



Manchester Science Park

Greenheys Redevelopment

Design & Access Statement

April 2023



bruntwood

BDP.

Issue Status

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Introduction

1.1 Executive Summary

The project is located on the site of the existing two storey Greenheys building, North West of the Manchester Science Park (MSP) masterplan. The development will provide accommodation for both a pre-let customer and speculative laboratory space for customers of MSP. The substantial pre-let extends to circa 64,500 sq ft nett over ground, first and second floors, with speculative MSP lab space on each of the three uppermost floors beneath a full floor of roof top plant. MSP laboratories provide circa 20,000 sq.ft per floor and have the ability to provide up to eight CL2 biology laboratory and accompanying write-up spaces per floor of approximately 2,500 sq.ft each.

The ground floor will provide a combined entrance space for both MSP lab and pre-let customers. This is located at the eastern edge of the proposed development to address the aspirations of the wider masterplan and public

realm and will be in close proximity to the entrances of Bright and the recently completed BASE building. This combined entrance will also provide a hub space for the building.

At the western edge of the development service access is provided from Greenheys Lane. This provides access for both MSP and pre-let customer. Above the yard a decked plant space is provided, beneath which ancillary storage, refuse and recycling is accommodated.

The building form creates a plinth at ground and first floor levels above which the building is set back and provides a regular form housing laboratory, write-up and office space. The uppermost level, or 'crown' of the building, contains mechanical and electrical plant, the roof of which incorporates a photo-voltaic array.



View from Pencroft Way

2

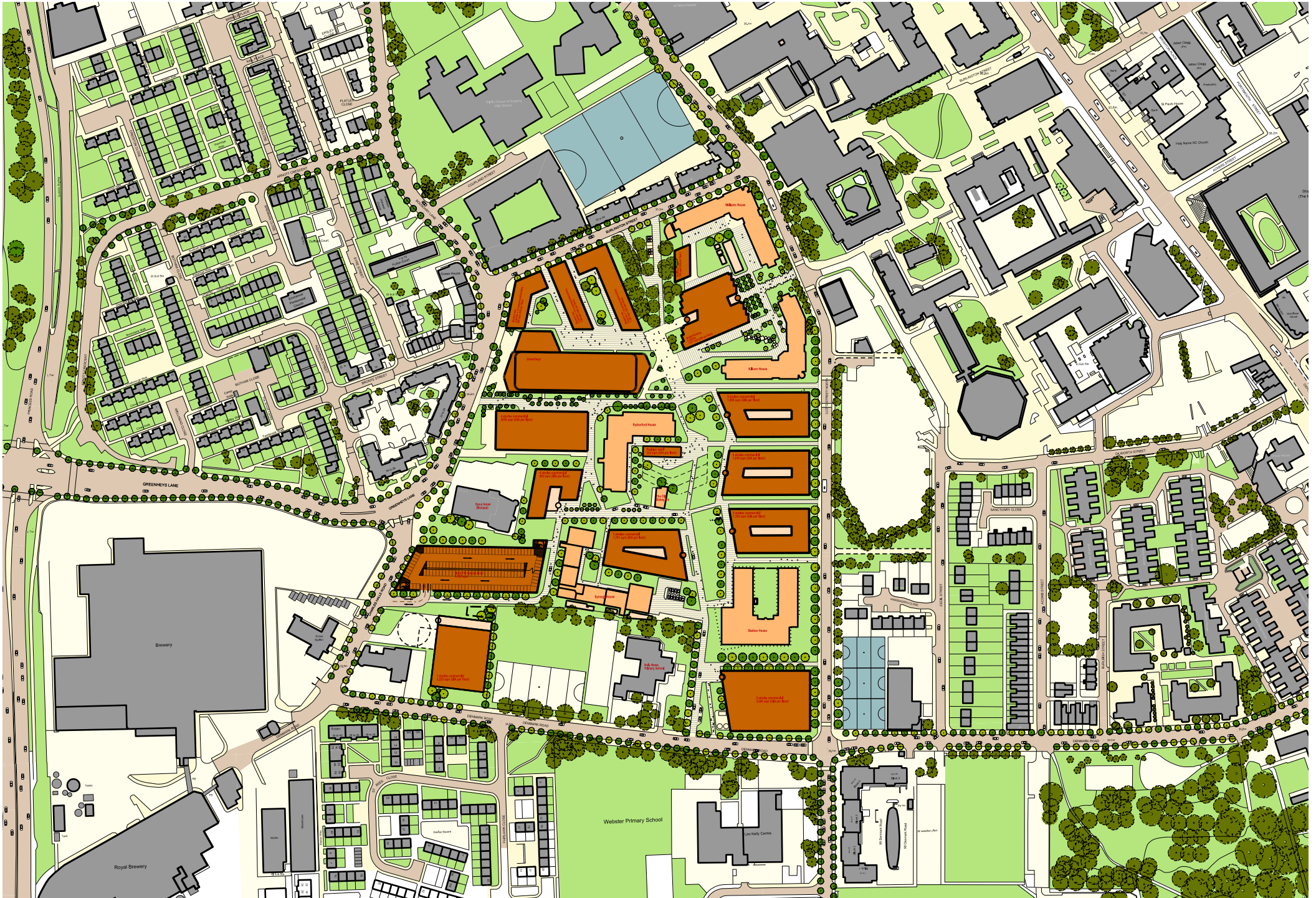
SRF Context

2.1 SRF Context

The Strategic Regeneration Framework (SRF) has been updated to include the proposed Greenheys building. The plan, immediately right, illustrates the 2018 SRF which had previously assumed the existing Greenheys building be extended. The revised, amended, plan is shown on the opposite page. The Greenheys site within the SRF was well suited to MSP's ongoing demand for future science space. The following pages of this Design and Access report illustrate the proposals in detail.



Original SRF 2018



3

Site Context

3.1 Site Location & Description

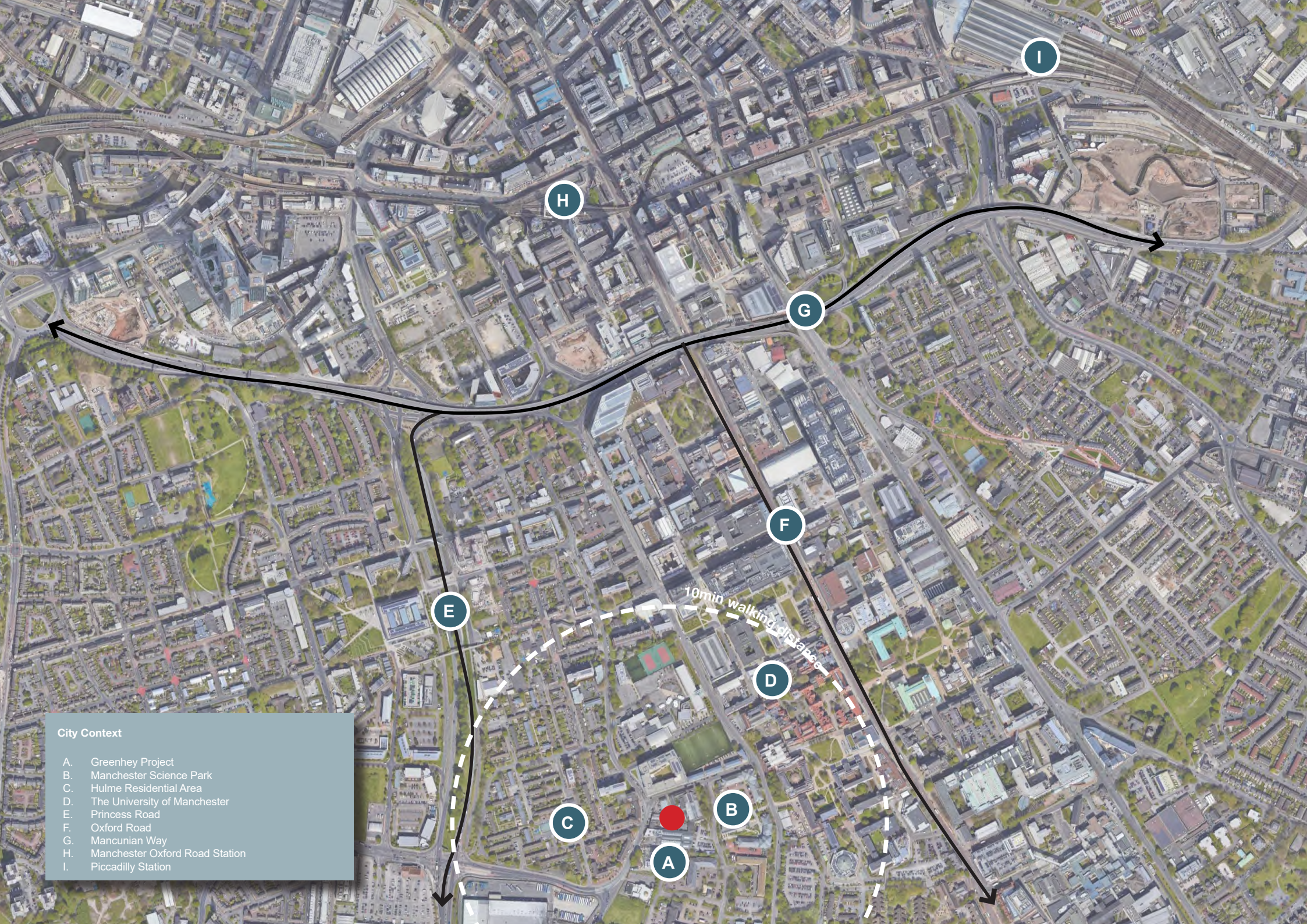
The Greenheys building is located on a site bounded by Greenheys Lane to the west and Pencroft Way to the east. Directly to the north is the University of Manchester sports facility 'The McDougall Sports Centre'. To the south and east further office accommodation is located; immediately south is the new BASE building development and to the east the Bright Building. The buildings to both north and south give the site a natural east west orientation with the new building entrance being logically located to the east, with service access to the west from Greenheys Lane.

Within the Strategic Regeneration Framework for the site a new development is planned to replace the McDougall Centre to the north and in the future it is the intention to close Pencroft Way which will enable further enhancement to the public realm, the east/west link through the site, and between the proposed building, the Bright building and recently completed BASE development. The key connecting route to the south of the site which connects

Greenheys Lane and the adjacent residential areas of Hulme to Lloyd Street North and the University campus beyond will be retained and further enhanced with planting as part of this development.

Links to the strategic road network leading to the city centre are within 0.5 miles of the site via Princess Road (A5013). The Mancunian Way (A57(M)) is within 1 mile of the site.

The site is directly south facing and is highly visible from both the eastern and western edges of the site. We have additionally included within this section information relating to the existing Greenheys building. This block in addition to the two terraced houses and storage space, in the ownership of MSP along Greenheys Lane, are to be demolished to enable this development. A single storey 1960's building within the McDougall site will additionally be removed to create necessary development area.



City Context

- A. Greenhey Project
- B. Manchester Science Park
- C. Hulme Residential Area
- D. The University of Manchester
- E. Princess Road
- F. Oxford Road
- G. Mancunian Way
- H. Manchester Oxford Road Station
- I. Piccadilly Station

3.2 Project Context

Project Boundary SRF Boundary



- A. Greenheys project boundary (denoted by red line)
- B. Manchester Science Park (denoted by green line)
- C. BASE Building
- D. Bright Building
- E. McDougall Centre
- F. Hulme residential area

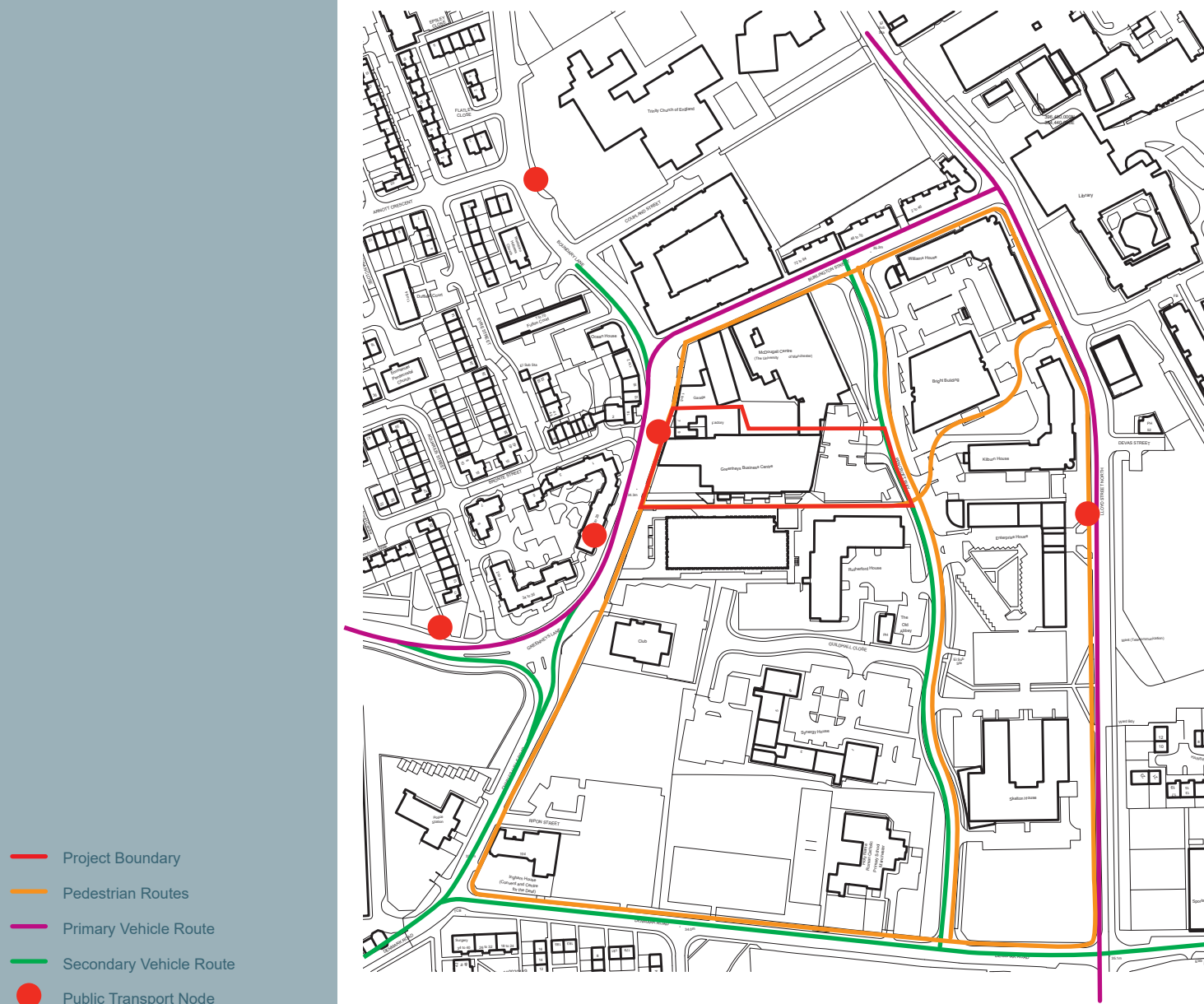
3.3 Access & Movement

The site is easily accessible to vehicles and pedestrians. There are two main vehicular routes to the perimeter of the site along Lloyd Street North, Greenheys Lane and the connecting Burlington Street. Pencroft Way provides access within the MSP development.

