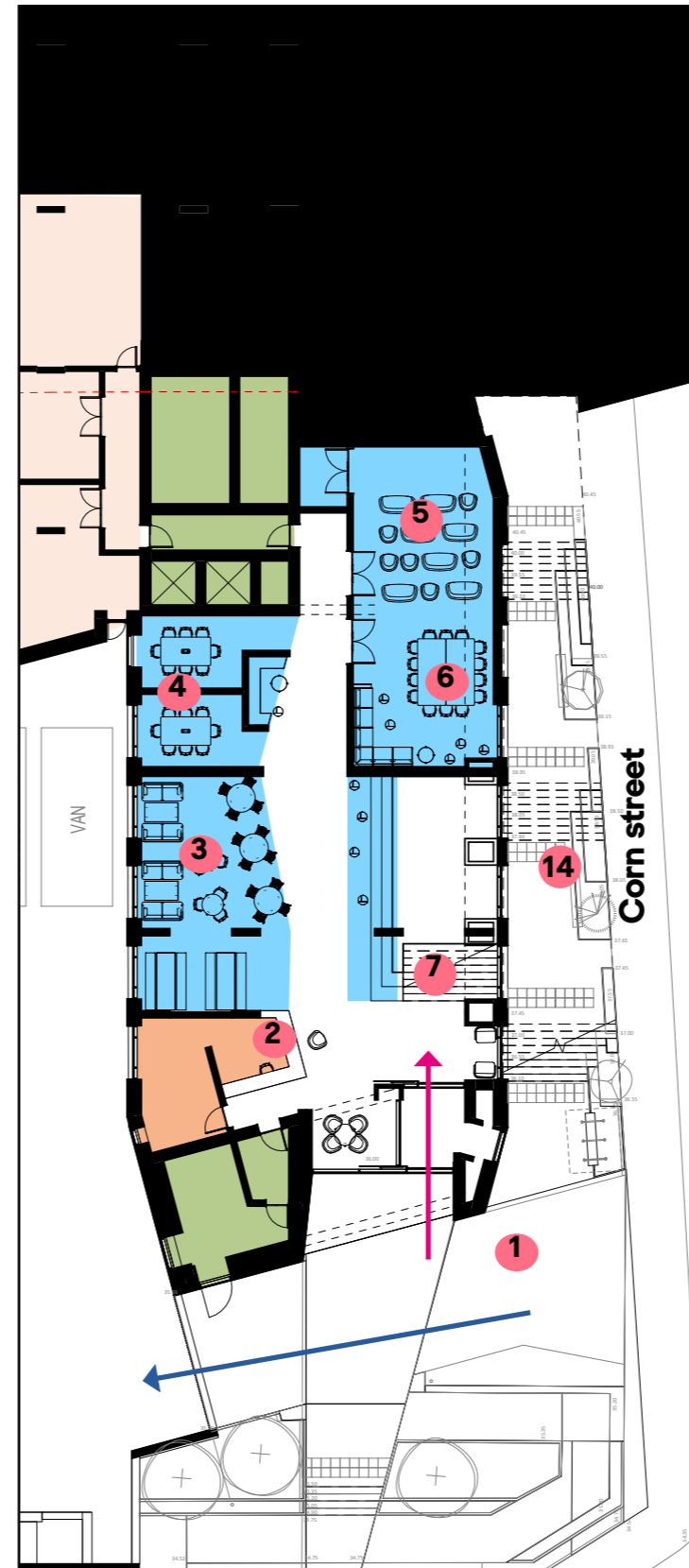
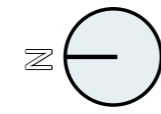
From the first floor entrance, an area of social learning booths (9) and touchdown spaces (10) are located overlooking the double height space over the stair and the entrance lobby, reinforcing the connection between the two levels and taking advantage of the south and west facing frontages. Along the north side, a number of social and working spaces are distributed: such as lounge (11), games room (12) and digital rooms (13).

The internal steps are mirrored outside by a terraced landscape (14) that runs along the south facade of the building. This is organised with planters that provide seating, rain gardens and tree planting. This terminates at Level 1 at the entrance to the building (8) and leads through a double height pend (15) into the upper courtyard (16). This controlled pend provides pedestrian and service access to the PBSA blocks and the Scottish Opera facilities.

