
3.0 Design

3.0.1 Design Process

The scheme is based on extensive analysis of the site and surroundings, seeking to bringing forward a characterful scheme that makes best use of land and relates well to its context, creating an attractive street frontage.



3.1 Use & Amount

3.1.1 Design Strategy

This development will result in the demolition of an existing single storey industrial unit.

This existing building which is not located within a Conservation Area nor is it statutorily or locally listed, offers very little architectural merit, nor does it fit in within its surrounding context.

The proposal will deliver managed student accommodation mainly at lower ground, ground and first floor levels with reduced amounts at second floor and 4 attic studios above.

The development also includes amenity and administration areas, including reception, common room, laundry facilities, plant areas, refuse area and cycle store.

A paved forecourt with tree planting is proposed at frontage.

An internal courtyard is proposed. This will be open to the South allowing sunlight to penetrate. Tree planting at either end of this and along the Western site boundary will soften the visual appearance of the scheme as seen from neighbouring properties



View from South West



View from North East



View from North West



View from South East

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3.1.2 Aerial View of Scheme



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3.1.3 Proposed Use

The schedules to the right detail the spaces proposed with total areas per use and the gross area of each floor plate.

Room Schedule			
Level	Area	Name	Count
Level 0	16 m ²	Bin Storage	1
Level -1	67 m ²	Common Room	1
Level -1	23 m ²	Plant	1
Level 0	20 m ²	Reception	1
	1360 m ²	Studio	62
Level 0	12 m ²	Sub Station	1

Area Schedule (Gross...)	
Level	Area
Level -1	518 m ²
Level 0	423 m ²
Level 1	524 m ²
Level 2	460 m ²
Level 3	261 m ²
Total	2186 m ²

The scheme includes a generous provision of high quality common space which has been designed to encourage social interaction between students; as places for students to meet and make friends.

It has been found on previous schemes that communal areas are important spaces within a student development and careful consideration of these spaces can improve the health and social wellbeing of residents. These spaces can also improve the desirability of the scheme with potential residents.

The scheme includes a common room and secure internal courtyard;

- Central Courtyard - 170m²

The Central courtyard provides a wonderful south facing landscaped space for students to interact, relax and socialise. As this courtyard is located a floor level below ground this greatly reduces any noise pollution as-well as visually screening all visibility though neighbouring gardens.



3.1.4 Room Type

Typical Studio

Studios are typically 22m2 (min.19m2) and are self-contained apartments providing sleeping, washing, lounge, cooking and dining facilities together with a generous study area. Indicative Studio Provision (all types):

Sleeping

- 1200mm Cabin Storage Bed
- Bedside shelf
- Headboard with shelving over

Washing

- Shower 1200x800mm
- WHB
- WC
- Toiletries Shelf

Cooking

- Domino Hob
- Compact sink and drainer
- Undercounter Fridge
- Combination Microwave
- Storage cupboards (base & wall units)

Dining

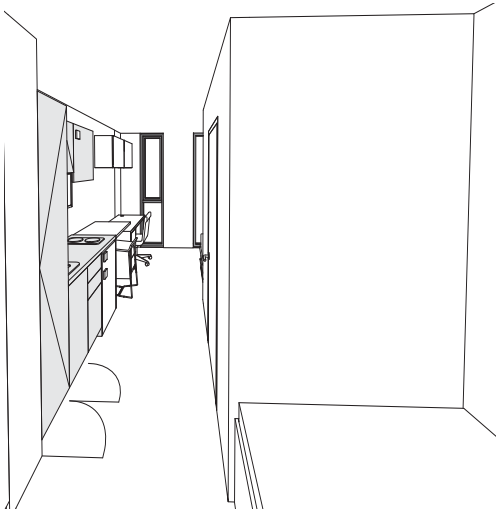
- 2-Seater Sofa

Lounge

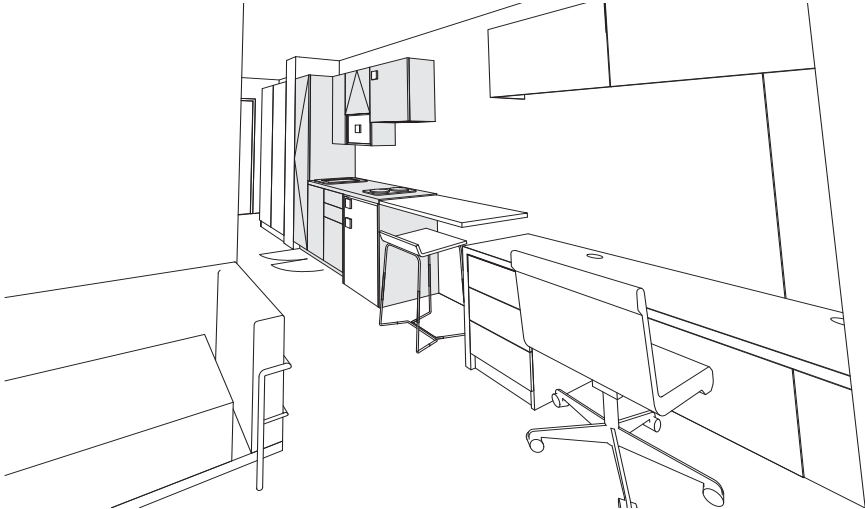
- Small 2 Seater Sofa

Study Area

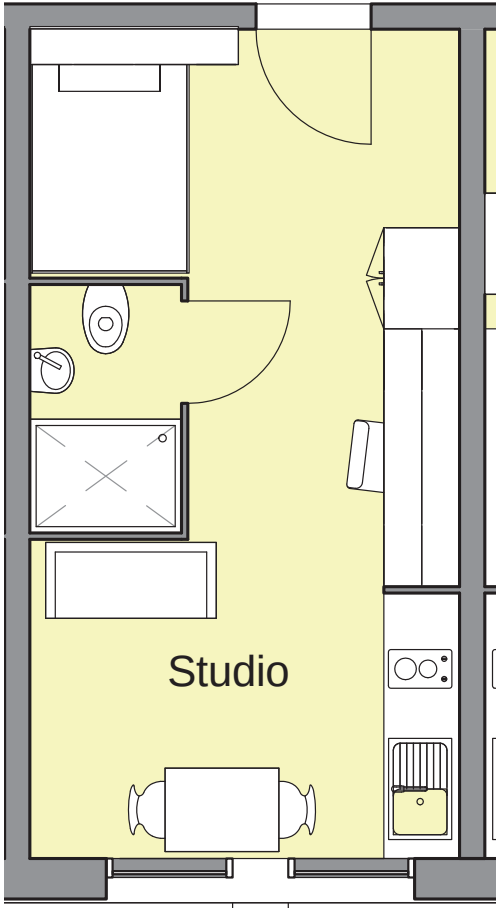
- 1600mm Desk
- Pedestal Drawer Unit
- Notice Board
- Shelving



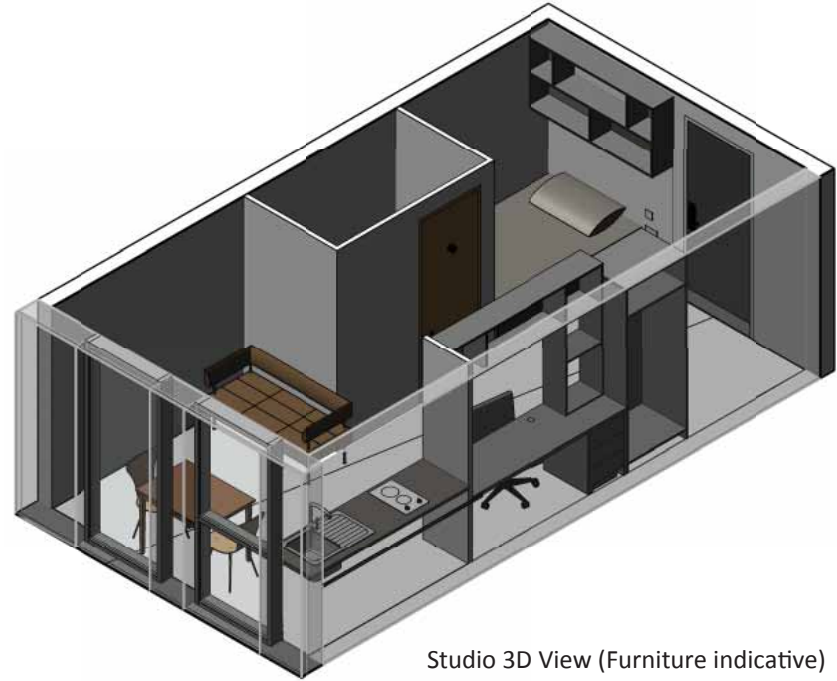
Typical Studio Layout Plan



Indicative Images - Studio



Studio Plan Layout (Furniture indicative)