There are public transport nodes identified within the local vicinity and these are served by a number of different bus companies.

These public transport services link the city centre to nearby civic and residential areas.

Princess Road (A5103) lies to the west and is within 0.5 miles of the site.

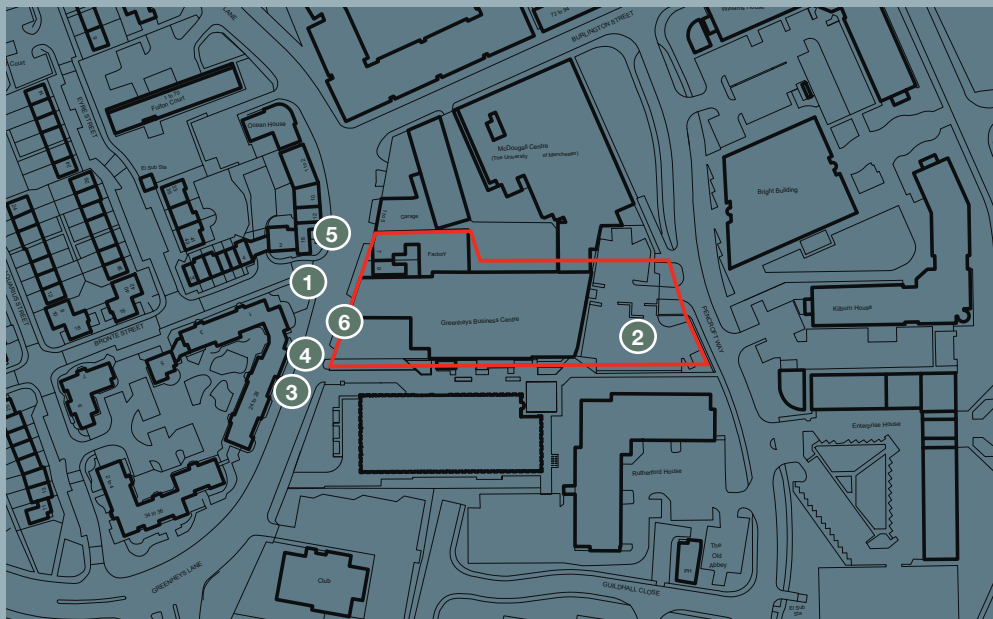


3.4 Existing Site Layout

The site includes:

- The existing Greenheys building comprises two elements, a single storey building to the east (facing Pencroft Way) and a double storey building to the west (facing Greenheys Lane).
- Two conjoined terraced houses and adjacent garage.
- Surface parking to Pencroft Way.
- Service yard to Greenheys Lane.

As part of the redevelopment a transfer of land between Manchester Science Park and The University of Manchester is required to facilitate the building footprint and associated access.



1 - View from Greenheys Lane



2 - View from Pencroft Lane



3 - View from Greenheys Lane



4 - View from Greenheys Lane - BASE Building



5 - View from Greenheys Lane



6 - View from Greenheys Lane Existing Bus Stop

4

Proposals Overview

4.1 Key Design Principles

The development of the proposals and key design drivers are illustrated within the diagrams contained within this section of the report. These highlight the context, constraints and solution created for the new building.

The briefed requirement from MSP is shown in the plan diagrams and massing sections. This illustrates the arrangement of the floorplates and their relationship between the ground and first floor, the 'plinth', and the upper levels of the building. The pre-let customer space & provision of open "maker" workshop space is illustrated in purple and MSP space in orange – these colours are used throughout the proposed plans within the report. The brief provides an opportunity within the massing of the architectural solution to create the plinth and proposed extensive green planted wall to the building perimeter. Above the plinth, each of the upper floors revert to a standard floor to floor height and are inset within the extents of the ground floor diagram – reducing the perceived massing of the upper building form.

An important aspect of the brief was to ensure the work being undertaken within the building is showcased, enabling 'visible science'. This approach additionally benefits the wider context ensuring active frontages are provided within the lower floor levels of the building wherever possible.



View from Greenheys Lane

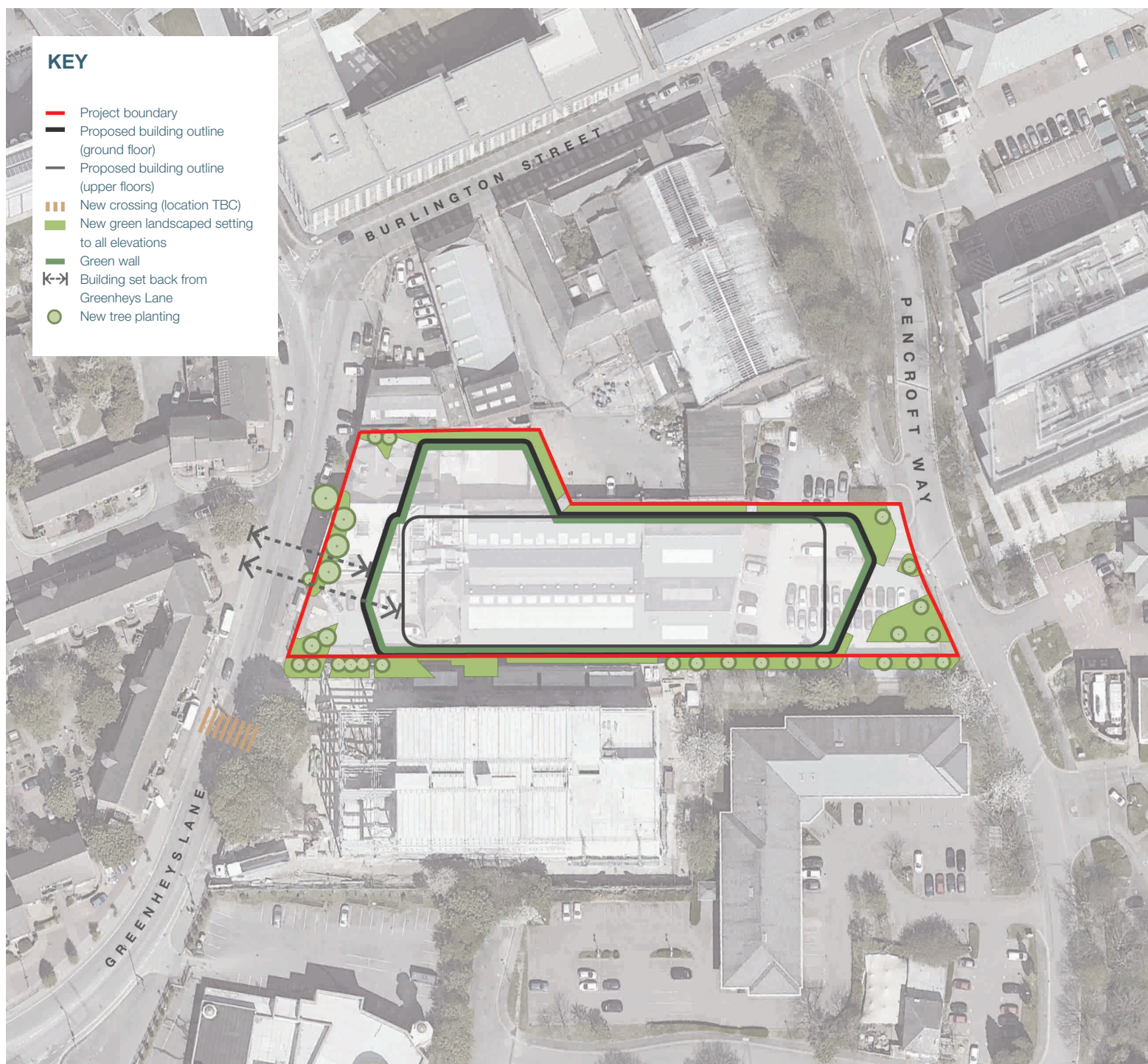
4.2 Key Proposal Considerations

Plan Form & Landscape Setting

The building plan form is stepped back from the site boundary to both its western and eastern edges. To the west this provides significant space between the new building, Greenheys Lane, and the residential area of Hulme. This offset from the road additionally provides access for building servicing, following the same servicing principle as the current Greenheys building.

The darker grey (outer) building outline contains the extent of ground and first floor accommodation. The lighter grey (inset and more regular shape) contains the uppermost levels of the proposal. The inseting of upper storeys of the building ensures a visible reduction in the massing of the proposed development. In addition, this allows the lower levels to be read as a 'plinth' to contain the larger, open, spaces occupied by the pre-let customer, which in turn provides a unique opportunity within the design to maximise the 'greening' of the development by introducing a significantly scaled, planted, green wall. The planted wall extends to the full perimeter of the development and provides a green, vertical backdrop to extensive planting proposed to each elevation within the landscape.

The soft, curved edged, building plan has been adopted to create an organic form in the context of the more angular brickwork adopted in adjacent and recently completed buildings within and alongside MSP.



Key Proposal Considerations

Key Proposal & Access

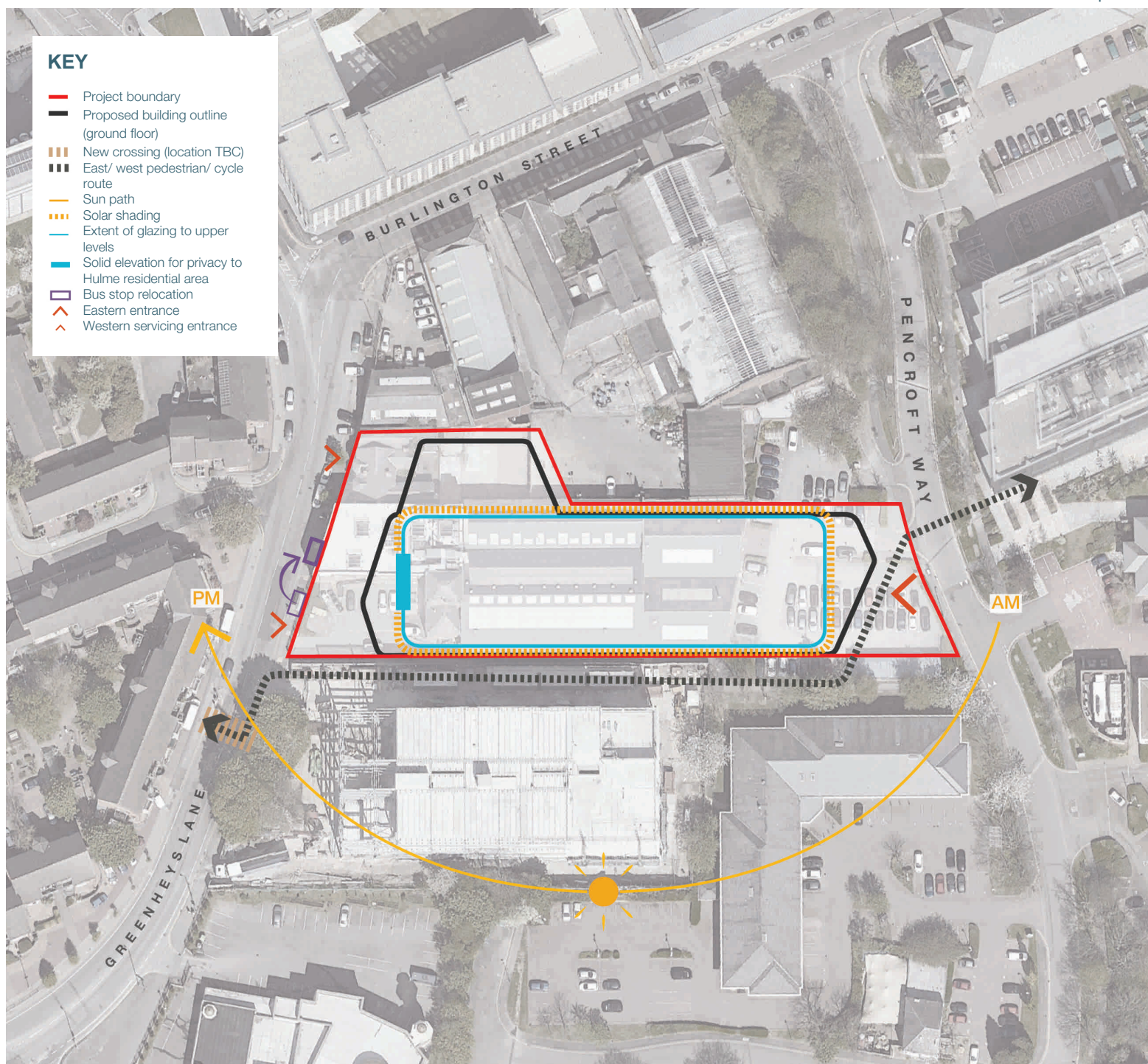
The east / west connecting route to the south of the proposed building will be enhanced with additional green landscaped treatment. There will be an extension to the crossing point on Pencroft Way, as part of the landscape proposal, and a new pedestrian crossing on Greenheys Lane, (the location of which is to be finalised), will also be implemented as part of the site wide works.

Access to the western service entrance is proposed off Greenheys Lane, to the north and south of the demise, as a result of which there has been a minor adjustment to the location of the existing bus stop. Pedestrian access to the building is from the eastern entrance off Pencroft Way.

At ground floor level the building façade incorporates large format windows set into the planted green wall which provide visibility into the pre-let customer demise.

At the building's upper floors a continuous ribbon window aesthetic, within an aluminium curtainwall, is adopted for the laboratory, write-up and office spaces, which is interrupted only at the western façade to provide privacy to the residential area opposite. The façade design incorporates modelling to assist in the reduction of solar gain into the space.