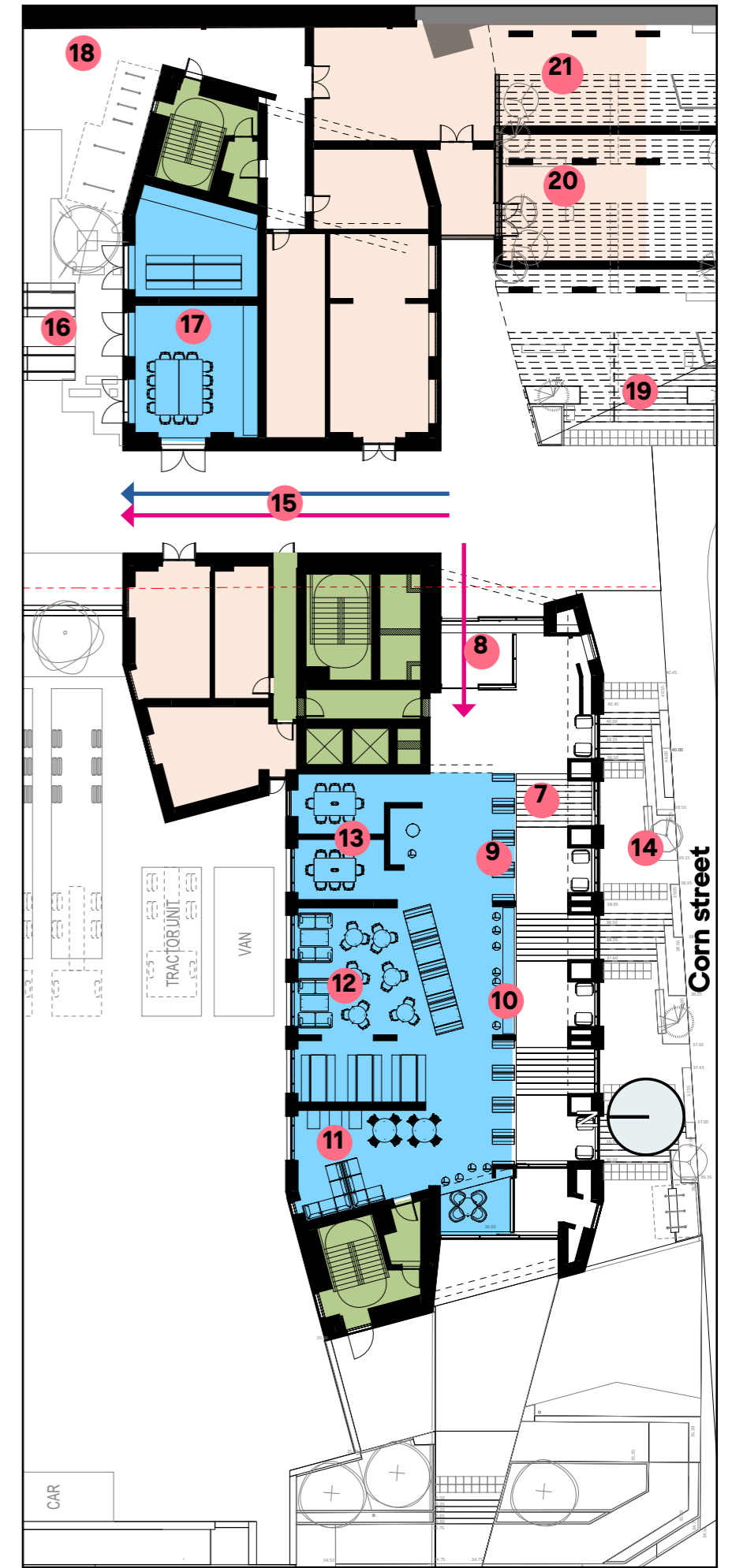
The courtyards will provide spill-out and seating spaces for the residents, particularly from the dining / party rooms (17) whilst also providing the necessary service spaces for Scottish Opera. To create a soft transition throughout the courtyard, new planting will be added in combination with transitional green paving, and a green wall (18) will be planted in front of the existing canal retaining wall.

A broad feature set of steps connects Level 1 up to the canal towpath. These steps are designed as a stepped green landscape (19). Elements of soft landscape, trees, extended platforms and seating nooks are integrated into the terraced landscape, providing shelter, visual amenity and spaces to gather and rest.