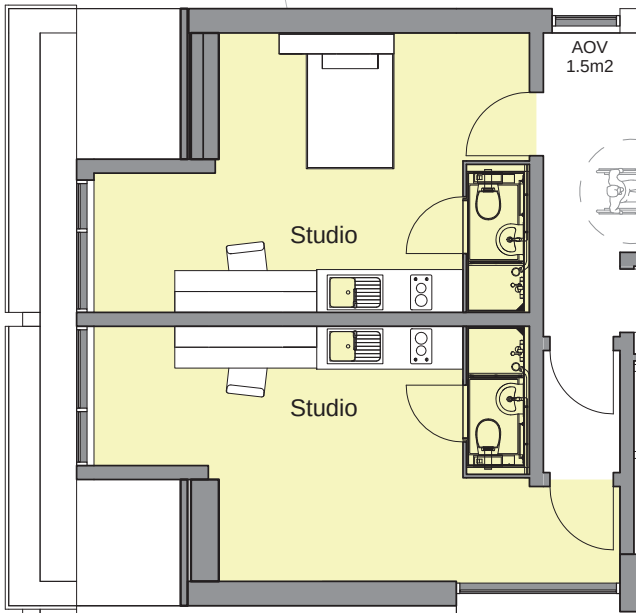
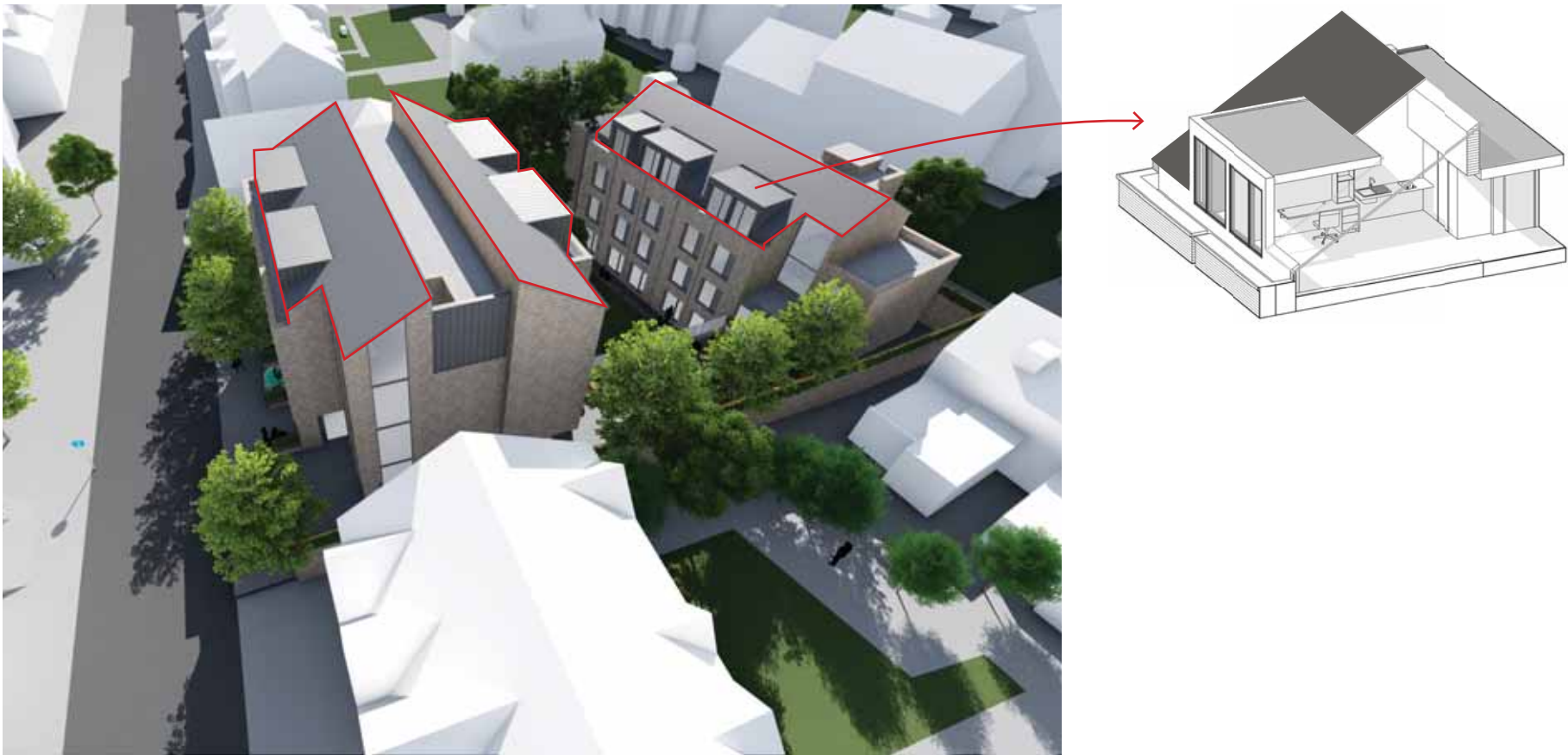


Studio 3D View (Furniture indicative)

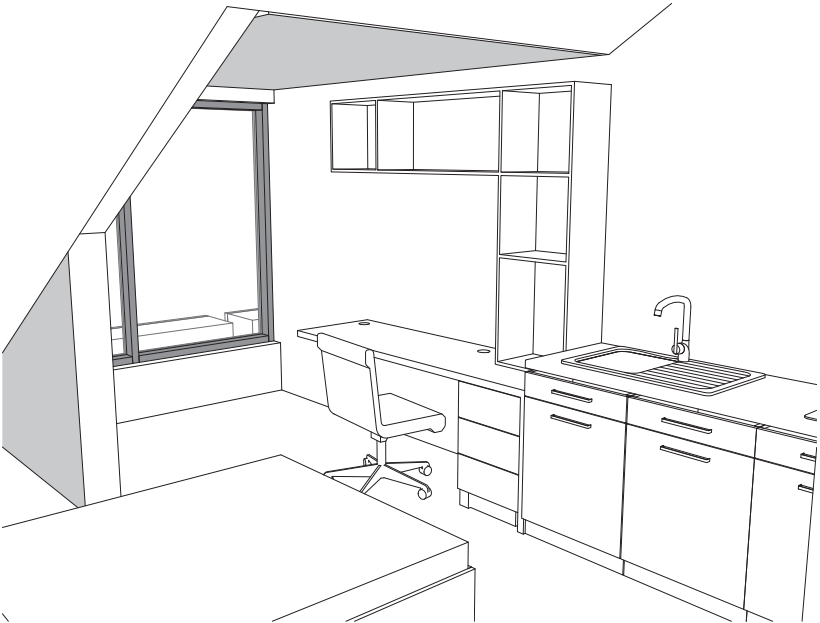
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3.1.5 Studio with Dormer

Studios with Dormers are located to the front and rear of the proposed scheme and reduce the overall massing impact on the street and surrounding properties.



Typical Floor Plan of Studio with Dormer



Indicative interior view

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3.1.6 Accessible Studio

We have carried out a survey across 11 student accommodation schemes sites nationally to understand the uptake of accessible room provision, types of registered disabilities and requirements experienced by the Hall Managers who have monitored residents needs. Of the sites that were evaluated, the number of designated accessible rooms accounted for 1 - 4% of the total room provision.

Uptake of Accessible Provision:

- There has been limited uptake of fully accessible rooms across the 11 sites.
- The no. of wheelchair-bound visitors is very low or none recorded.
- 2 of the sites have limited access for people who are wheelchair-bound but have experienced very low levels of demand.
- The majority of disabilities recorded relate to visual and hearing impairments.

In addition:

- Residents with a hearing impairment are typically provided with a ‘hearing package’ containing vibrating pillow and flashing alarm system.
- The majority of residents with a registered disability have not required adaptations within the accommodation.
- Other disabilities have required specific adaptation or facility such as orthopaedic mattress, applied tinted window films which have been accommodated.
- For the 11 halls reviewed, Hall Managers have also recorded any medical conditions which may not be considered to be a disability, but may require additional facilities within the accommodation such as medical fridges . These have been provided as required.
- There have been a small number of requests for the use of disabled parking spaces for visitors, such as parents, which have been accommodated.
- There has been no requirement to date for adaptation of staff facilities.
- Personal Emergency Evacuation Plans (PEEPs) for residents and visitors at all sites as required.

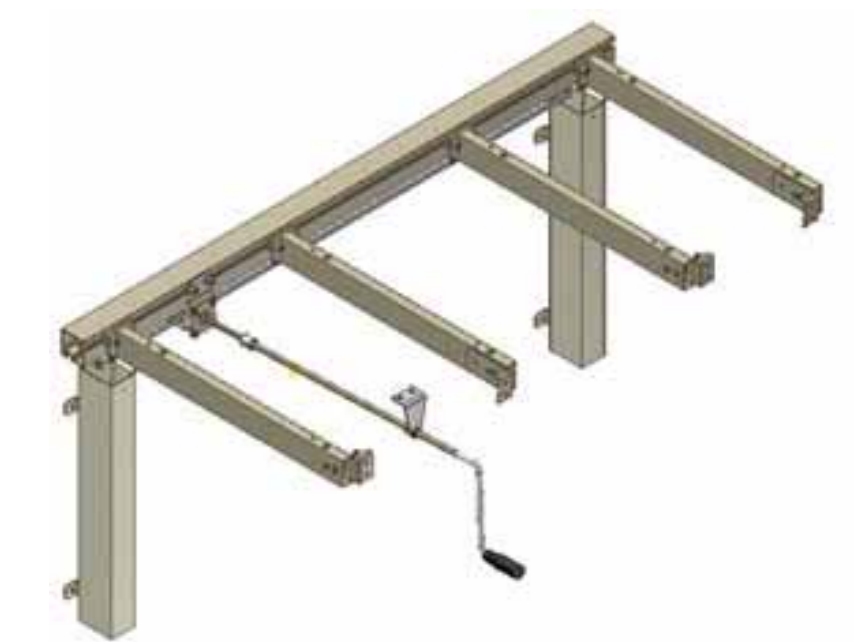
The Approved Inspector for the scheme have extensive experience within the student sector, and support new schemes providing a minimum of 1% total designated accessible rooms with access to shower facilities that meet the spatial requirements of AD.M. Of this 1% only 0.5% needs to be fully fitted on completion, but is to be designed to be readily converted to suit a resident’s specific needs.