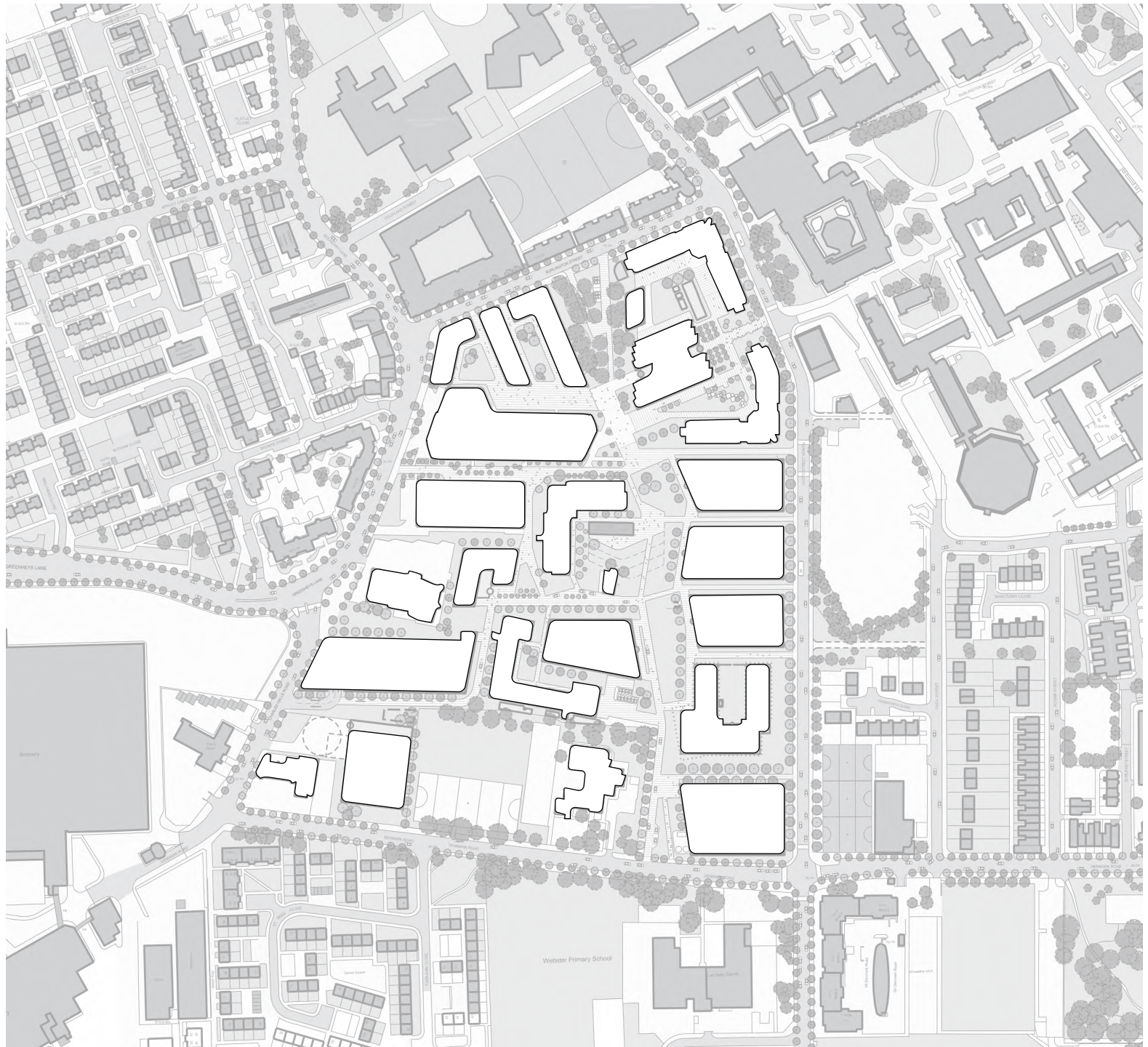
The curtainwall aesthetic provides a visually lightweight solution to the building envelope in the context of its 'heavier' masonry clad neighbours. The wider SRF plan included on the following page has been annotated to illustrate the planned future mix of lightweight curtainwall and more solid masonry envelope construction.



4.3 Materiality within the SRF Context

As noted on the two previous Key Proposal Consideration diagrams, the new Greenheys building is proposed as a lightweight curtainwall aesthetic to the upper levels above a 'plinth' of both irrigated and planted green wall within its landscaped setting.

It is the intention, within the wider context of the site, to employ a mix of both 'heavier' and 'lightweight' façade solutions within the delivery of future phases at MSP. The proposed approach will provide a visual softening of the development and creates variety within the overall proposed composition of the SRF.



4.4 Form & Function

Height to parapet:

- **Greenheys Development:** 29.9m
- **Base:** 22m (to plant circa 26m)
- **Greenheys Development plinth height:** 8.4m

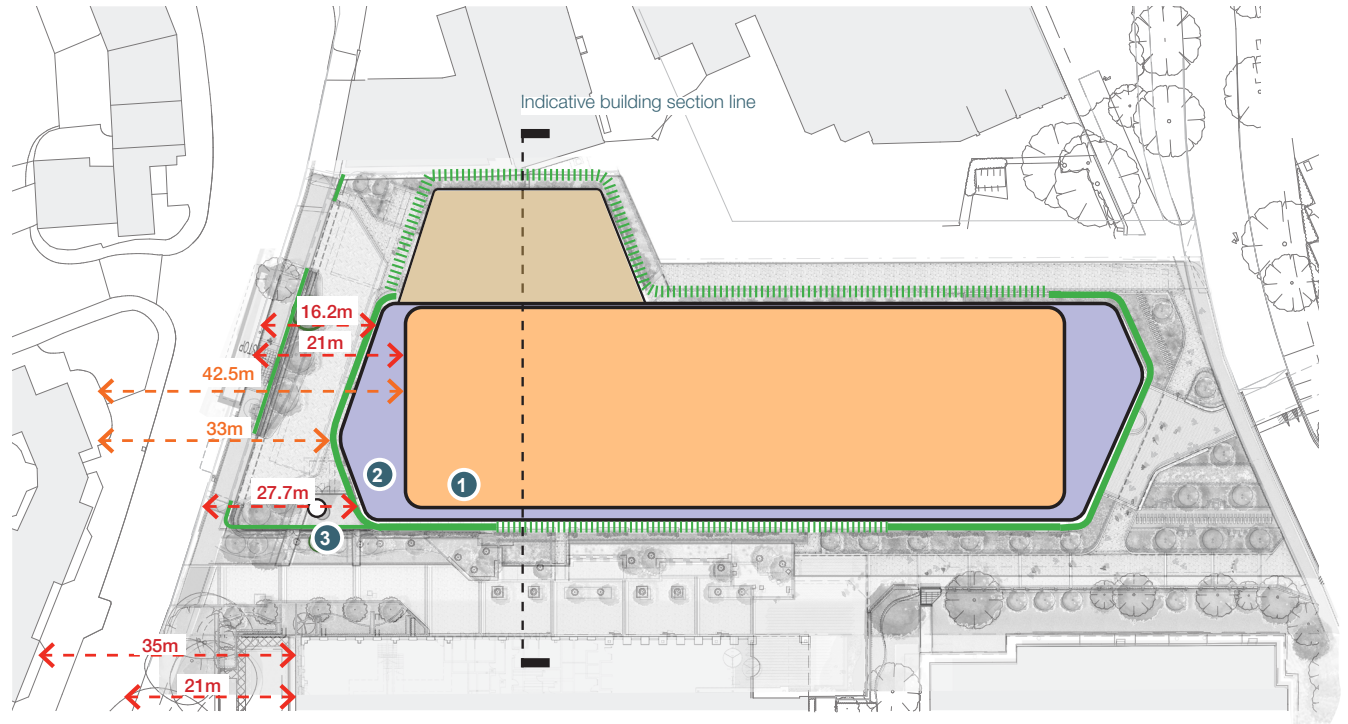
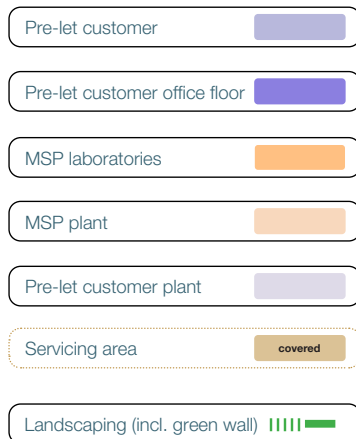
Distance to:

Residential, west of Greenheys Lane:

- 33m plinth / 42.5m to upper storeys

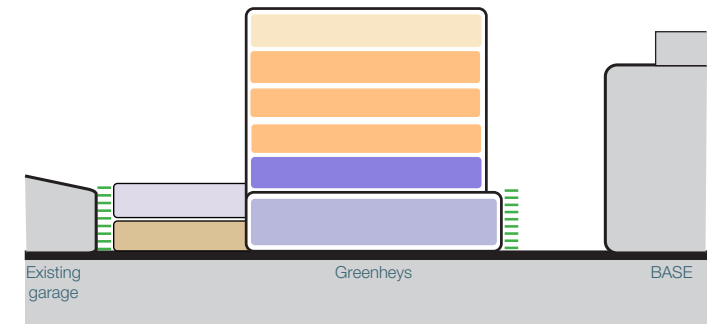
Greenheys Lane:

- **Greenheys Development** 16.2m plinth / 21m to upper bloc
- **Base** 20m to plinth



KEY

1. Upper levels
2. Plinth
3. Liquid nitrogen storage

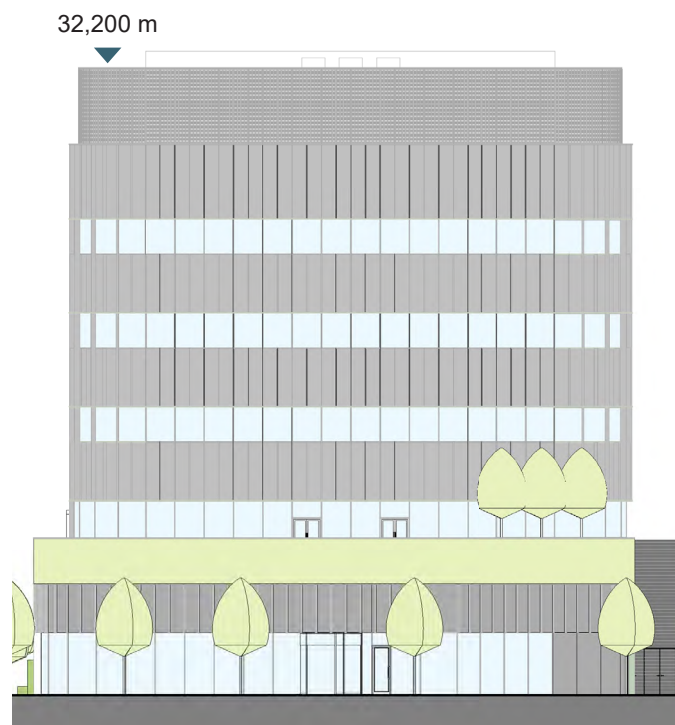


Indicative building section with uses

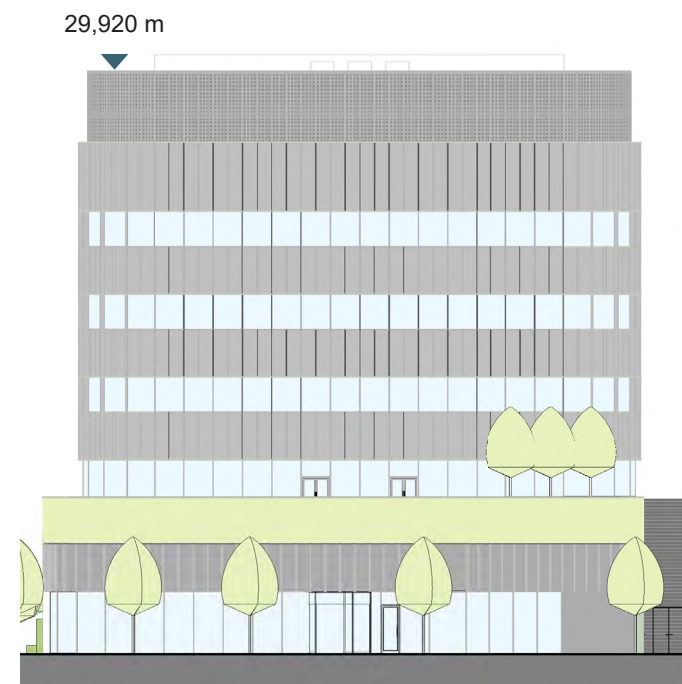
4.5 Proposal Updates following Consultation

Building Height

The design team have refined the floor-to-floor height at each of the upper storeys which has resulted in an overall reduction in building height of 2280mm (a decrease of 570mm per upper floor) since the public consultation event. The proposal now provides the minimum workable dimension between slab level and soffit level within each of the laboratory, write-up and office spaces.



Previous building height

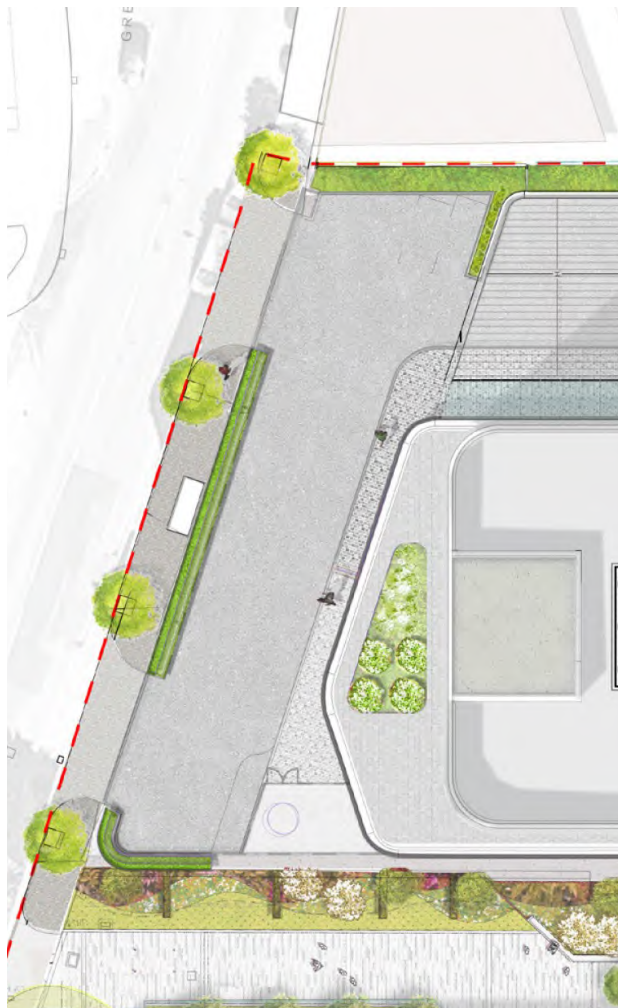


Current building height

Proposal Updates following Consultation

Western Service Entrance

The proposal for this space was updated during the pre-application process to ensure the maximum extent of landscape 'greening' and tree planting was incorporated within the context of Greenheys Lane. The surface finish for the service space has additionally been enhanced from our earlier proposal for the space. Furthermore the proposed single Liquid Nitrogen storage vessel has been updated to include two smaller storage vessels, reducing the overall height from circa 10 meters to circa 6 meters.