These steps also create space below to utilise for plant and service provision. The central bin and recycle area (20) is located here along with bike storage for the development.



Ground floor. South Block



First floor. South Block

- Circulation
- Reception
- Amenity
- Plant
- ↑ Access
- ← Vehicle route

Plan development.

Ground and first floor

North block

As in the south block, the ground and first floor of the north block form part of the development plinth accomodating mostly public and amenity uses. As seen in the south block, the building is similarly cut back in plan up to Level 2 in order to mark the entrance, creating a canopy overhang.

The ground floor of this north block will incorporate an independet commercial unit (1) directly accessed from the new plaza (2). This external space has been designed to feature pockets of seating and rest points, enclosed by planting mounds and rain gardens.

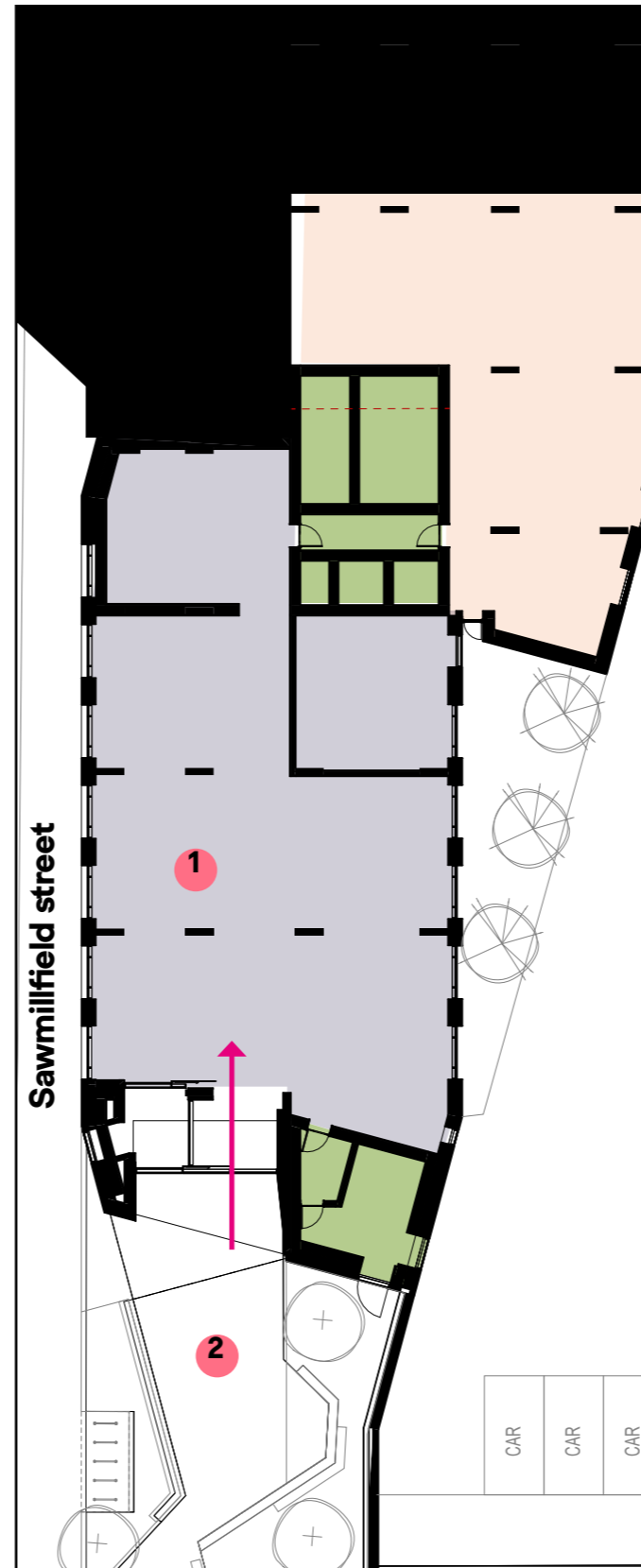
Sawmillfield Street leads naturally up to Level 1, where the main entrance (3) to the north PBSA block is located. A controlled entrance (4) at this point gives access to a student lounge (5) and chill area (6).