Part of the justification for this approach is based on the annual figures published by UCAS which have consistently shown over the last 5 years that the number of applicants and students accepted to University with mobility impairments is only 0.2%.

A total of 1 no. Accessible Rooms are proposed for this scheme with spatial configuration to meet AD.M. This provision will account for approximately 0.5% of the total rooms.



Accessible Studio (indicative layout)



Adjustable worktop to kitchens

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3.1.7 Accommodation Schedule

The schedules to the right indicates the number of rooms proposed and the gross internal area of each floor plate to achieve these occupancy numbers.

The proposed accommodation will provide a total of 62 en-suite studios. This will provide a varied mix and choice of accommodation types, to suit resident’s budgets and living preferences.

Indicative Images - Studio



Room Schedule			
Level	Area	Name	Count
Level -1	21 m²	Studio	5
Level -1	23 m²	Studio	3
Level -1	25 m²	Studio	1
Level -1	32 m²	Studio	2
Level 0	17 m²	Studio	2
Level 0	18 m²	Studio	2
Level 0	20 m²	Studio	1
Level 0	21 m²	Studio	6
Level 0	23 m²	Studio	1
Level 1	21 m²	Studio	6
Level 1	23 m²	Studio	7
Level 1	25 m²	Studio	2
Level 1	26 m²	Studio	1
Level 2	19 m²	Studio	4
Level 2	22 m²	Studio	1
Level 2	23 m²	Studio	6
Level 2	25 m²	Studio	2
Level 2	26 m²	Studio	1
Level 3	18 m²	Studio	1
Level 3	19 m²	Studio	1
Level 3	20 m²	Studio	4
Level 3	21 m²	Studio	1
Level 3	23 m²	Studio	1
Level 3	26 m²	Studio	1

Area Schedule (GIA)	
Level	Area

Level -1	461 m²
Level 0	379 m²
Level 1	475 m²
Level 2	416 m²
Level 3	237 m²
Total	1967 m²

3.1.8 Unit Types and Sizes

Accommodation Types

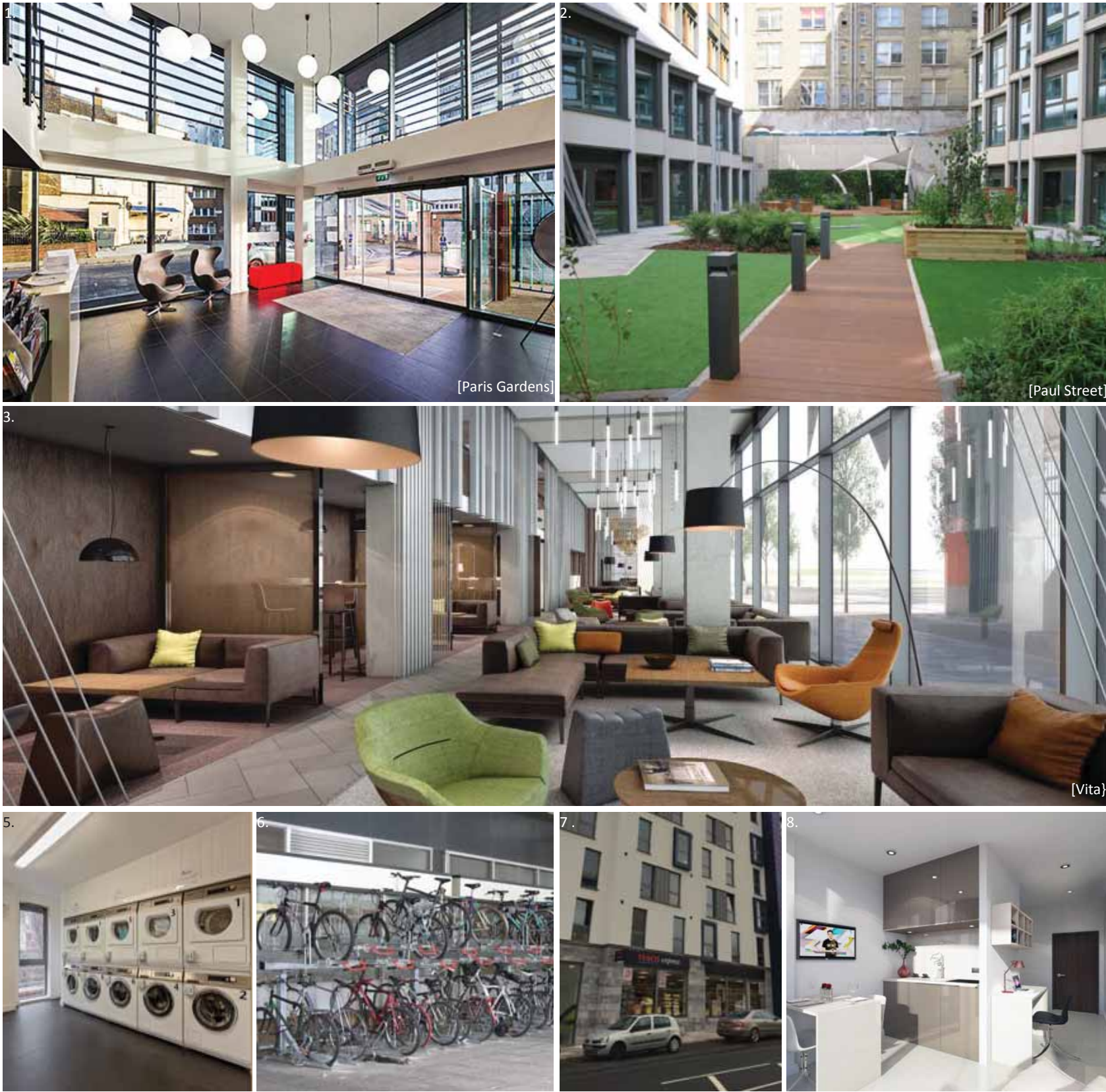
Typical Studio Rooms: 62 No. at 19 - 22m²
Accessible Studio Rooms: 24.3m²

Amenity Spaces

Student Courtyards: 170m²
Common Room: 70m²
Substation: 19m²
Plantroom: 20m²
Reception: 19m²
Refuse Store: 16m²
Cycle Storage: min 10 no. of cycle spaces

Unit Type Examples (Right)

- 1. Reception
- 2. Courtyard Area
- 3. Student Common Room
- 4. Laundrette
- 5. Cycle Storage (25 Spaces)
- 6. Studio Kitchen



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3.2 Layout & Landscape

3.2.1 Site Layout

The images to the right show the overall scheme sitting within its context.

The layout of the scheme has been developed to reflect the existing street form and courts that are characteristic to the vicinity and maintain a contextual relationship with the surrounding properties and the recently approved scheme at 79 Silver Street.

The arrangement of the floor plans has been developed around a secure central landscaped courtyard to maximise use of the site area providing single aspect student accomodation inline with existing surrounding structures and emulating the mass and scale of neighbouring structures and green space.

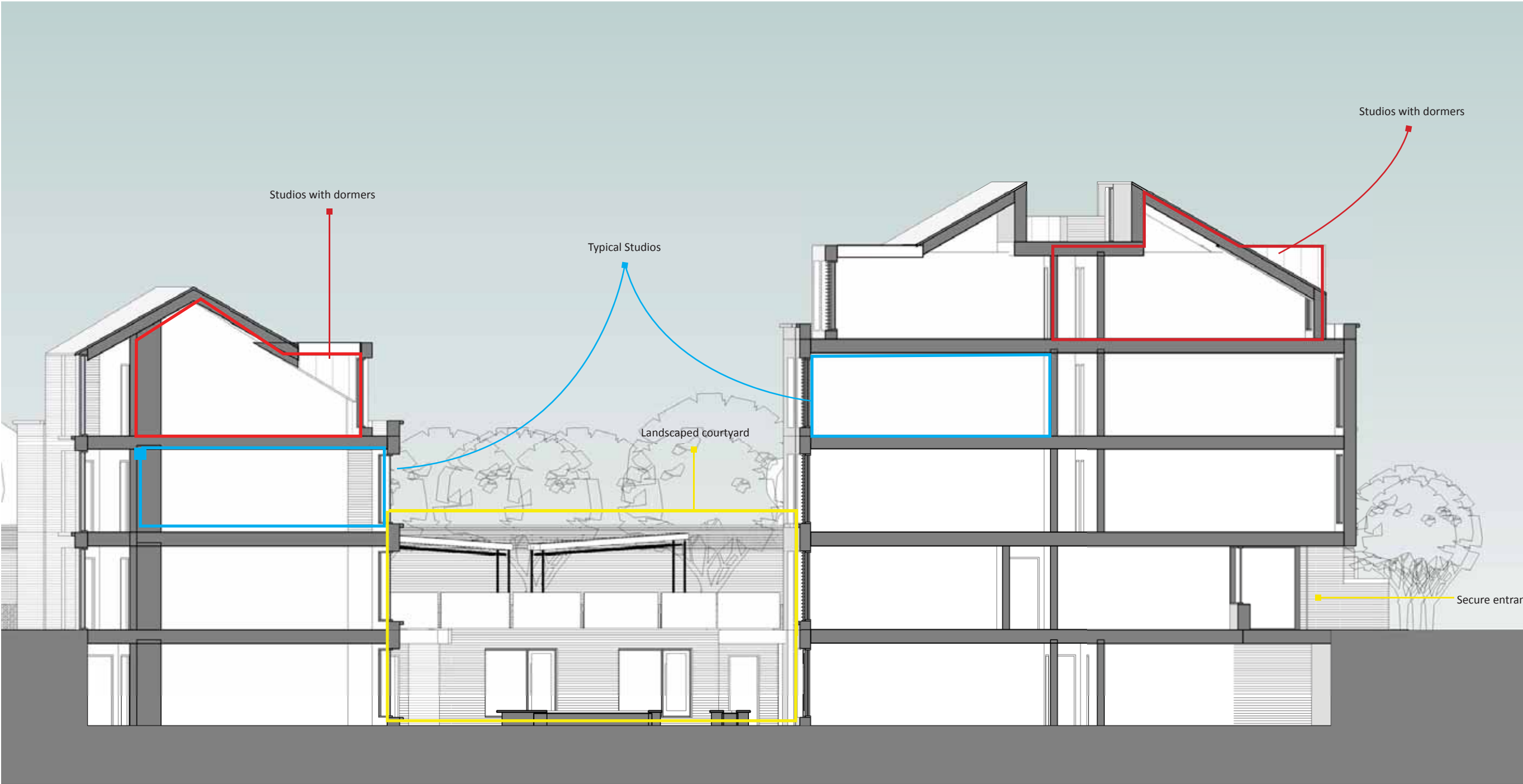
The courtyard area is set 3m below the existing ground level to aid with any visual and noise disturbance that may otherwise have been imposed onto the neighbours.