Previous Western Service Entrance



Current Western Service Entrance

5

Design Proposals

5.1 Developed Design

Client's Brief

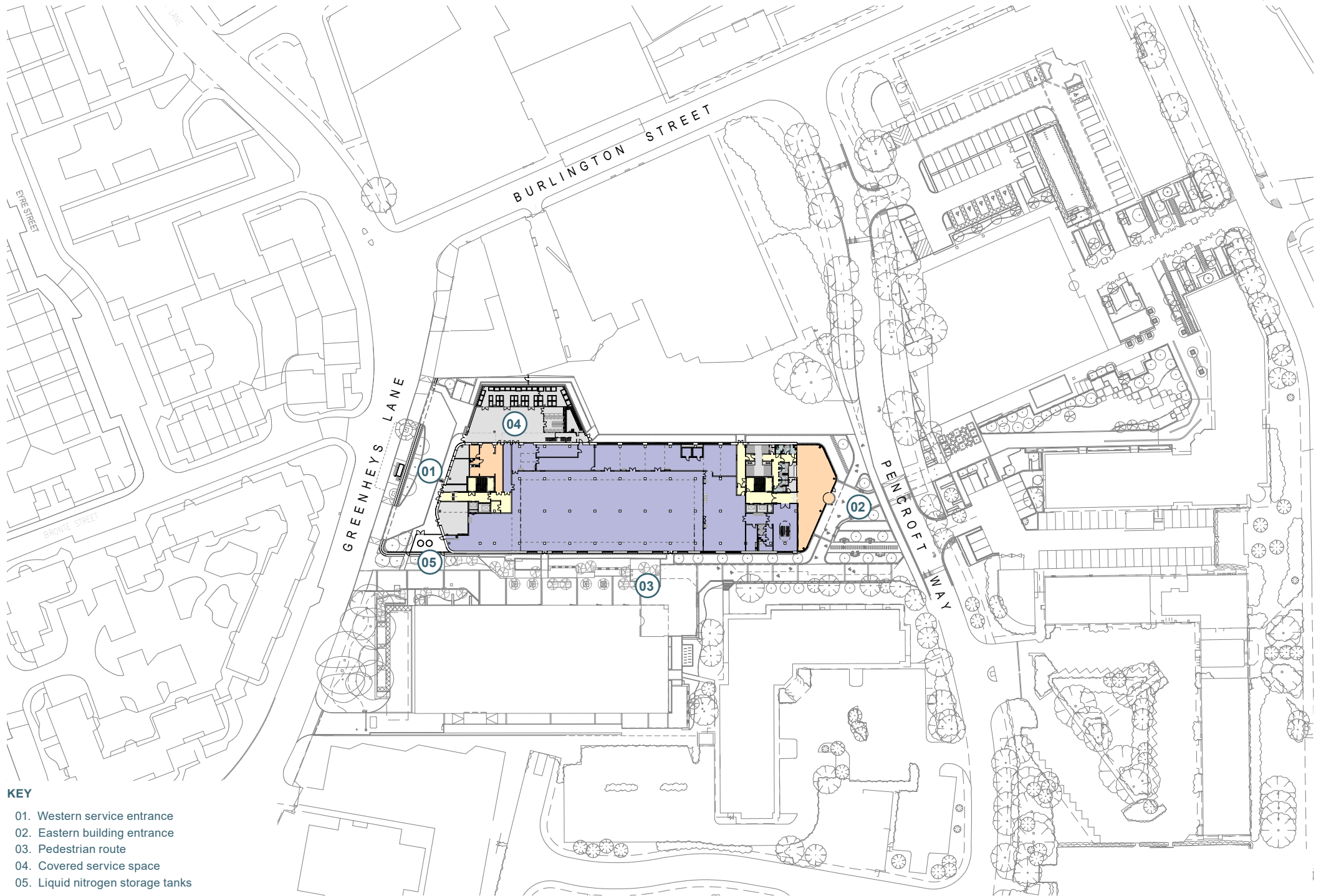
The brief for the building requires flexibility within the proposed design to accommodate small start-up businesses through to mature organisations.

The current proposal reflects the iterative briefing process undertaken during the building design. We have reflected the requirements for customer laboratory space and refined the proposals to create floor splits to provide suites of circa 2,500 sq.ft in size. This requirement is illustrated to each upper floor level with a small communal space provided at third floor.

A key requirement of the ground floor brief was to provide a collaborative hub space for the building customers with a coffee offer that is additionally publicly accessible. This has been incorporated within the double height entrance space of the building. Adjacent to this an ancillary area for cycle storage and showers / changing facility has been included.

To the west of the floorplate, accessed from the service space, an MSP goods area has been included within the proposal. This is located alongside the Pre-let customer goods area and was again developed using an iterative process to create an appropriately sized and future proofed area for the building and site in the proximity of Greenheys Lane.

Lastly, it is a requirement that the proposal must be BREEAM Excellent and achieve as low carbon a solution as possible. The proposed details for which are included within the accompanying specialist report.

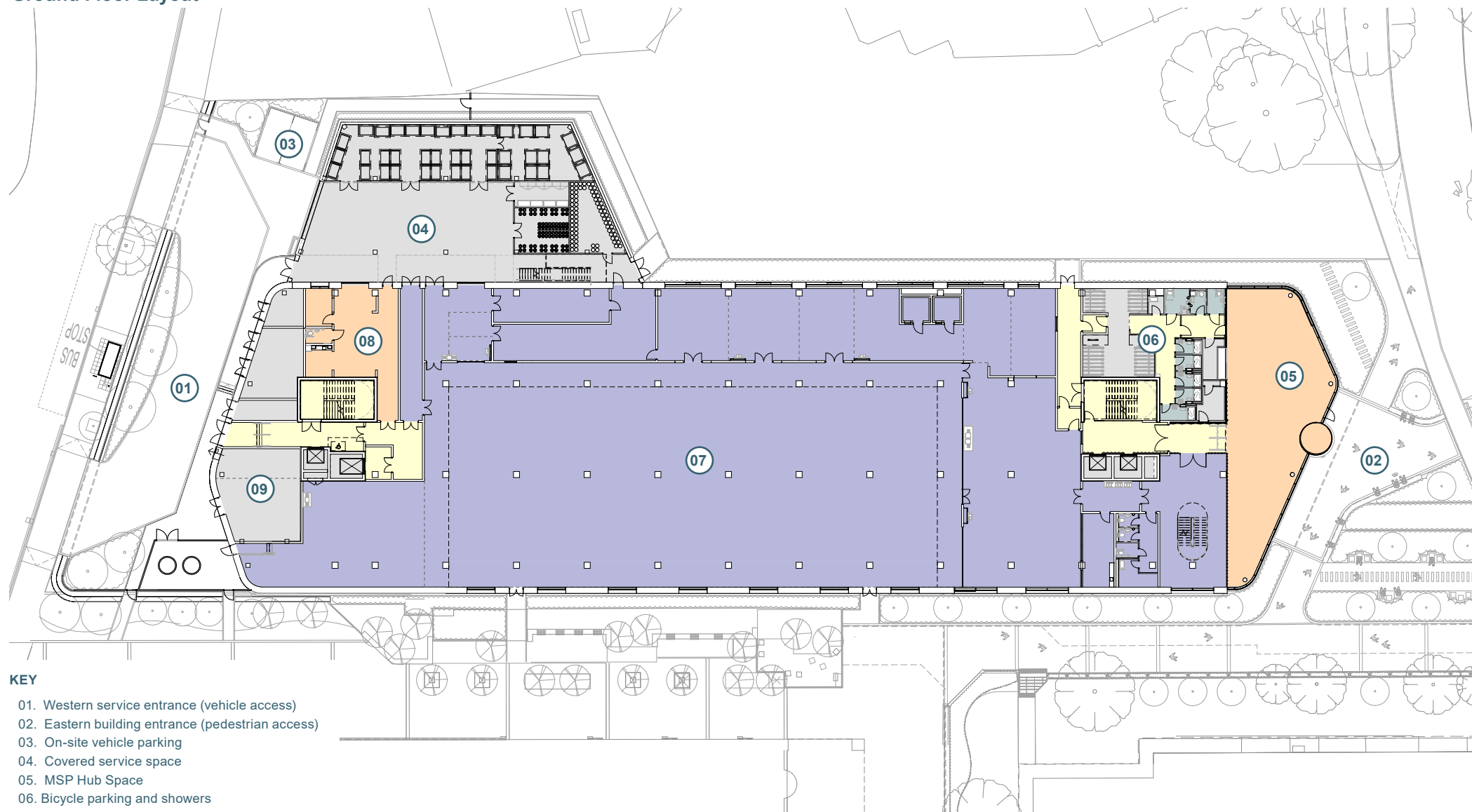


KEY

- 01. Western service entrance
- 02. Eastern building entrance
- 03. Pedestrian route
- 04. Covered service space
- 05. Liquid nitrogen storage tanks

5.2 General Arrangement

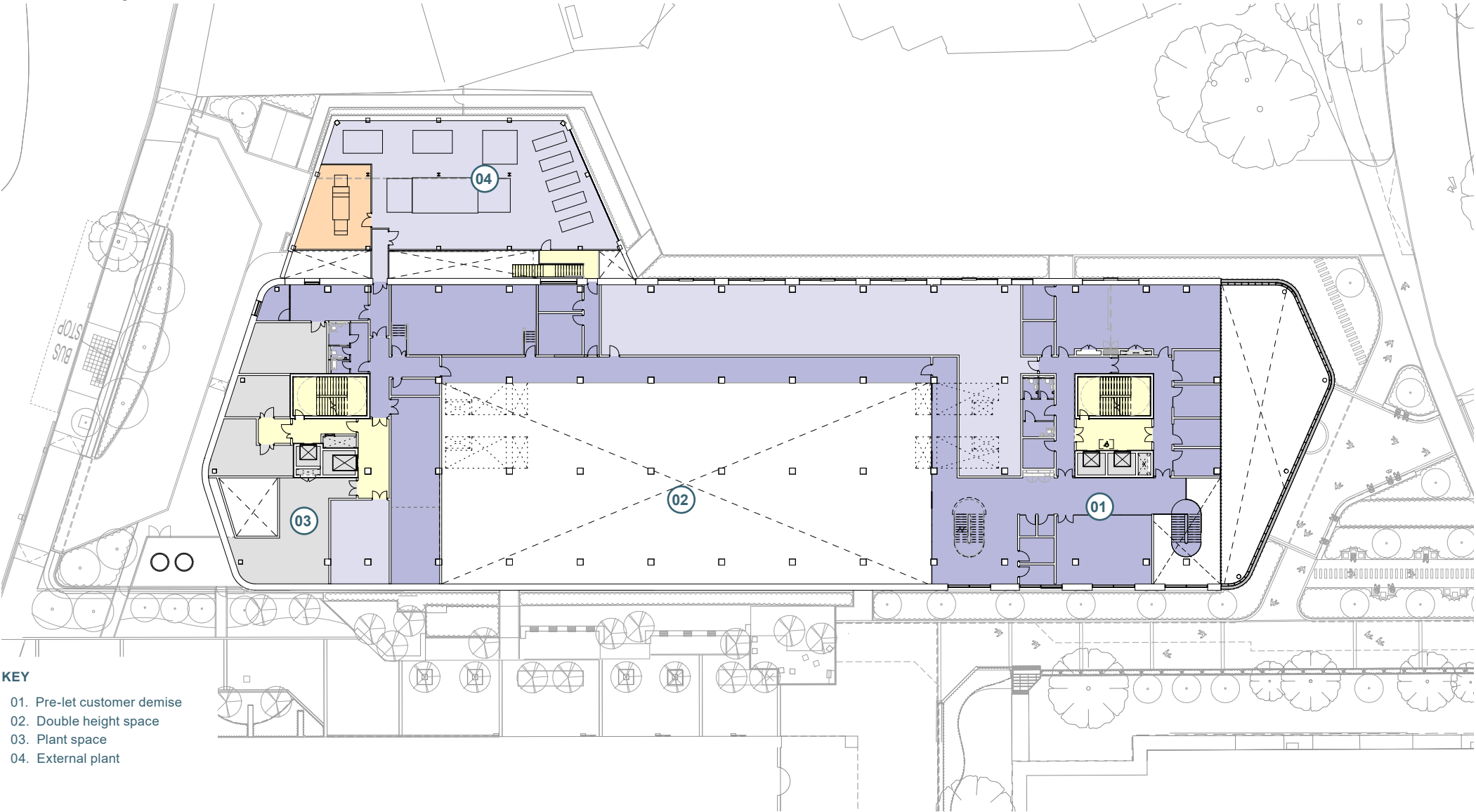
Ground Floor Layout



KEY

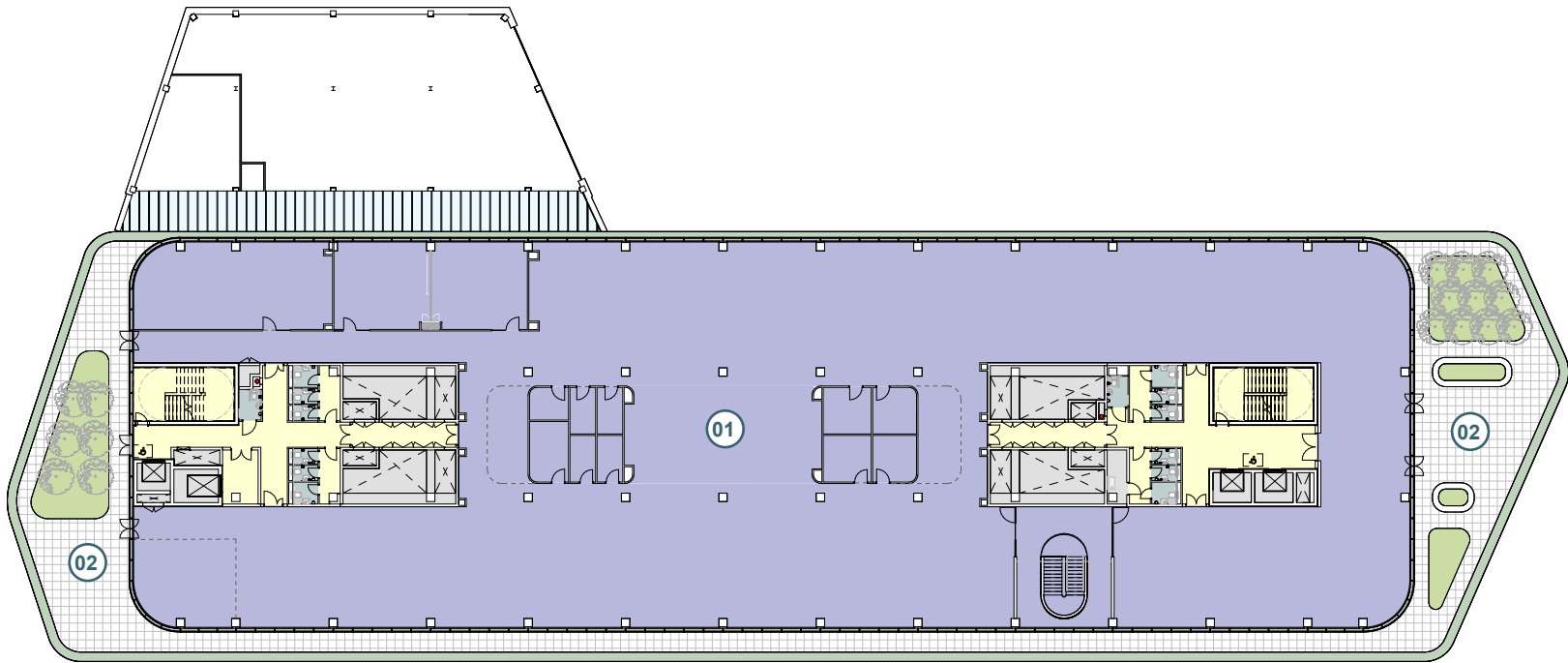
- 01. Western service entrance (vehicle access)
- 02. Eastern building entrance (pedestrian access)
- 03. On-site vehicle parking
- 04. Covered service space
- 05. MSP Hub Space
- 06. Bicycle parking and showers
- 07. Pre-let customer demise
- 08. MSP Service space
- 09. Plant space