Externally, the arrangement of access through the pend (7) is replicated in the north block. This controlled pend will provide pedestrian and service access to the PBSA blocks and the Scottish Opera facilities.

The courtyard will provide spill-out and seating spaces for the residents, particularly from the dining / party rooms (8) whilst also providing the necessary service spaces for Scottish Opera. To create a soft transition throughout the courtyard, new planting will be added in combination with transitional green paving, and a green wall (9) iwll be planted in front of the existing canal retaining wall.

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- Circulation
- Reception
- Amenity
- Plant
- Access
- Vehicle route



Ground floor. North Block



First floor. North Block

Plan development. Third floor North and South blocks

At Level 3 both blocks of PBSA connect to the Canal towpath. Two landscaped platforms bridge over the retaining wall to connect at grade with the towpath creating an access plaza (1) where the stepped green areas culminate (2).

These plazas provide opportunities to enjoy the spectacular views west towards Glasgow, whilst offering seating nooks, gathering spaces and soft landscaping and trees that front the canal.

From here two different facilities can be accessed: within the north block, a gym (3), and in the south block a learning cafe (4) that opens onto a south facing terrace (5).

Both facilities have dual access; to the public from the plaza and for the residents directly from the main core of each of the buildings (6).

The western section of both blocks is dedicated to student accommodation, and follows the same design principles as a typical plan.

A double sided corridor (7) provides access to the residences. This level contains a mix of studios (8), (including en-suite and kitchenette), accessible units and clusters of 5 en-suite units (9) sharing a common kitchen and living room (10).

- Circulation
- Studio
- Cluster
- Living
- Amenity
- Access



Third floor. North Block



Third floor. South Block

Plan development. Roof terrace levels North and South blocks

The roofs of the lower volume of each block, (closest to the Canal) are dedicated to resident's roof terraces. These are at Level 10 on the south block and Level 13 on the north.

Protected from the wind by a full storey height screen, the spaces take advantage of panoramic views of the city as well as benefiting from the morning and evening sun.

The roof terraces will provide a shared green space for PBSA users as well as offering an area of harder landscape. This provides opportunity for cooking (1), a space for play - with featured ball game areas (2), as well as rest and gathering. The space will provide additional soft landscaping with the introduction of raised planters and considered planting, softening the rooftop landscape.

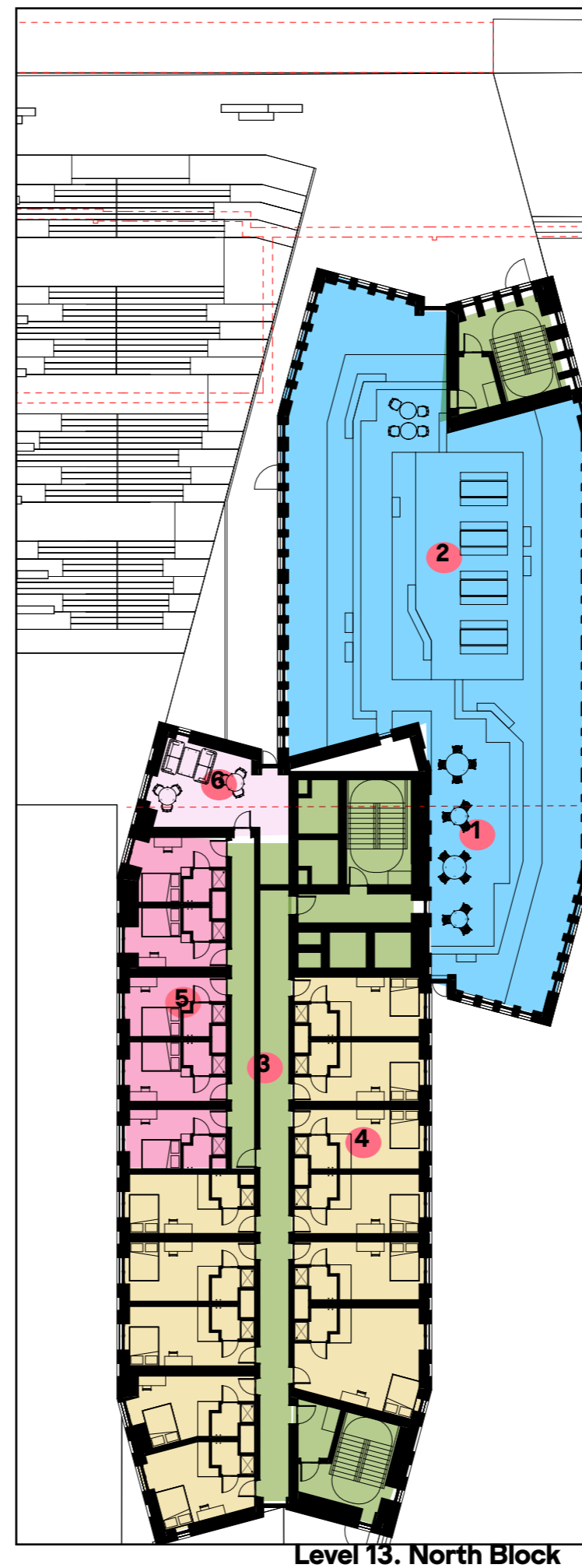
Integrated seating areas will be provided to offer additional gathering, meeting and resting points across the terraces.