Proposals for the landscaped courtyard and residents garden area will be developed by TPM Landscape. A separate design statement will be prepared by TPM Landscape showing the design development and concept proposals.



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3.2.2 Internal Arrangements

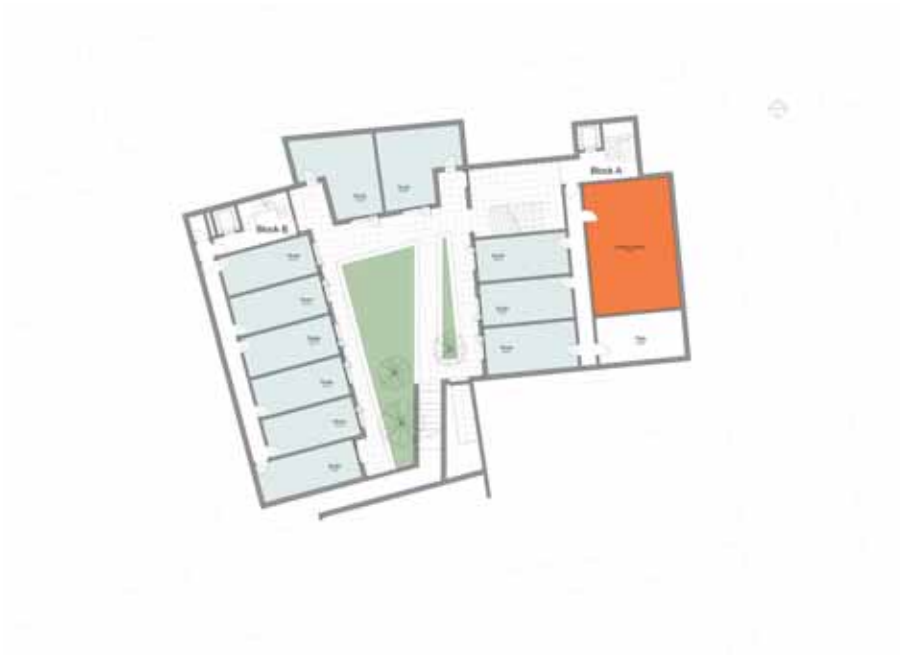


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3.2.3 Floor Plans

Accommodation Type Key

- Study Beds
- Bin Store
- Reception
- Sub-Station
- Common Room



Level -1



Level 0



Level 1



Level 2



Level 3

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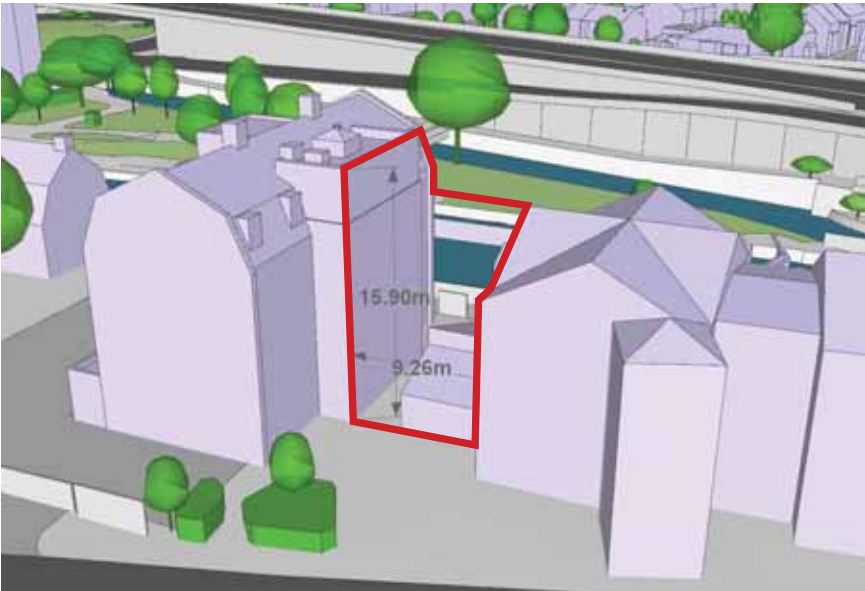
3.2.4 Landscape - Courtyard
Precedent Study

The scheme aims to achieve a well proportioned central courtyard that will provide an attractive focal point for the small community of resident students. The size and proportions of this space have been informed by local precedent studies;

Nearby Courtyard Precedents

01 Celador Apartment, Fobney Street

Width : Height
1 : 1.7
(1 : 4.9 at narrowest width)



Height of tallest wall around courtyard: 15.90m



Width of courtyard above low level building: 9.26m



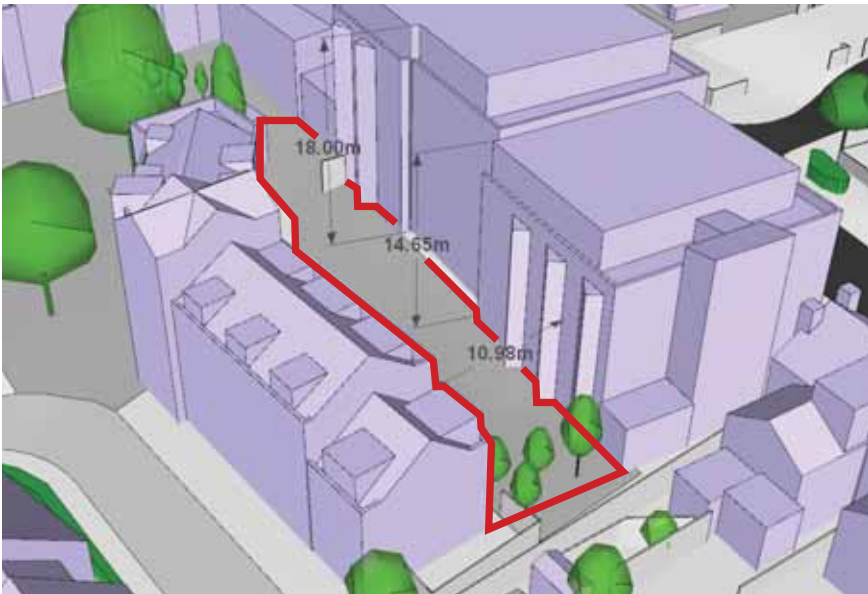
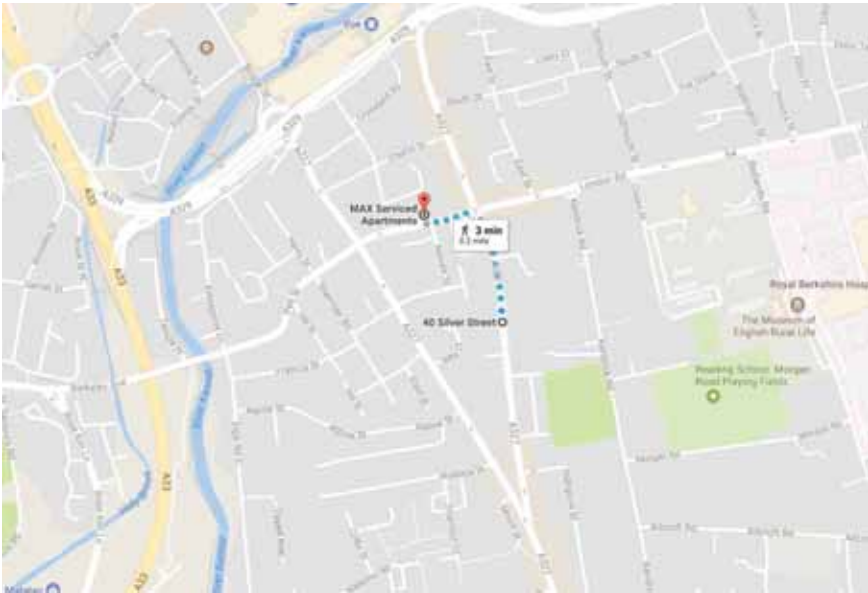
Width of courtyard at ground level: 3.22m