First Floor Layout



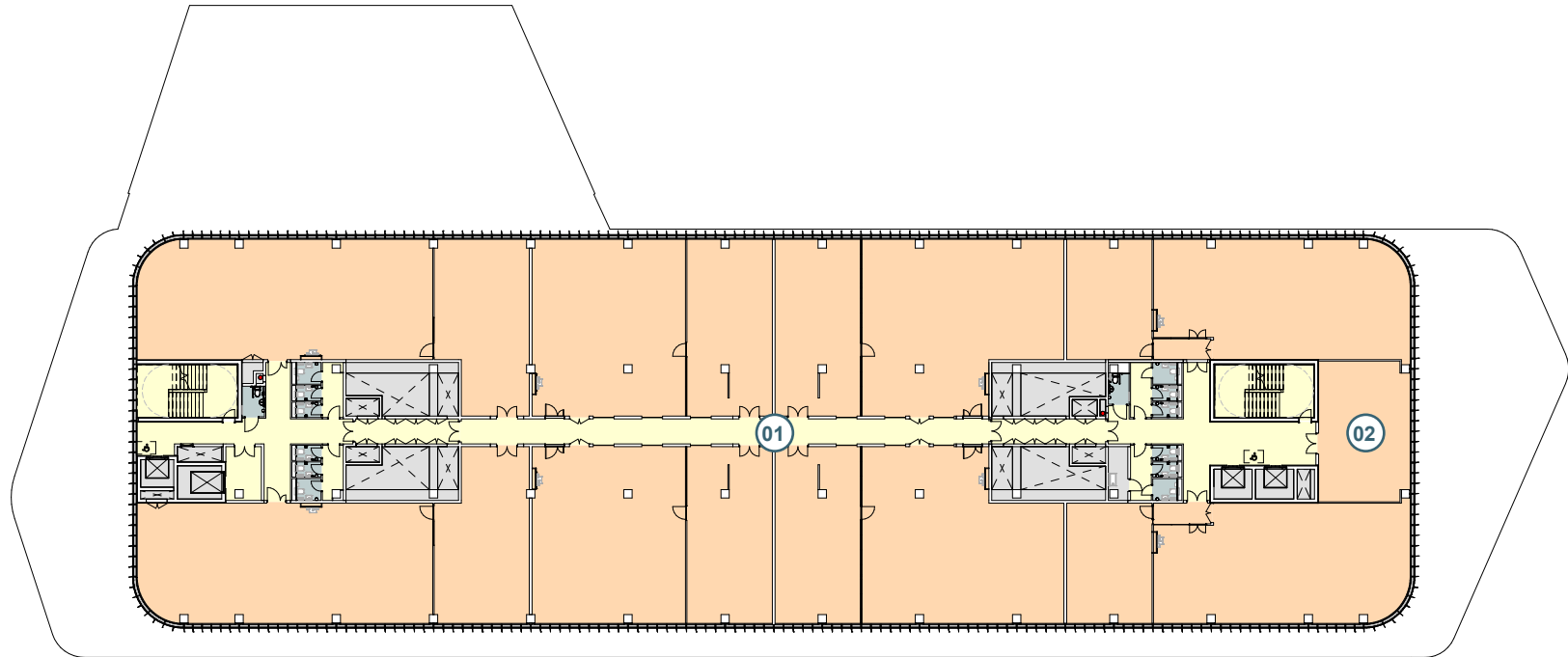
- KEY**
- 01. Pre-let customer demise
 - 02. Double height space
 - 03. Plant space
 - 04. External plant

Second Floor Layout



- KEY**
- 01. Pre-let customer demise
 - 02. External terrace

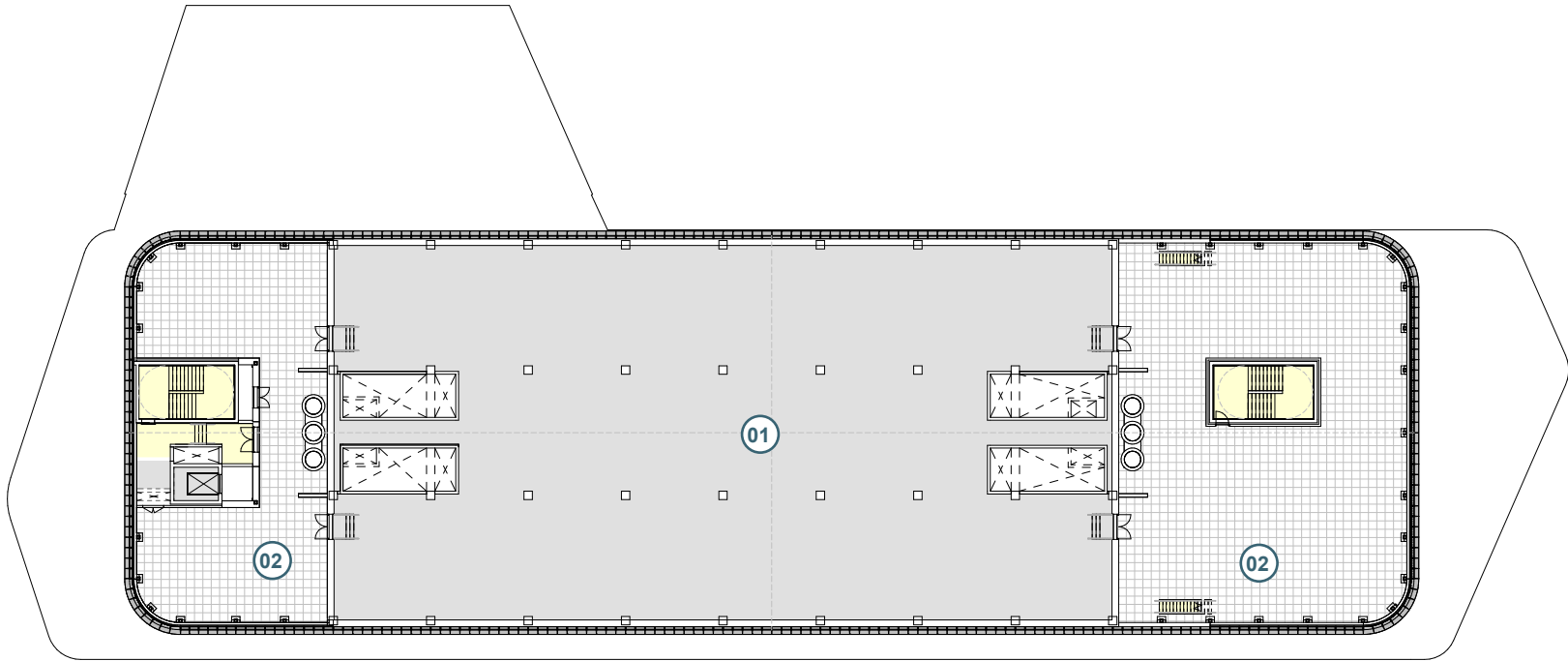
Upper Floors Layout 3rd, 4th & 5th



KEY

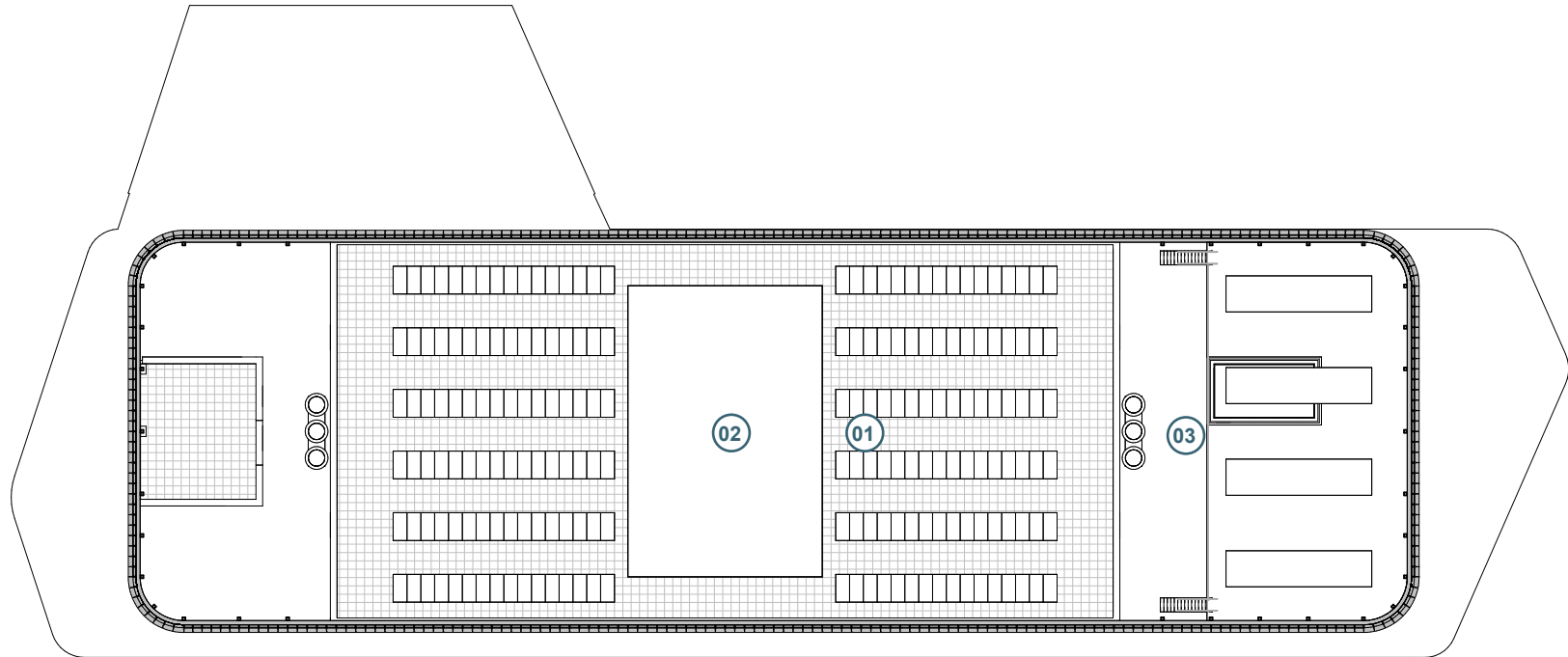
- 01. MSP laboratory and write-up space
(with individual suite configuration)
- 02. MSP Customer communal space

Plant and Roof Layouts



- KEY**
- 01. Enclosed plant area
 - 02. External plant floor

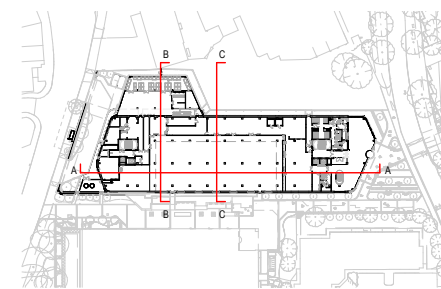
Roof Layout



KEY

- 01. Plant enclosure roof with photo-voltaic array
- 02. Raised area of plant room roof
- 03. Plant deck above external plant floor