Sustainable practices have been considered throughout the design. All terraces will be porous paved to provide free draining surfaces that capture and slowly release precipitation.

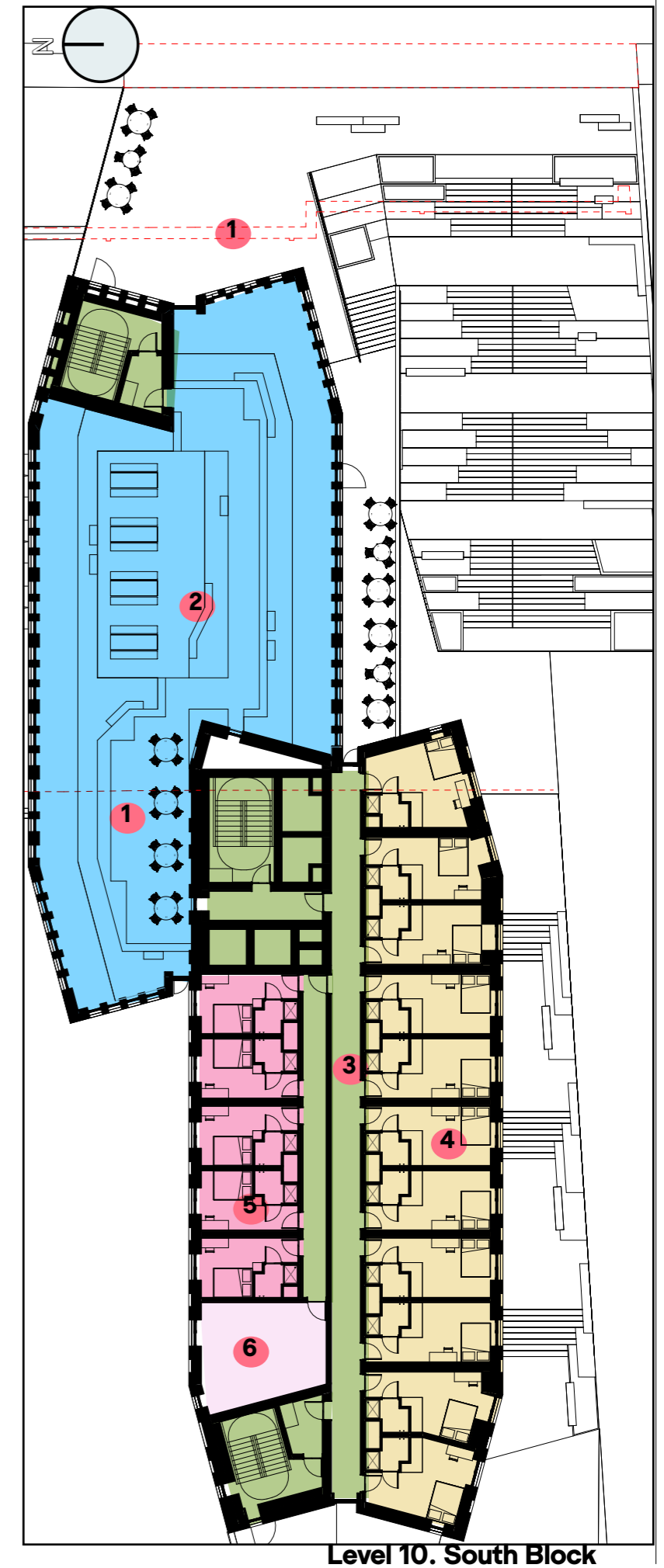
The western part of both blocks at these levels is dedicated to student accommodation, and follows the same design principles as a typical plan.