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Nearby Courtyard Precedents

02 MAX Serviced Apartments, Crown Street

Width : Height
1 : 1.7



Height of tallest wall around courtyard: 18.00m



Length of courtyard: 42.22m



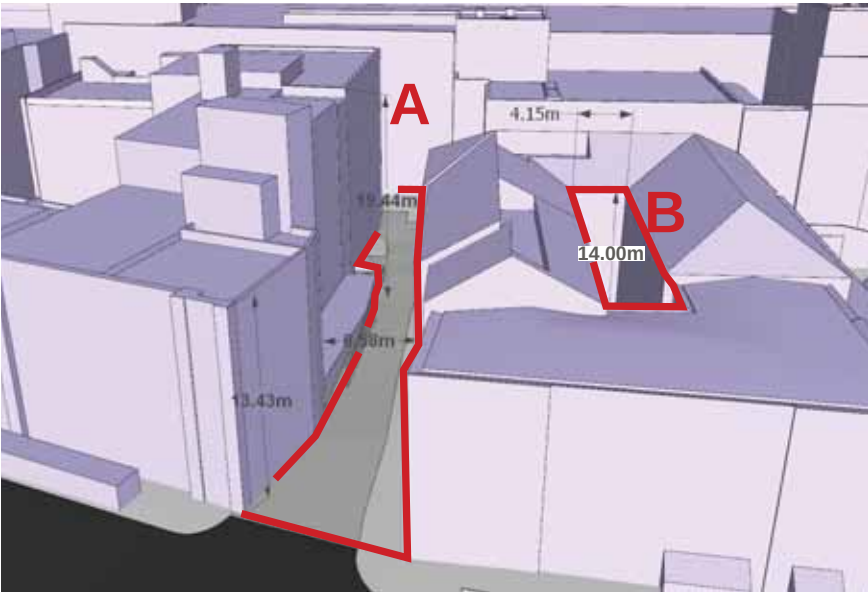
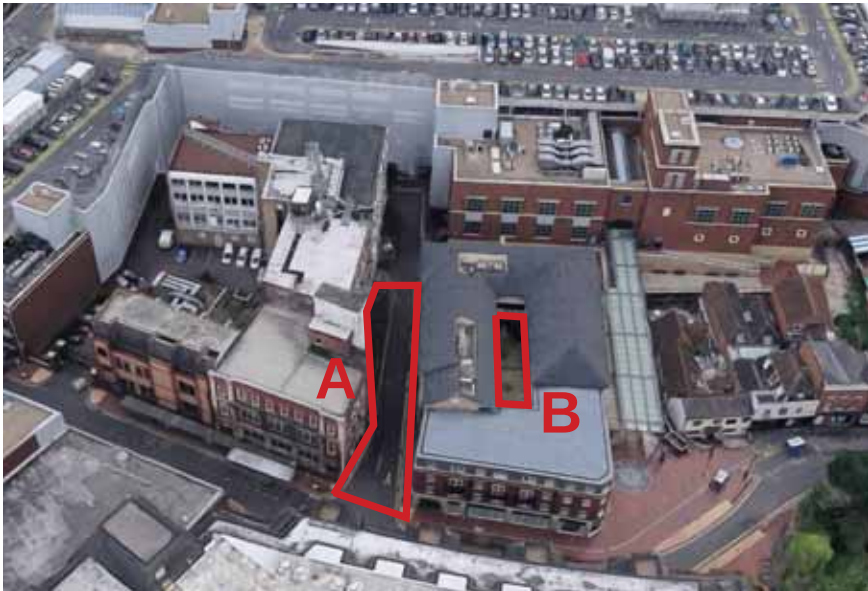
Average width of courtyard: approx. 10.50m

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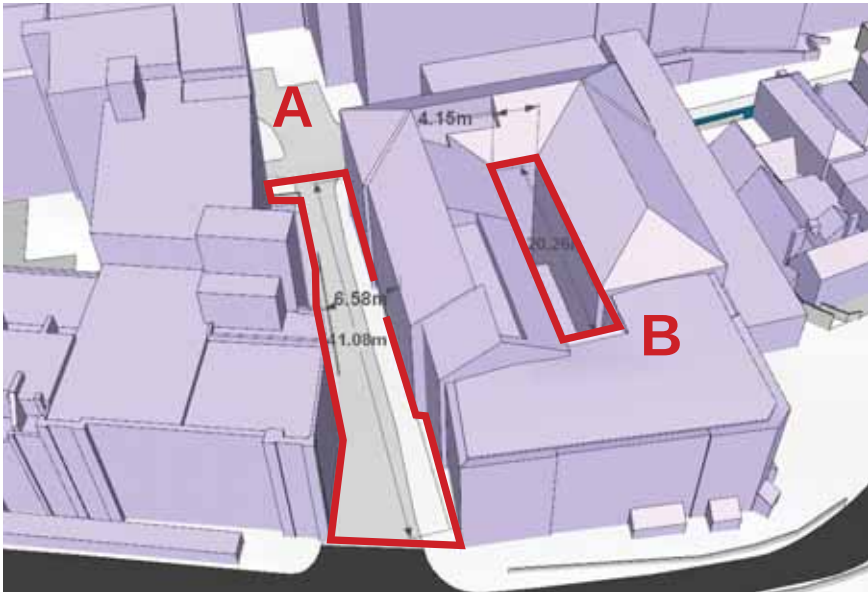
Nearby Courtyard Precedents

03 Premier Suites, Minster Street

Width : Height
Courtyard A - 1 : 3
Courtyard B - 1 : 3.4



Height of tallest wall around courtyard A: 19.44m
Height of tallest wall around courtyard B: 14.00m



Length of courtyard A: 41.08m
Length of courtyard B: 20.26m



Width of courtyard A: 6.58m
Width of courtyard A above ground level: 7.83
Width of courtyard B: 4.15m

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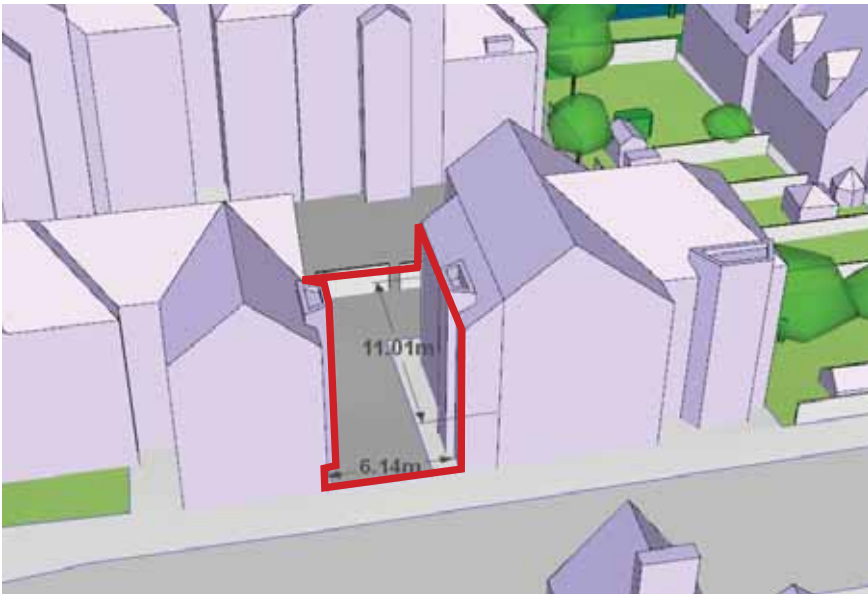
Nearby Courtyard Precedents

04 Katesgrove Lane

Width : Height
1 : 1.8



Height of tallest wall around courtyard: 10.78m



Length of courtyard: 11.01m



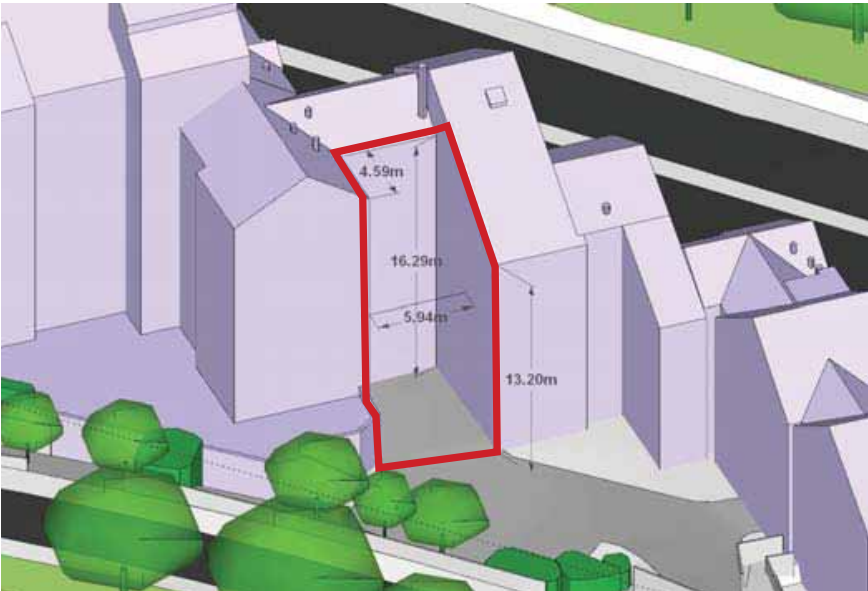
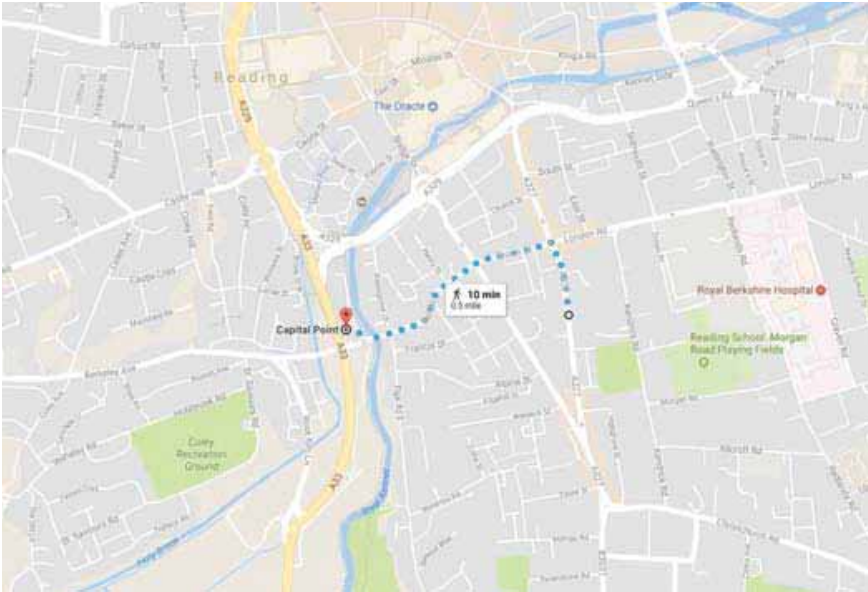
Width of courtyard: 6.14m