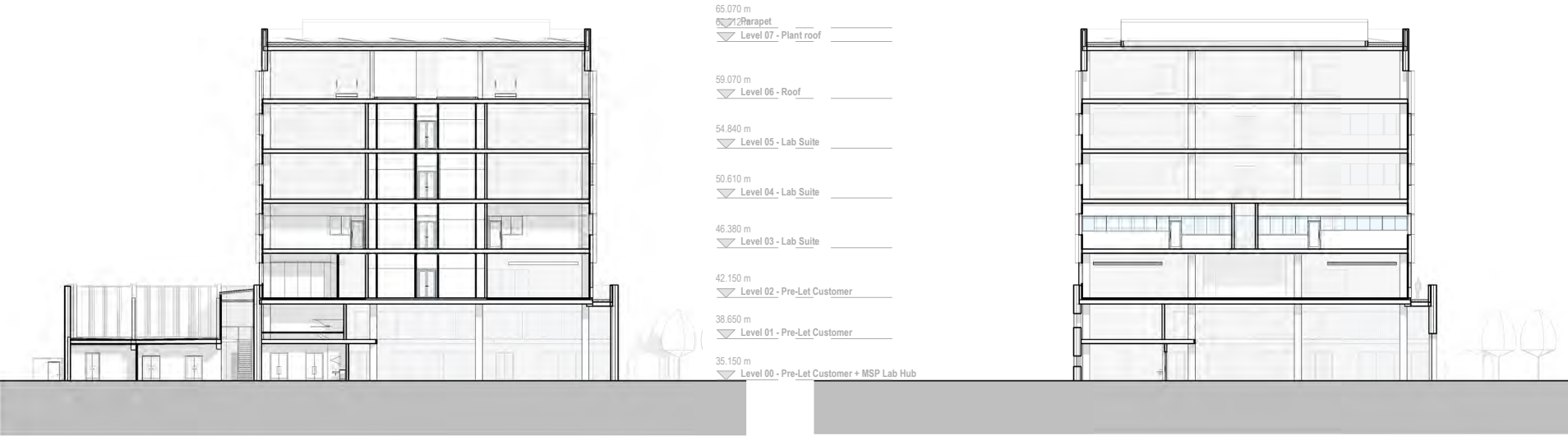
5.3 Building Sections



Section location



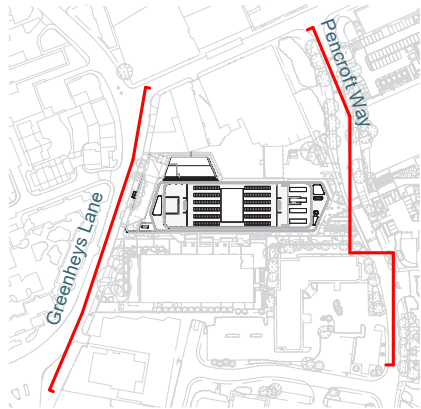
Section A



Section B

Section C

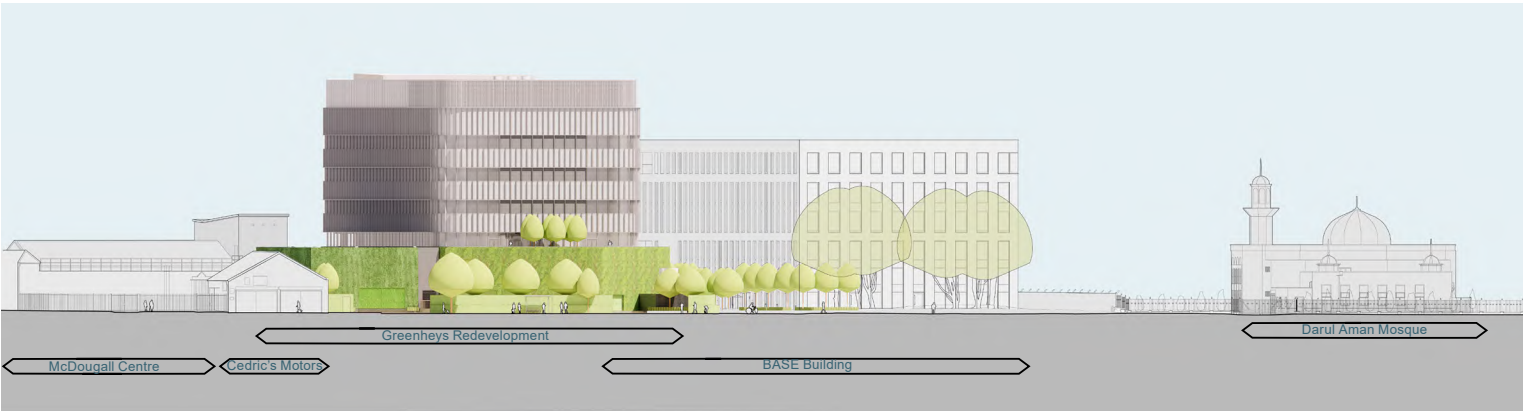
5.4 Contextual Elevations



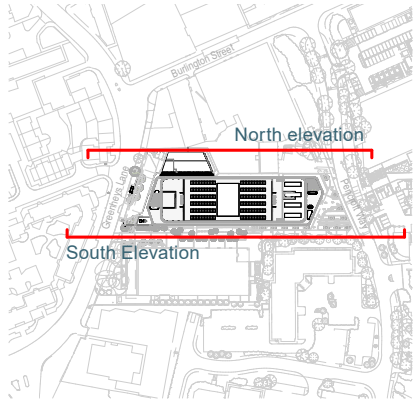
Elevation locations



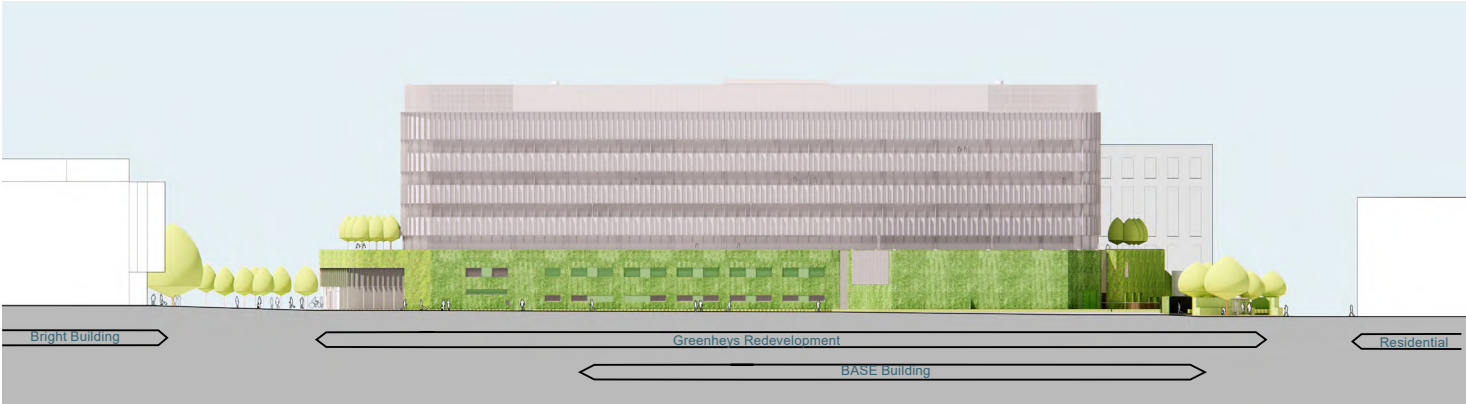
Pencroft Way



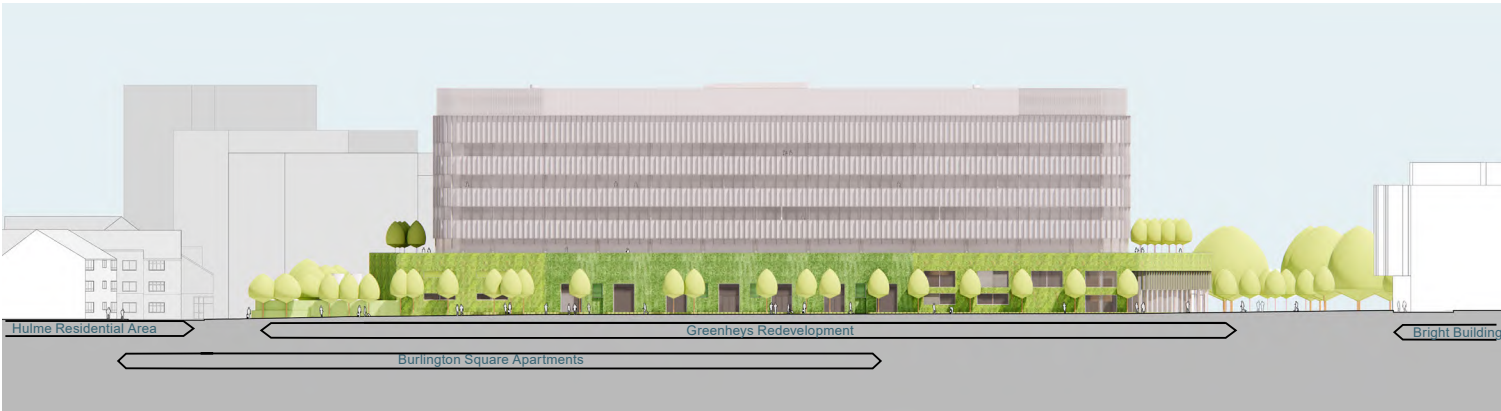
Greenheys Lane Elevation



Elevation locations

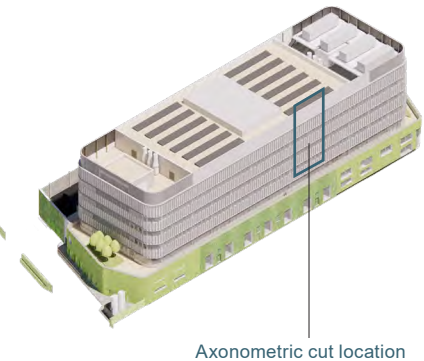


North Elevation



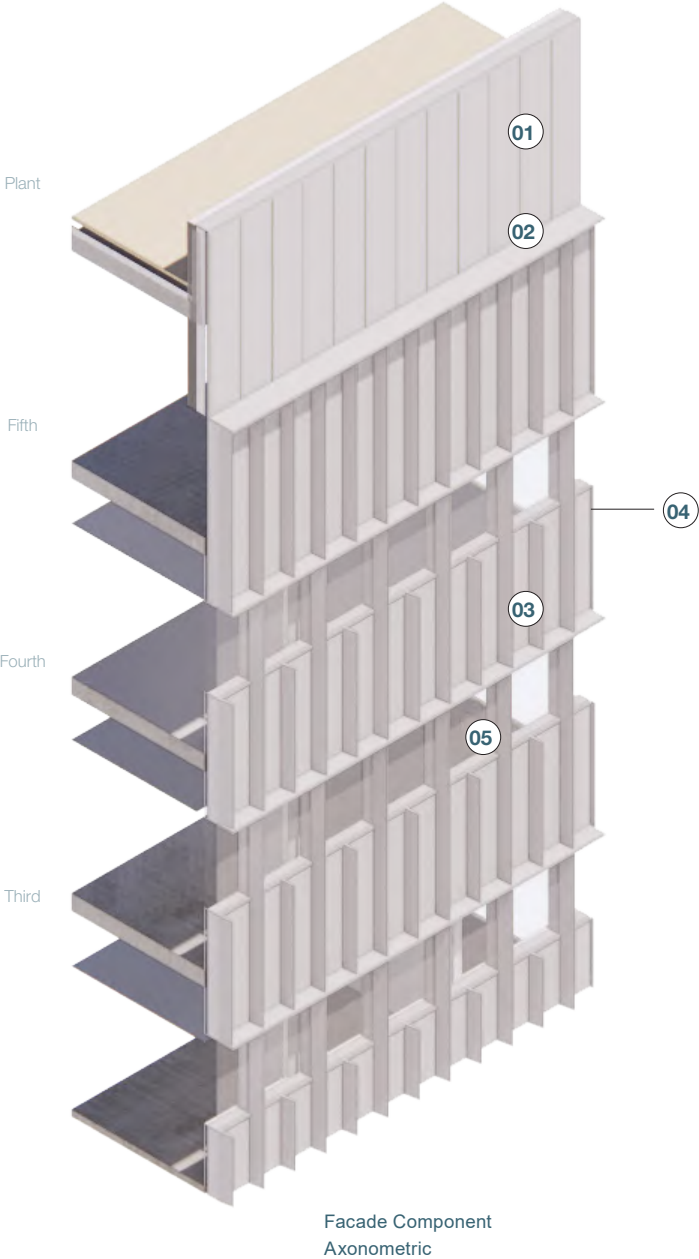
South Elevation

5.5 Materiality



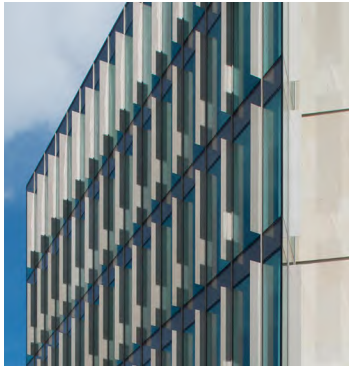
Façade composition to the upper levels of the development comprises an anodised curtainwall system with horizontal ribbon windows. The horizontal and vertical fin fenestration provide modelling and solar shading in conjunction with solar control glass units.

The uppermost element is formed as an anodised rainscreen system, with perforate pattern at the eastern and western extents of the building.



Anodised aluminium curtainwall and rainscreen panels

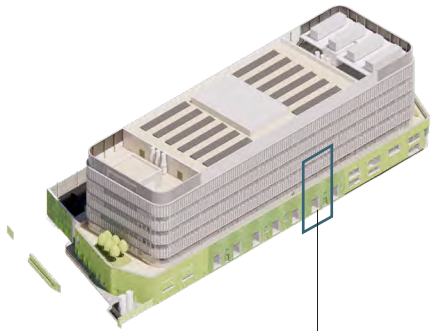
- 01. Aluminium vertical rainscreen panels with shadowgap detail (perforated to east and west elevations)
- 02. 300mm deep horizontal transom cap to head of vision glazed panels
- 03. 300mm vertical fin at each mullion and vertical panel joint
- 04. Anodised spandrel panels
- 05. Solar control, clear vision glass



Curtainwall fin precedent

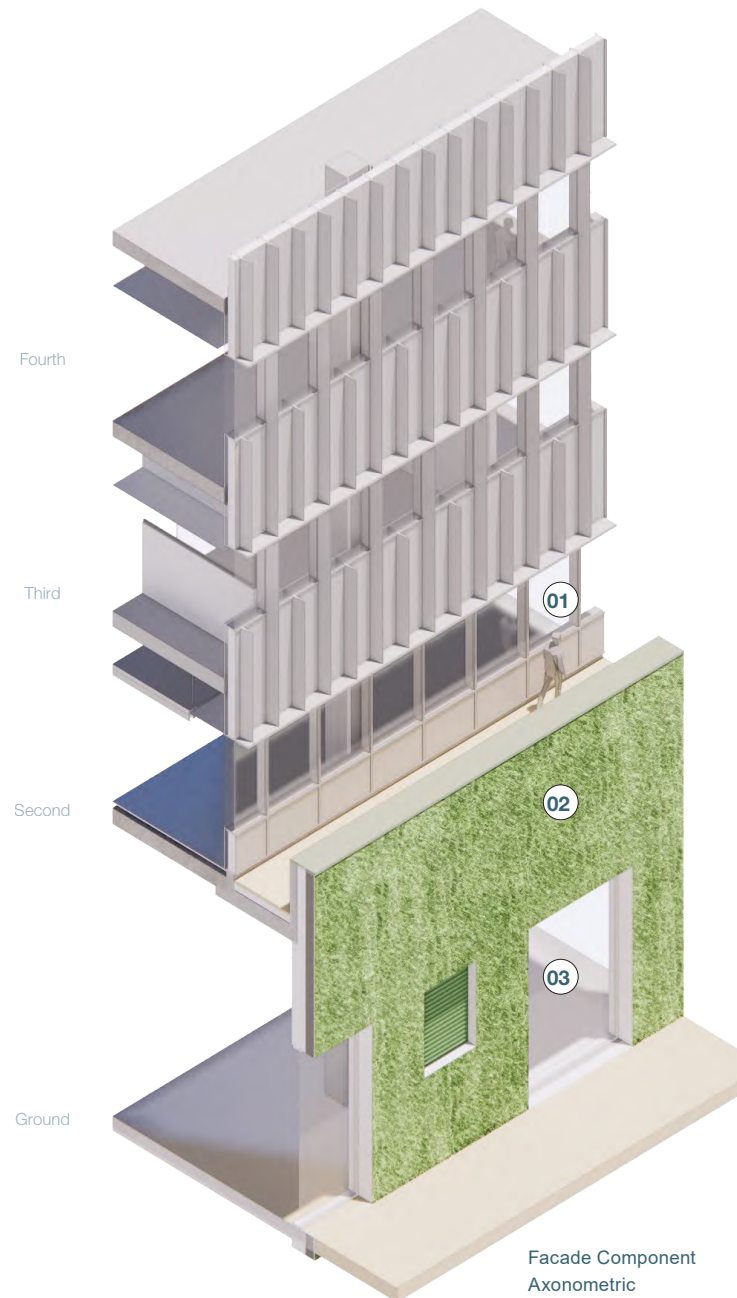


Anodised aluminium precedent



Axonometric cut location

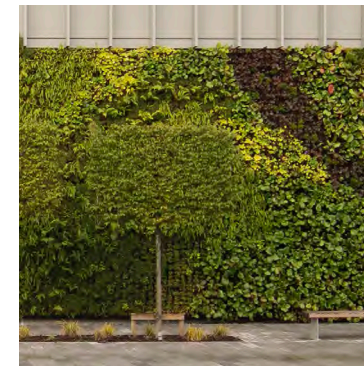
At the lower levels of the building, the 'plinth', enclosing ground and first floors, comprises both a fully irrigated planted green wall system or vertically grown planted wall utilising a stainless steel wire climbing system. The wire system is fixed through an anodised aluminium rainscreen system. Picture windows and louvre screens are located at different positions within the façade. The large format picture windows animating the façade within the extent of the green wall.