A double sided corridor (3) gives access to the residences, containing a mix of studios (4), (including en-suite and kitchenette), accessible units and clusters of 5 en-suite units (5) sharing a common kitchen and living room (6).

- Circulation
- Studio
- Cluster
- Living
- Amenity
- Access



Level 13. North Block



Level 10. South Block

12.5 Facade articulation and materiality

The materiality and articulation of the PBSA blocks are influenced by the Victorian industrial architecture that was previously evident on the site and of which some pieces still remain - such as a fragment of the lower section of wall of the Port Dundas power station. This is located at the southwest corner of the site and forms the existing boundary onto Edington Street, as part retaining structure between the southern service yard and the pavement. (1).

The facade organisation is reminiscent of a classical order, including three clear horizontal bands: plinth, piano nobile and attic.

The plinth, that unifies the PBSA blocks with the Scottish Opera new facility presents taller and wider openings, well recessed into the façade and reminiscent of a colonnade, reinforcing the impression of public use and connectivity with the outside.

Above the plinth, the piano nobile is conceived as a solid wall, structured by continuous vertical piers spanning to the attic level that recreate the concept of grand order. The windows are formed as punched openings in the façade and arranged between the pilasters into further recesses, strengthening the sense of thickness of the wall.

To accentuate the break between the piano nobile and the attic, a strong, continuous horizontal line is formed, creating a frieze. This upper level is articulated more delicately and playfully by narrower vertical openings inbetween pilasters.

This tripart horizontal articulation is continuous around the 4 elevations of each of the volumes, adapting to their heights, the position of their contact with the ground, and the geometry of the plan.

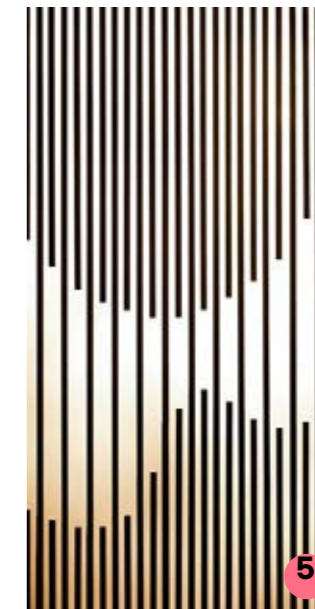
For example, the narrowing geometry on plan at both ends of the buildings is accentuated by introducing slot windows through the piano nobile, accentuating the verticality of this element, evocative of the industrial chimneys that would have occupied this site.

Another adaptation of the general principles occurs on both eastern blocks. As the terrain steps up, and the buildings touch the ground at Level 3 above the general plinth level, the piano nobile adjusts its articulation to create larger openings conducive to the public uses at this location.

The proposal uses brick as a primary material to reinforce the sense of solidity of the walls reflecting the historic use on the site. Blue engineering brick (2) is proposed for the plinth and a soft red / pink (3) for the rest of the building.

Different coursing arrangements and depths of returns add to the richness of the façade (4)

Bronze coloured metalwork is used as a accent to window frames, balustrades and spandrel panels, the latter profiled to make reference to the rich Victorian tradition of ironwork and ornamentation in a contemporary manner. (5,6)



789
Top of Parapet
104300

PBSA North Upper Roof

PBSA Top of Parapet
89300

PBSA South Upper Roof

Void openings to
roof plant area

PBSA - Level 14
83300

PBSA North Lower Roof

PBSA - Level 11
74300

PBSA South Lower Roof

Techcrete panels
with brick inserts.
Colour TBC.

Curtain walling.
Anodised aluminium.
Colour TBC. Metallic
finish. Full height triple
glazing unit and opening
lights.

Anodised aluminium.
Colour TBC. Metallic
finish. Pattern and
relief TBC.

Tow Path
48800

Top of Retaining Wall
46500

Gate

Level 1
40450

GF (Level 0)
36000

South Block. South elevation