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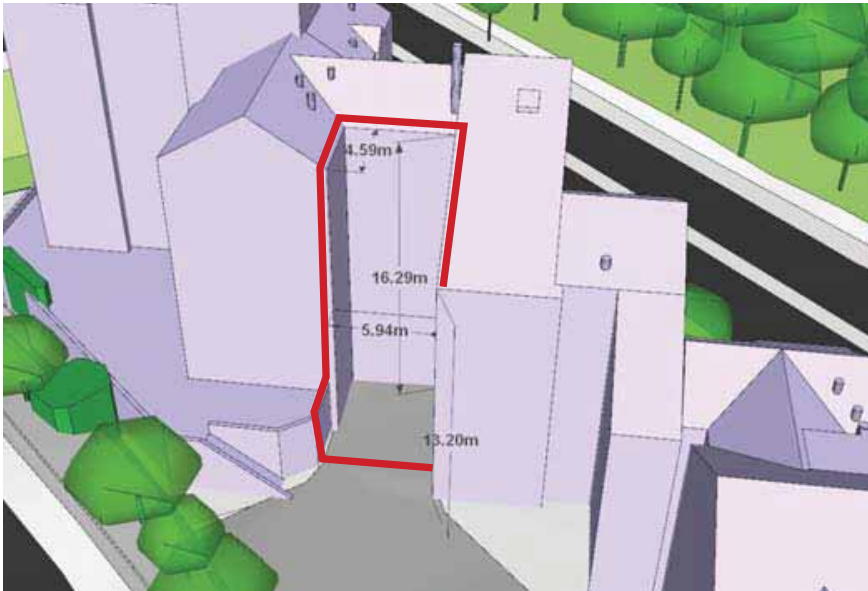
Nearby Courtyard Precedents

05 Capital Point, Temple Road

Width : Height
1 : 2.7



Height of tallest wall around courtyard: 16.29m



Width of courtyard: 5.94m



Length of courtyard: 9.65m

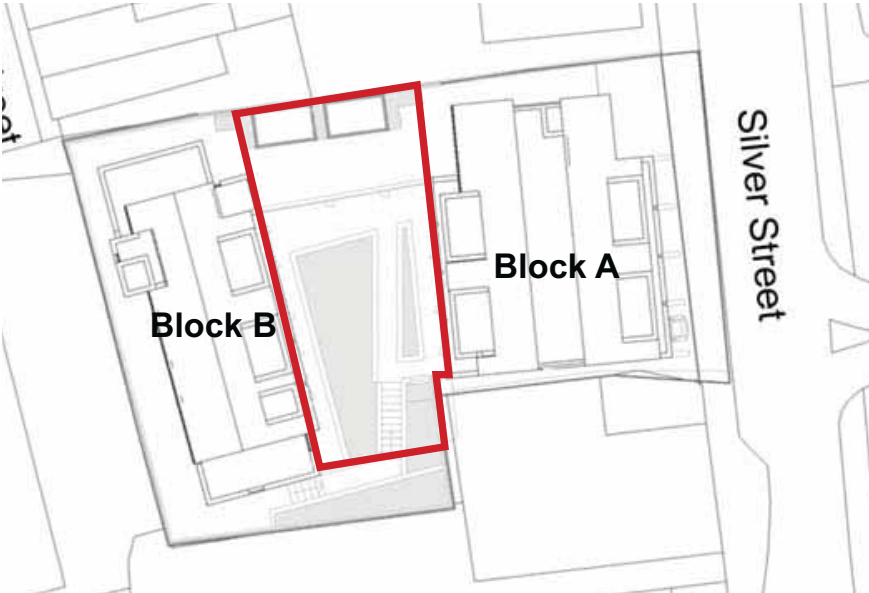
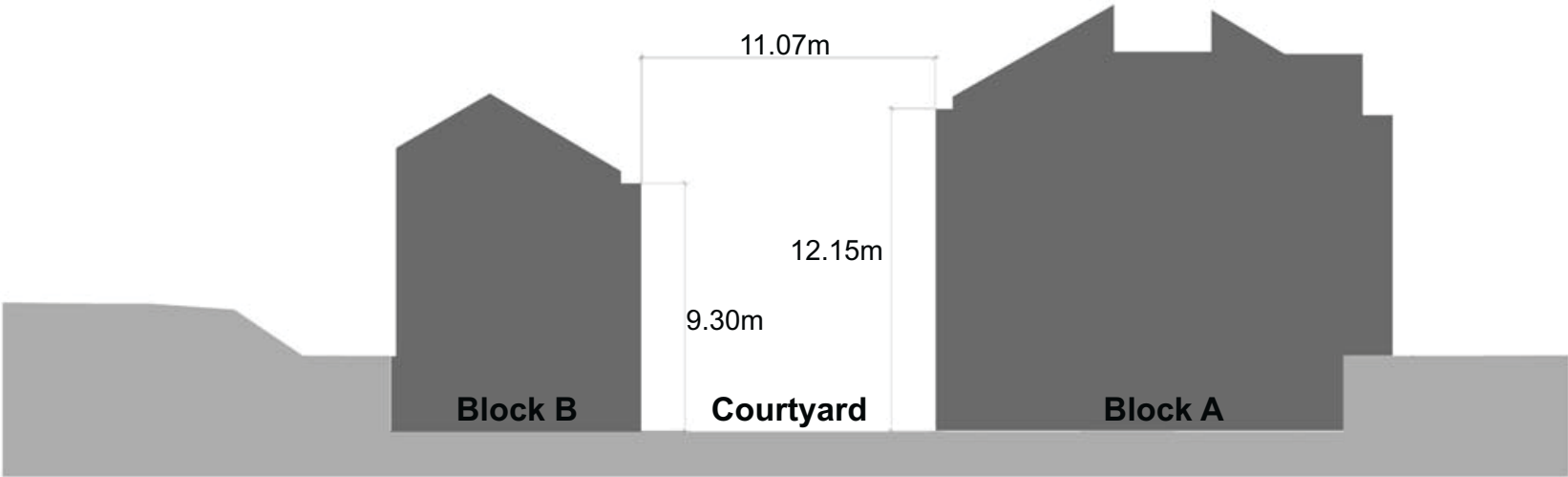
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3.2.5 Landscape - Courtyard
Proposal

Proposed Scheme

40 Silver Street

Width : Height
Block A - 1 : 1.1
Block B - 1 : 0.8



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3.3 Scale & Massing

3.3.1 Block Plan

The illustrations to the right show the initial massing derived in response to the site and its context.

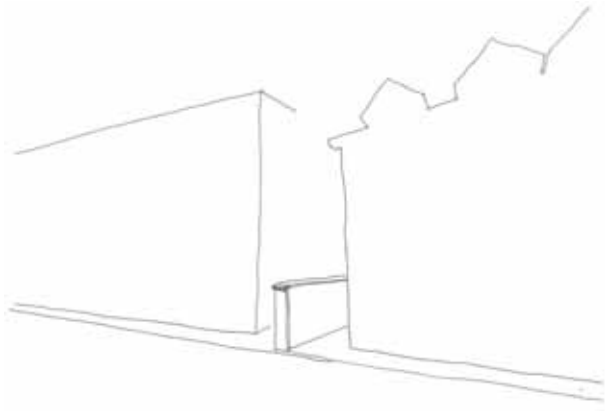
Consideration was given to the existing building scale and massing as well as issues regarding overlooking and protecting the privacy and amenity of both the development and neighbouring residential properties.

Other considerations:

- Silver Street scale and character
- Height of eaves and relationship to neighbouring 3-storey residential properties

Our initial response to the Client’s brief for a full studio development was to develop 2 separate residential blocks of 3-4 storeys connected below ground by a landscaped courtyard.

The sketches to the right show the development of form and style and its articulation to create a positive and appropriate relationship with the street and adjacent properties.



Silver Street - 3 storey



Silver Street - 3 storey, with dormers



Silver Street - 3 storey, with dormers and facade articulation



Silver Street - Frontage form



Silver Street - Frontage Development



Silver Street - Final Frontage Form

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3.3.2 Street Frontage

The existing single storey industrial unit is rectilinear and offers little in terms of form or style to relate to its context.

The images to the right provide a comparison with the existing and proposed structures.

The proposed scheme maintains consistency with the design, scale and massing of the recently approved 79 Silver Street scheme proposed on a site adjacent.