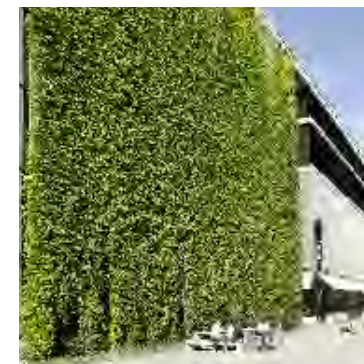
Facade Component
Axonometric

Anodised curtainwall, second floor terrace & green wall plinth

- 01. Solar control, clear vision glazing to 2nd floor level, with spandrel at 900mm datum
- 02. Irrigated green wall system (and elsewhere, planted wall on trellis wire system) fixed to anodised aluminium rainscreen
- 03. Large format picture windows within plinth



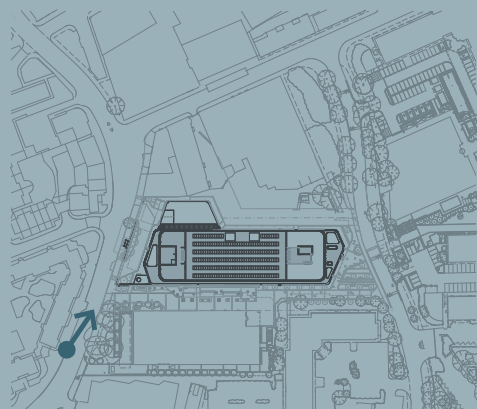
Irrigated green wall system



Climbing plant green wall

5.6 Key Views

Verified View 1. Existing



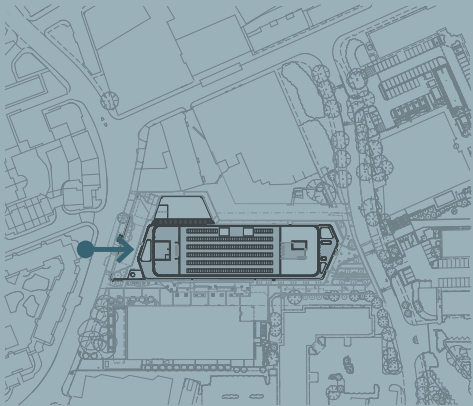
View position





View 1. Proposed

Verified View 2. Existing



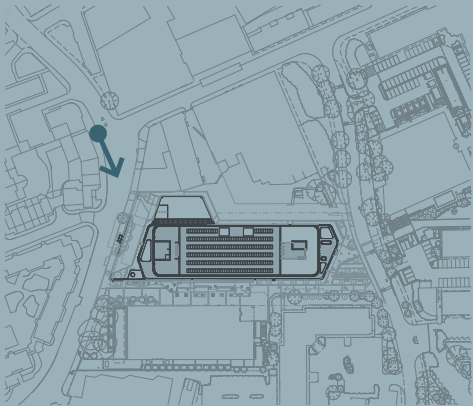
View position





View 2. Proposed

Verified View 3. Existing



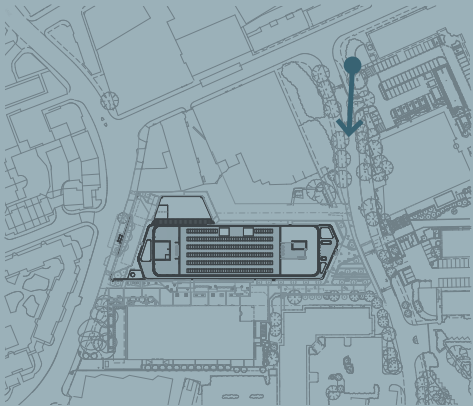
View position





View 3. Proposed

Verified View 4. Existing



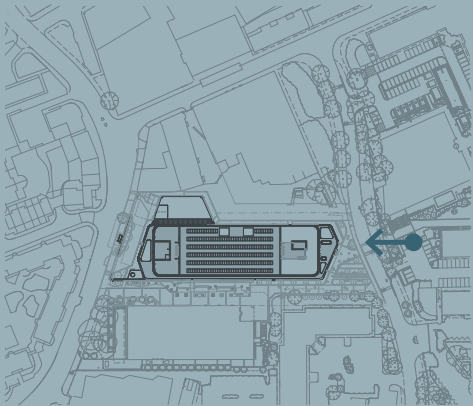
View position





View 4. Proposed

Verified View 5. Existing



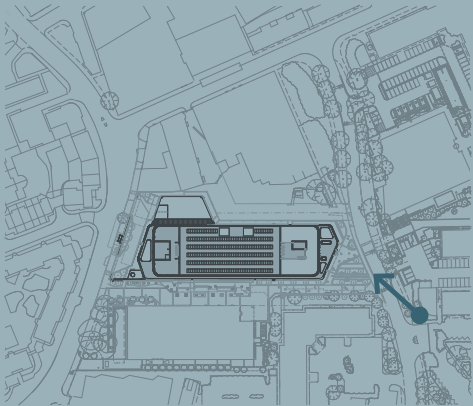
View position





View 5. Proposed

Verified View 6. Existing



View position





View 6. Proposed

6

Area Schedule

Gross Area Schedule (to be read in conjunction with 05 Series drawings)

Level	Area	Area sqft
Level 00 - Pre-let Customer + MSP Lab Hub	3,580 m ²	38,538 ft ²
Level 01 - Pre-let Customer	1,905 m ²	20,509 ft ²
Level 02 - Pre-let Customer office	2,527 m ²	27,196 ft ²
Level 03 - Lab Suite	2,527 m ²	27,198 ft ²
Level 04 - Lab Suite	2,527 m ²	27,198 ft ²
Level 05 - Lab Suite	2,527 m ²	27,198 ft ²
Level 06 - Roof	1,656 m ²	17,826 ft ²
	17,249 m ²	185,664 ft ²

Net Area Schedule (to be read in conjunction with 05 Series drawings)

Level	Area	Area sqft
Level 00 - Pre-let Customer + MSP Lab Hub		
Pre-let Customer	2,230 m ²	24,009 ft ²
MSP - Lab	89 m ²	954 ft ²
MSP - Lab Hub	218 m ²	2,350 ft ²
Level 01 - Pre-let Customer		
Pre-let Customer	1,468 m ²	15,804 ft ²
Level 02 - Pre-let Customer office		
Pre-let Customer	2,005 m ²	21,581 ft ²
Level 03 - Lab Suite		
MSP - Lab	74 m ²	802 ft ²
MSP Lab - Suites	1,951 m ²	20,996 ft ²
Level 04 - Lab Suite		
MSP - Lab	74 m ²	802 ft ²
MSP Lab - Suites	1,951 m ²	20,996 ft ²
Level 05 - Lab Suite		
MSP - Lab	74 m ²	802 ft ²
MSP Lab - Suites	1,951 m ²	20,996 ft ²
	12,086 m ²	130,091 ft ²

7

Access & Circulation

7.1 Access and Maintenance Strategy

The Greenheys Redevelopment site sits within Manchester Science Park where Manchester Science Partnership have access to an established range of access methods, equipment and a preferred contractor with which they maintain the wider estate. Mobile Elevated Working Platforms (MEWPs) and mobile tower scaffolds can be accommodated around the perimeter of the building on hard landscaping designed accordingly.

Access

The primary access for servicing the building is through the western service entrance off Greenheys Lane. Access is also available to the north elevation from Burlington Street. Pencroft Way allows access from within the wider park.

Plant and equipment

Mechanical plant is located at roof level to the main building and annexe. A mobile tower crane positioned on the north elevation could reach both external plant areas from one position. Alternatively, a mobile telescopic boom and jib crane could service the western external Plant Area from the western service space.

The project includes surface water attenuation with the storage tanks located beneath the service area (and potentially the access space parallel to the north elevation). Support for

craneage has been taken into consideration within the design. Proposed large items of equipment on the ground floor will access the building from the covered service area via a dedicated goods lobby with suitably sized openings and roller shutters.

Window cleaning

Window cleaning will be conducted using the same methodology as adopted for adjacent buildings (Bright Building and BASE) The windows to the tall ground floor storey can all be cleaned from the ground employing a water fed pole. Where the elevations rise above the ground floor these will be reached by employing an articulated boom lift located to the perimeter of the building.

Internally all windows can be cleaned from floor level employing a water fed pole and mist head where height dictates.

Health & Safety Considerations

The selected system must not only be safe in itself but also the method of operations and working practices must also provide an acceptable level of safety. Equipment should only be used in the way that it is designed to be used. Whilst consideration to the safety of the operatives is given, it is important that personnel and public are not exposed to unsafe situations as a result of the operation of the equipment.

There are Safety Directives and legislation which have a direct role in the manner and application of access systems to building maintenance. These are continuously updated and refined together and with requirements of the CDM Regulations have significant effect on the importance of considering an appropriate access scheme.

All equipment should be properly maintained, serviced and certified. All operatives should be appropriately trained and certified with the exception of trainees under close supervision by a qualified person.

Regulations

The scope of access equipment extends over a significant range of applications and types and is required to perform varied tasks whilst maintaining a safe environment for operatives and those affected by the operations.

Although codes and regulations are in existence for conventional mobile equipment, they only provide guidance on the basic operating parameters, they do not provide specific guidance to special applications. Maintenance operatives should seek specialist advice and or contractors, with appropriate method statements those that are component to undertake the task.

7.2 Servicing & Security

A series of Flow drawings have been developed, to indicate the intended movement of the 3 No principle elements that will circulate through the new facility - People, Goods and Waste.

People Flows

The main group of people accessing the new building will be the various staff teams, who work in the customer suites, but there will also be a secondary flow of visitors, FM engineers and delivery and collection drivers. The People Flow drawings created show the main flows of the staff teams into the pre-let customer areas at ground and first floor, as well as the upper level laboratory customer suites.

A drawing has also been created to show the staff movements for the small food retail unit at ground floor.

Goods Flows

Projected deliveries are as outlined within the specialist consultant report.

The main types of Goods entering the building are expected to be:

- General lab consumables – for the pre-let Customer and upper level customer suites.
- Lab samples – for the pre-let Customer and upper level customer suites.
- Lab equipment - for the pre-let Customer and upper level customer suites.
- Solvents / Chemicals and Gasses - for the pre-let Customer and upper level customer suites.
- General office consumables.

There will also be a small, daily goods flow

of food / drink, for the food retail unit on the ground floor.

Some of the general lab consumables might be hazardous, and so the movement of such goods will need to be considered as part of a RAMS assessment.

Appropriate surface finishes will be specified for the identified routes, including hard wearing vinyl / LVT flooring and cleanable wall and paint finishes.

Waste Flows

The external storage space for refuse and recycling has been appropriately sized in line with the specialist consultant report.

In addition to general and recyclable waste, the function of the new building may require a clinical waste stream using a Sharps system or similar, which is accommodated within the proposed space allocation.

The waste from the food retail unit on the ground floor, is shown being taken off site via Pencroft Way, in order to avoid travelling the length of the building to get to the service space.

In addition to the 3 no. main flows (People, Goods and Waste) the following have been considered and accommodated:

Laboratory Equipment

Aside to the primary flows of people, goods and waste around the building, there will also be a need to move laboratory equipment, in and out of the pre-let Customer spaces and the upper level laboratory suites.

The sizes of doors, lift cars and widths of circulation corridors, an 'Equipment Clearance Requirement' has been incorporated within the design.

Solvent / Chemical and Gasses

Whilst certain gasses may be piped directly into some of the lab spaces, there will inevitably be a need to bring various solvents / chemicals and gasses (within bottles) into the labs.

The provision of piped gasses have been accommodated and their respective routes will be refined during the detailed design of the building.

A Flow drawing has been developed illustrating the movement of solvents / chemicals and bottled gasses into the building, using the Goods lift to access the upper levels.

As many of the chemicals / solvents and gasses are likely to be hazardous, a RAMS assessment will need to be developed by MSP Bruntwood and the customer, to ensure they are transported through the building in a safe manner.

Security

A specialist security consultant has provided detailed commentary during each design stage of the building. Also refer to the accompanying report submitted as part of this application.

7.3 Sanitary Facilities, Cycle Storage & Showers

Sanitary Facilities

With the exception of the ground and first floors sanitary facilities have been calculated using BS 6465-1:2006+A1:2009, 6.4 Workplaces based on a common part location. This allows a maximum flexibility for the building should in the future it be let for traditional workplace setting. Gender neutral toilets to be developed during final WC suiting.

Cycle Storage, Showers

Cycle storage and associated showers are provided as per the GA. These have been calculated based on the requirement of BREEAM 2018.

8

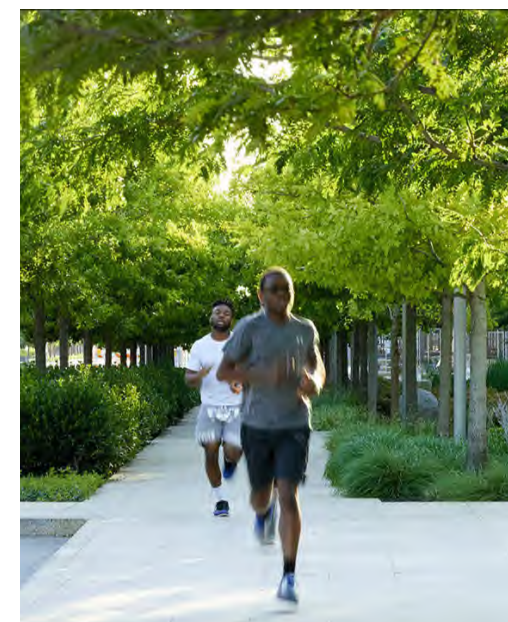
Landscaping & Public Realm

8.1 Precedent Images

The Brief

The Greenheys development sits between the recently completed schemes of Bright Building and BASE Building, and will create the next new building and piece of landscape as part of the Manchester Science Park campus. The brief for the landscape proposal is as follows:

- Create clear identity and arrival for Greenheys, but with a commonality across the public realm in terms of materiality, as part of the delivery of new public realm and landscape.
- Create an active, greener, better connected, high-quality place for the MSP community to thrive.
- Facilitate good pedestrian connections through the site, addressing desire lines from BASE Building to Bright Building.
- Create a new welcoming Piazza, with uncluttered space to define the entrance to Greenheys, including social seating, lighting and high quality planting.
- Improve and build upon the landscape scheme recently completed as part of BASE Building.
- Create a green street frontage to Greenheys Lane, to provide visual amenity and a high quality interface with the wider public realm.