Existing



Proposed

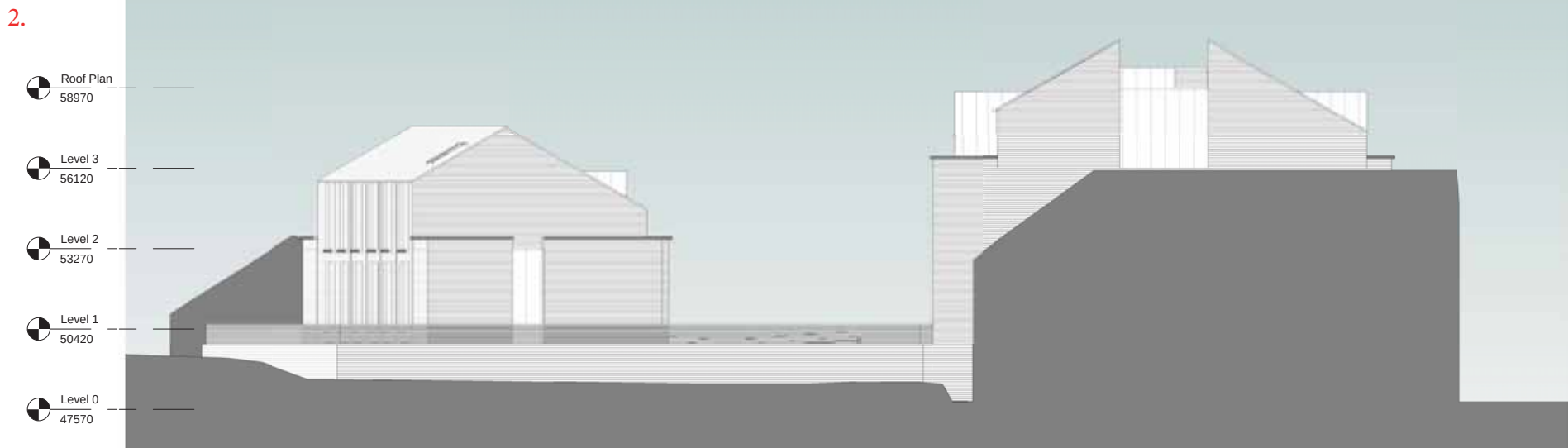
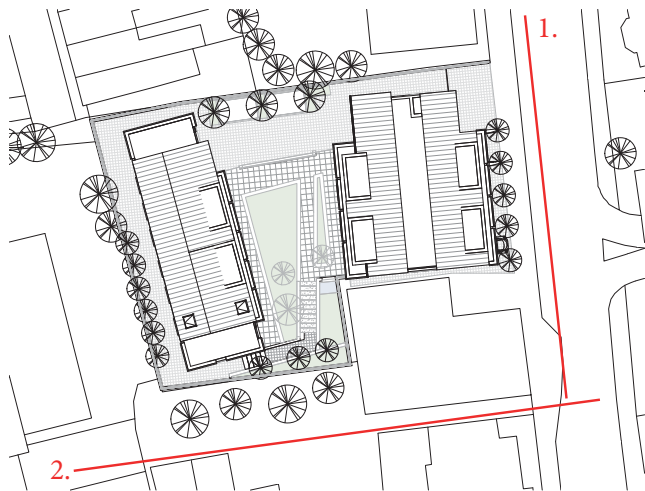
Site Analysis	Use & Amount	Layout & Landscape	Scale & Massing	Appearance	Shadow Analysis	Sustainability	Access	Working Drawings	Scheme Visuals
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3.4.3 Contextual Relationship

The elevations opposite show the scale and massing of the proposed scheme

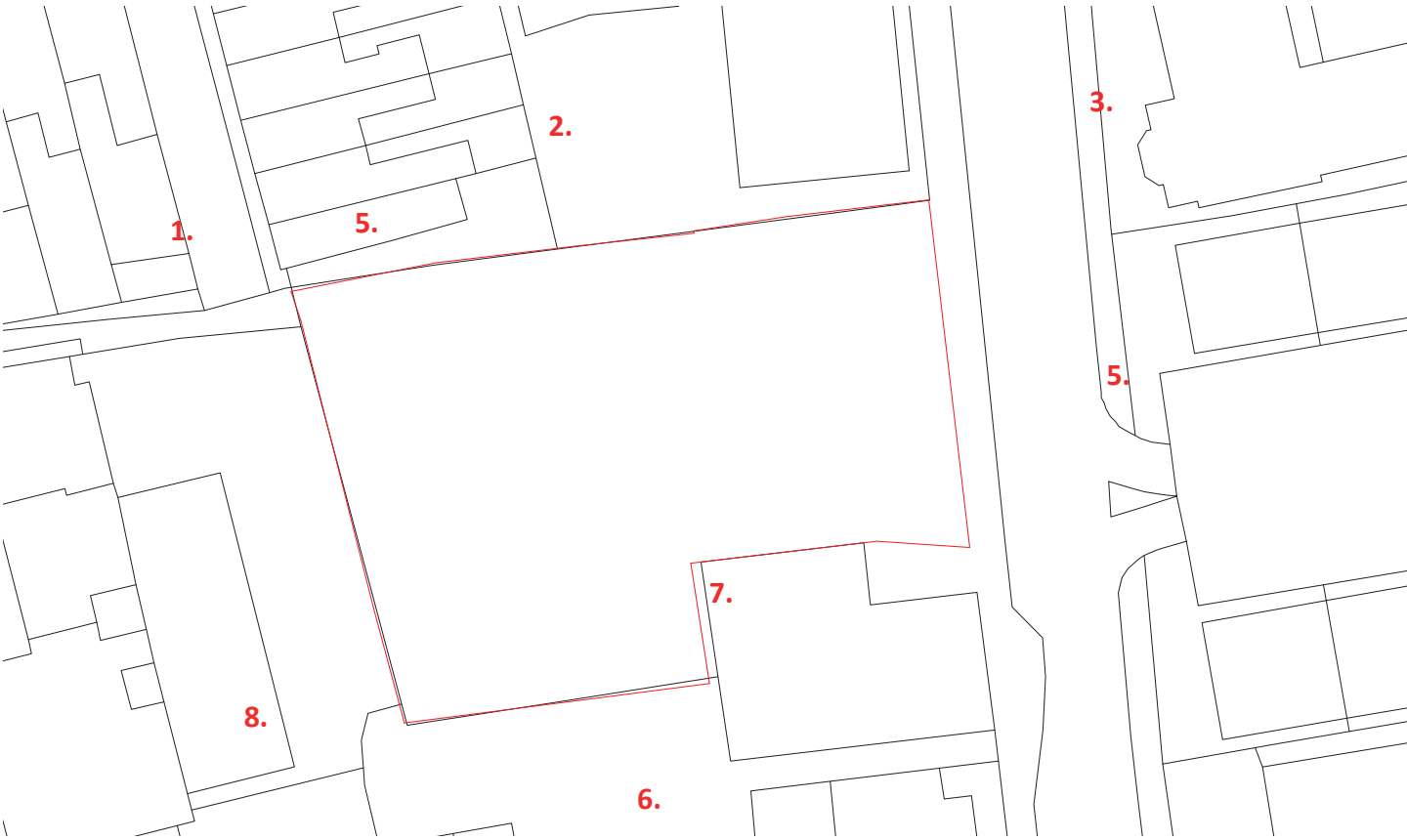
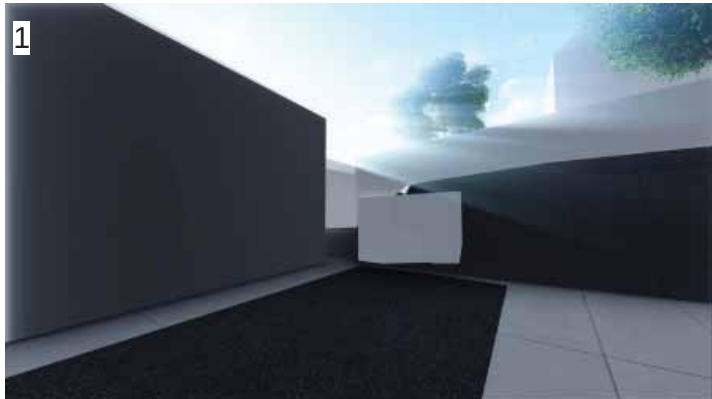


Hiett Close - adjacent



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3.5.1 Viewpoints - Existing



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3.5.2 Viewpoints - Proposed



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3.4 Appearance

3.4.1 Material Selection

A simple pallet of traditional materials with contemporary detailing is proposed for the development.

Traditional masonry construction will provide a robust and sustainable solution with good thermal, acoustic and fire performance as well as being a strong and durable finish requiring infrequent maintenance.

Facing brick:

A grey multi-brick with recessed windows.

Feature brick detailing:

Projecting 10mm alternate courses within recessed panels.

Window & Door frames:

PPC Aluminium dark grey/brown finish to provide contrast with the facing brick.

Roof Finishes:

Metal standing seam roof including cladding to dormer roofs.



3D View of the proposed Silver Street facade



Proposed projecting brick - alternate courses and window louvre vent detail (indicative image)



Zinc clad dormer and roof (indicative image)



Zinc clad dormer (vertical standing seam)



PPC Aluminium - Window & CW Frames, Copings



Grey Multi Facing Brick

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3.5 Shadow Analysis

3.5.1 Shadow Study

The diagrams to the right illustrate the sunlight path and how its hits the proposed building.

The diagrams show that the rooms to the rear and the front of the courtyard receive early morning - midday illuminance. Similarly the rooms located to the front of the scheme receive a good level of sunlight from mid day though until the evening. The south facing courtyard receives sunlight thought the day.

The diagrams also show that the proposed scheme will have minimal year round effect on the neighbouring properties.

Winter Solstice -

December 22

- 1. 10:00am
- 2. 13:00pm
- 3. 15:00pm

Spring & Autumn Equinox -

20th March & 23rd March

- 4. 9:00am
- 5. 12:00pm
- 6. 15:00pm

Summer Solstice -

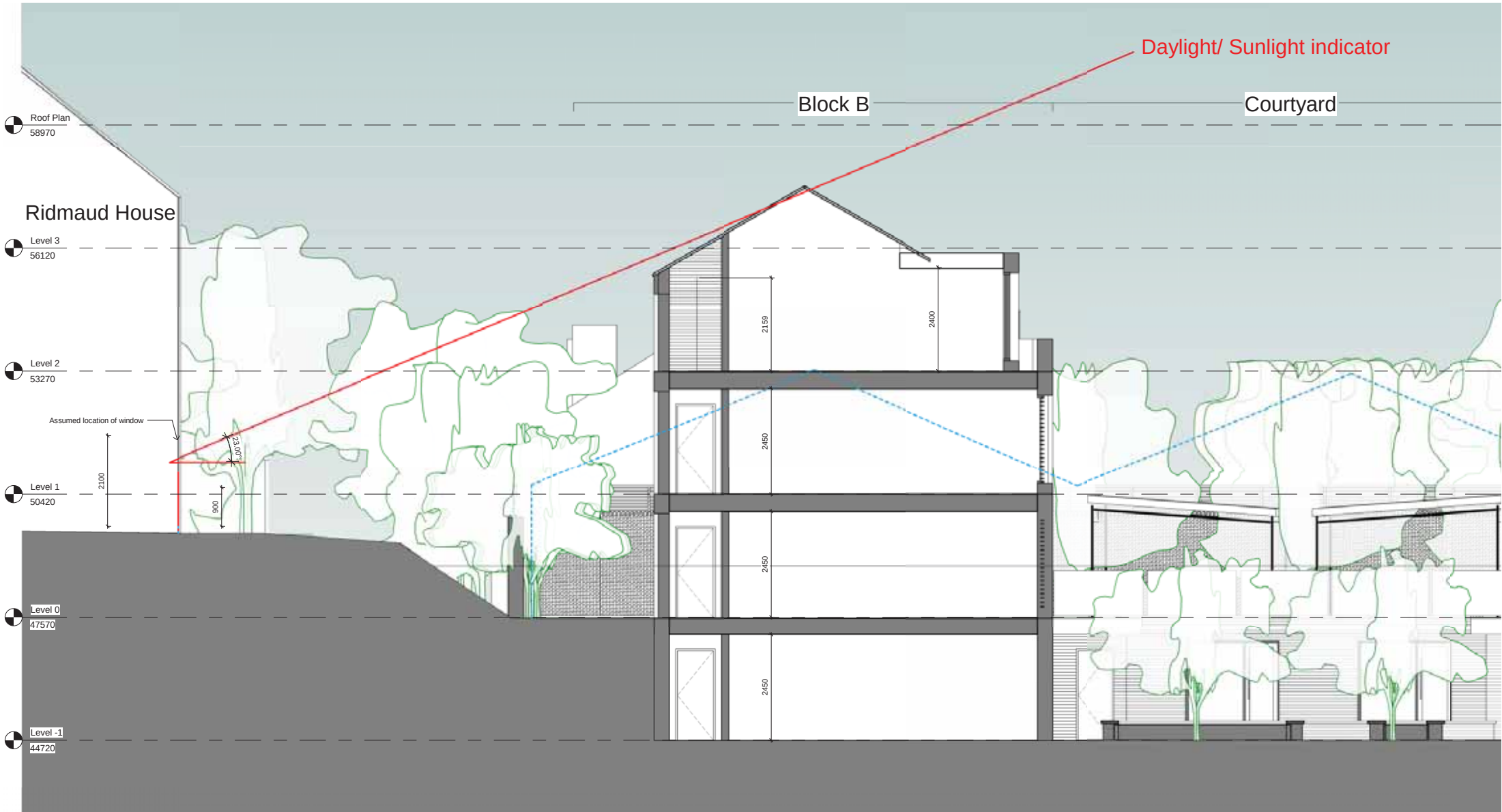
20th June

- 7. 9:00am
- 8. 12:00pm
- 9. 16:00pm



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3.5.2 Sunlight Study



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3.6 Sustainability

O’Connell East Architects and the design team have agreed with the client that a sustainable agenda should underpin all aspects of the design process. The proposed development will meet the minimum requirements of BREAM ‘Very Good’. The key choices leading on from this approach in the building are as follows:

- Large windows to allow good natural lighting.
- Internal solar shading of all windows to minimise over-heating.
- Substantial use of brick, a natural material, to reduce embodied energy.
- Use of high robust materials for longevity.
- Extensive use of deep wall and roof insulation zones to reduce thermal loss below statutory requirements.
- High performance double glazed windows and curtain wall glazing to reduce thermal loss below statutory requirements.
- Landscaped areas with natural materials and extensive planting.
- Natural ventilation and heat recovery ventilation of all student rooms to decrease energy use.

In addition the servicing energy strategy will include:

- Low energy electrical appliance and controls.
- Low flow appliances to conserve water.
- Centralized community type heating.

Social sustainability

- Design responsibly – by incorporating flexibility into schemes to accommodate future users. E.g. Demountable partitioning for future adaptability.
- Development benefits from a very sustainable location within walking and cycling distance of the city centre and University campuses and is served by the local bus network significantly reducing the reliance upon private cars for students.
- The scheme incorporates ‘Secure by Design’ recommendations.

Economic sustainability

- In terms of economic benefits the proposals will introduce new people into the area which will help contribute to the vitality and viability of local shops and services. The development will also help the local economy by creating jobs during construction and operational phases of the development
- Investigation and implementation of innovative construction methods which support environmental sustainability and offer immediate and longterm economic efficiencies.
- Design for minimum waste.

Environmental sustainability

- The proposal is sustainable in seeking to minimise energy consumption by providing high density student accommodation designed to current energy efficient and conservation standards defined in Part L, F & G of the building regulations and by specifying recyclable materials with minimal wastage and employing local labour where possible.
- Encourage efficient use of space heating/lighting, equipment, water, electricity and utilise renewable energy forms where appropriate.
- Promote the use of environmentally friendly and sustainable materials.
- Work alongside other professionals who actively encourage the same values in their specialisations with regards to sustainability and the environment.

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4.0 Access

4.0.1 Transport & Servicing Strategy

PEDESTRIANS

Residents and visitors arriving on foot will access the development through the reception which fronts Silver Street. Access control points will be provided to restrict unauthorised entry.

VEHICLES

The development will have 3no parking spaces to the front of the development off the Silver Street, these will not be regularly available to students or staff but will be available to students for occasional use during the ‘moving-in / out’ period at the beginning and end of terms.

Students will be encouraged and accommodated to use more sustainable means of transport, such as cycling, walking and buses throughout their tenancy.

The ‘moving-in / out’ period will normally be a managed process over two weekends each academic year. To stagger arrivals, each student will be advised of a date and time to take up occupancy of their room.

During ‘move in/out’ days an increased management presence will be provided, in order to minimise disruption a methodical approach utilising appointment times that students can arrive and unload and send them a supporting information pack relating to unloading positions and public transport routes.

If students and visitors choose to ignore these timings the management company will reserve the right to refuse access.

The move in/out process will be meticulously planned so that all students don’t arrive or leave at once. This will minimise the impact on the surrounding streets.

CYCLISTS

Residents arriving by bike will access the development via the secure entrance gates fronting Silver Street, and follow the ground floor walkway along the southern boundary to a designated cycle store.

The cycle storage area will accommodate up to 20 bikes with Sheffield Hoops.

REFUSE STORAGE

A designated refuse store is provided at ground floor level adjacent to the cycle store.

It is envisaged that the refuse vehicle will park on the highway, and management staff bring bins to the front of the development and return the empty ones to the store. A designated holding area has been identified within the site and within 6m of the highway for bins awaiting collection.

FIRE TENDER

Under fire condition, it is envisaged that the tender will park on the highway and connect to dry-riser breach inlet valves which serve the two lift / stair cores.

Details of the fire strategy for the development are to be agreed with Building Control and the Local Fire Officer.



Site Analysis	Use & Amount	Layout & Landscape	Scale & Massing	Appearance	Shadow Analysis	Sustainability	Access	Working Drawings	Scheme Visuals
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4.0.2 Security Fixtures

The development has been designed to provide a safe and secure environment for student residents.

ACTIVE

The site will be provided with a security lodge that will be manned 08.00 - 18.00 with emergency and security contacts available off-site outside of these times.

Physical barriers with access controls will be placed at the main entrance and gated entrance to ground level cycle and refuse storage areas.

CCTV cameras that are generally located to view the following locations:

- Reception / main entrance
- All final exits / exit lobbies
- Lift car
- Laundry
- Cycle store
- Common Rooms

PASSIVE

Internal courtyards and the rear boundary will be overlooked and benefit from natural surveillance.

Indicative examples:



CCTV System



Intercom



Access Control

Site Analysis
Use & Amount
Layout & Landscape
Scale & Massing
Appearance
Shadow Analysis
Sustainability
Access
Working Drawings
Scheme Visuals