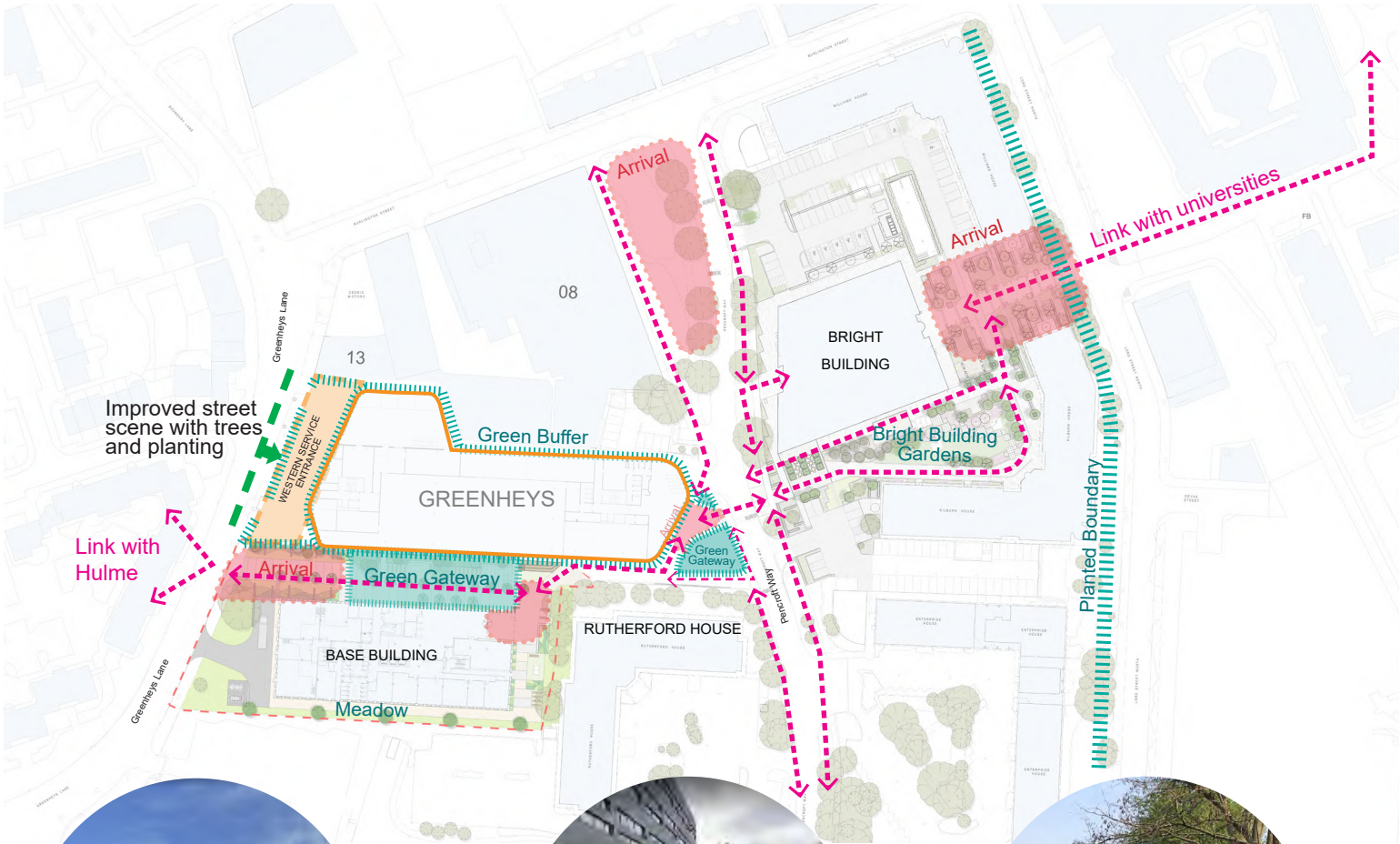
Public Realm and Connections

The adjacent diagram illustrates the new Greenheys Redevelopment Building within its context and its relationship to new and existing buildings such as BASE Building and Bright Building.

The design of the new landscaped spaces and public realm aims to enhance the setting for the new building, and expand upon the pedestrianised environment within the Science Park development.

The design aims to build upon the character and distinct sense of place established in Phase 1 around the Bright Building, and subsequently around BASE, to create a positive and cohesive dialogue between buildings and ensuring a bespoke response to the new architecture.

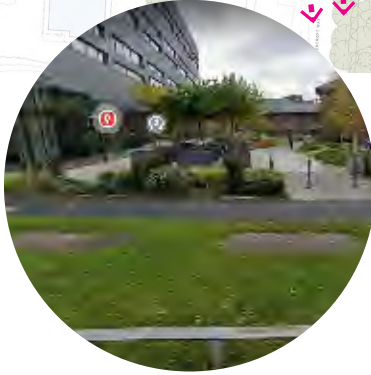
The landscape proposals will create a high quality, safe, coherent, and legible pedestrian and cycling environment which connects the new building with that of BASE Building and Bright Building, and creates a new green edge to the street scene.



Adjacent BASE Building



Visual link to Bright Building glazed frontage / entrance



Visual axis and desire line alongside Bright Building



Existing footpath link along Rutherford House

8.3 Context Analysis



View 1. Pedestrian Link
Link to Base Building and raised table crossing.



View 2. Pencroft Way to Bright Building.
Informal path through verge to Pencroft Way.



View 3. Pencroft Way to Greenheys entrance.
Existing planting and level changes within car park.



View 4. Greenheys Lane, North to South.
Existing trees to be repositioned.



View 5. Greenheys Lane North to South.
Existing bus stop to be repositioned.



View 6. Greenheys lane.
Existing tarmac pavement with a drop kerb.

8.4 Landscape Development Context

The new Greenheys Redevelopment will have a strong visual link to Bright Building, from the new glazed entrance, looking east. The landscape design will consider the desire lines to the Bright Building, and the appearance of hard and soft landscape will be consistent in style, however it will also be distinctive enough to identify the new development as a destination within its own right.

Directly to the south of the new Greenheys redevelopment is situated the recently completed BASE Building. As part of the new landscape design for BASE Building an improved pedestrian connection has been created, linking Pencroft Way to the east, with Greenheys Lane to the west, providing an active movement spine into the heart of the MSP campus.

The palette of hard materials will consider the connecting pedestrian routes, in particular over Pencroft Way considering the extension of an existing raised table crossing to facilitate ease of movement, and integrating the existing piece of public realm of BASE Building. This will be a key consideration, for the 'buildability' aspects, and also to ensure the buildings relate to each other in a positive and cohesive way.

Photographs of completed Bright Building and BASE Building schemes



8.5 Landscape Design Development

The landscape design for Greenheys Redevelopment masterplan has developed following the design concept stage to include additional details on layout, materiality, planting, and furniture and taking into consideration the wider masterplan of the development. The new selected planting will improve the quality of the street-scene along Pencroft Way through the Science Park and the public road, Greenheys Lane, to the west. Visual and physical links in the form of hard and soft landscape continue the green corridor from BASE building to the north increasing biodiversity of the surrounding spaces.

Greenheys entrance piazza is designed to welcome users to the building and to create a new strong pedestrian connection by linking BASE building with Bright building through the piazza, encouraging pedestrians to rest and socialise within the space through the addition of new stone seating.

Additionally, raised planters with multistem trees and a variety of colourful shrubs, perennials and grasses have been introduced to the roof terraces, following the layered green character of the building, creating an attractive destination point for the building users, and creating further habitat opportunities at higher level.

The key components of the landscape masterplan are as follows:

Proposals:

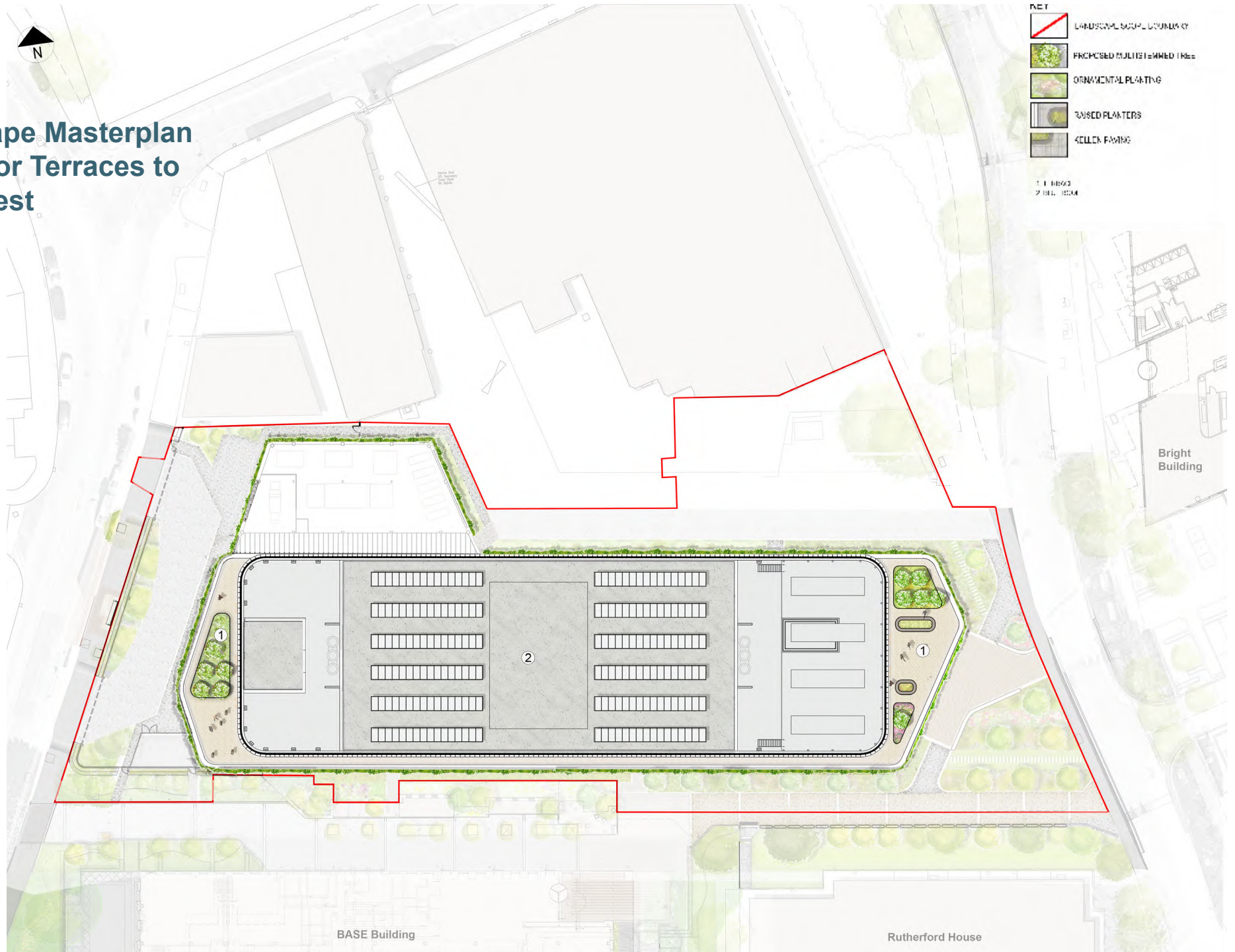
- Enhanced access and movement to improve existing connections.
- A strengthened pedestrian spine route creating a leafy boulevard connection between existing buildings.
- A new feature Piazza creating a welcoming entrance to Greenheys.
- Attractive layered and sensory planting to create identity, incorporating a 'green wrap' around the building, both horizontally and vertically.
- Social heart nodal space with seating, set within rich and sensory soft landscape.
- Creation of a public realm which is green, welcoming, safe, and enjoyable to be in.
- Development of a materials palette which is high quality and low maintenance integrating to the existing schemes.
- Increase biodiversity and ecological value by the use of a varied matrix of native and ornamental planting around the building and in the green facades.
- Improved street setting to Greenheys Lane, with a double height hedgerow and semi-mature tree planting to screen the service yard.



8.6 Landscape Masterplan Ground Floor



8.7 Landscape Masterplan Second Floor Terraces to East and West



8.8 Zonal Plan

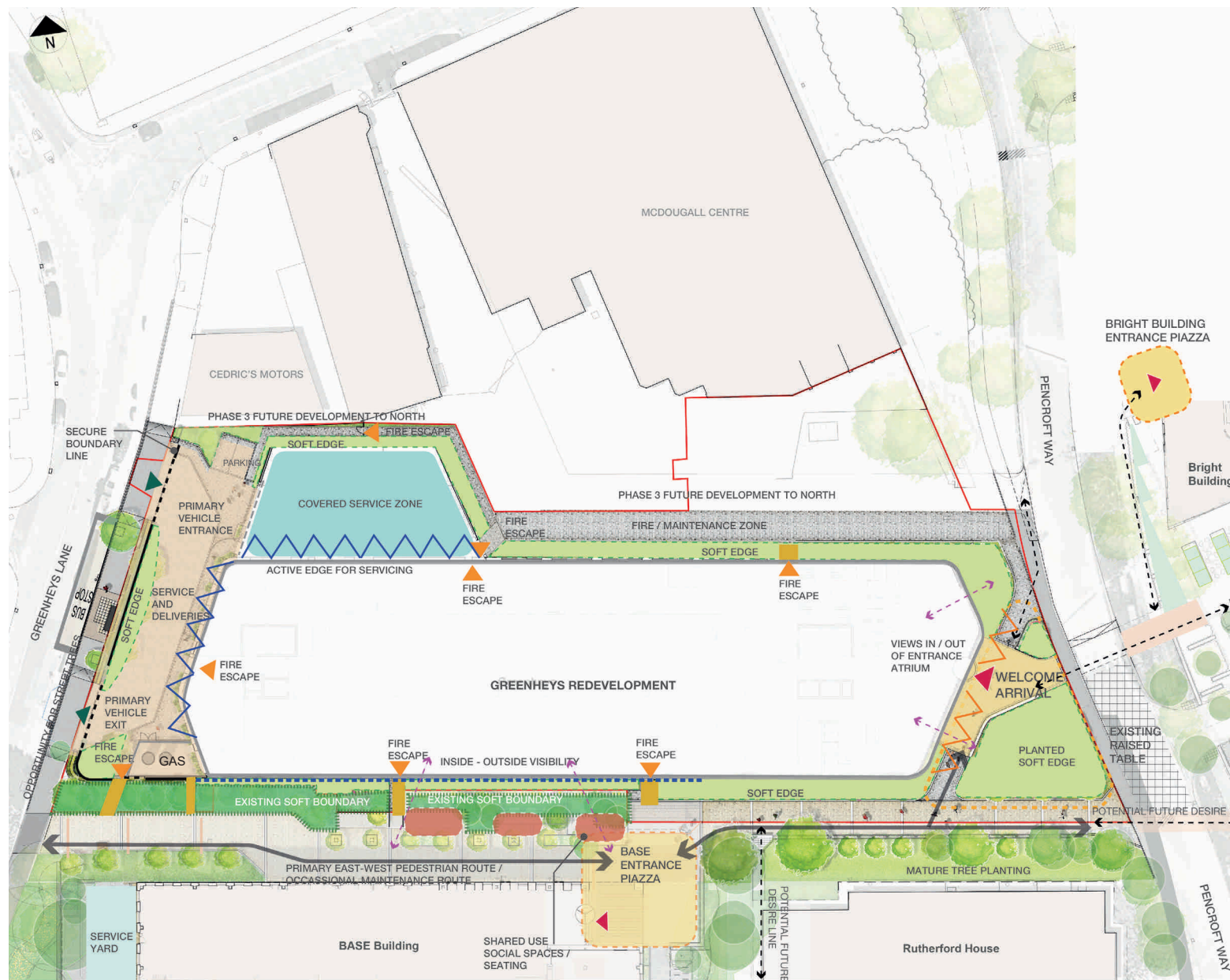
The adjacent zonal plan illustrates the key landscape typologies and spatial requirements for the landscape spaces, considering practical elements of functionality and opportunities for improved connections, pedestrian spaces, and green infrastructure.

To the north of the development is a generously proportioned planted border, with a 6m wide paved maintenance zone to facilitate occasional service and emergency vehicles. As part of future development to the north, this route will be widened / pedestrianised.

To the south, a green corridor / pedestrian movement spine connects Greenheys Lane to the west, through the pedestrianised landscape of BASE Building and through to Bright building beyond.

To the east, a new welcoming Piazza space associated with the Greenheys building is intended to create an attractive nodal point along Pencroft Way. A raised table along Pencroft Way will extend north to pick up a desire line from the new development to Bright Building and the east of the Science Park.

To the west, the two entry points to the service area along Greenheys Lane will be accessed through controlled sliding gates. In addition, controlled pedestrian access gates facilitate access and egress by foot. To accommodate the new access points an existing tree within the pavement will be removed, and replaced further south. The existing bus stop will be repositioned between the two gated entry points. 2No. parking spaces are provided within the secure fence line of the service yard, and a safe pedestrian route identified in a contrasting paved surface.

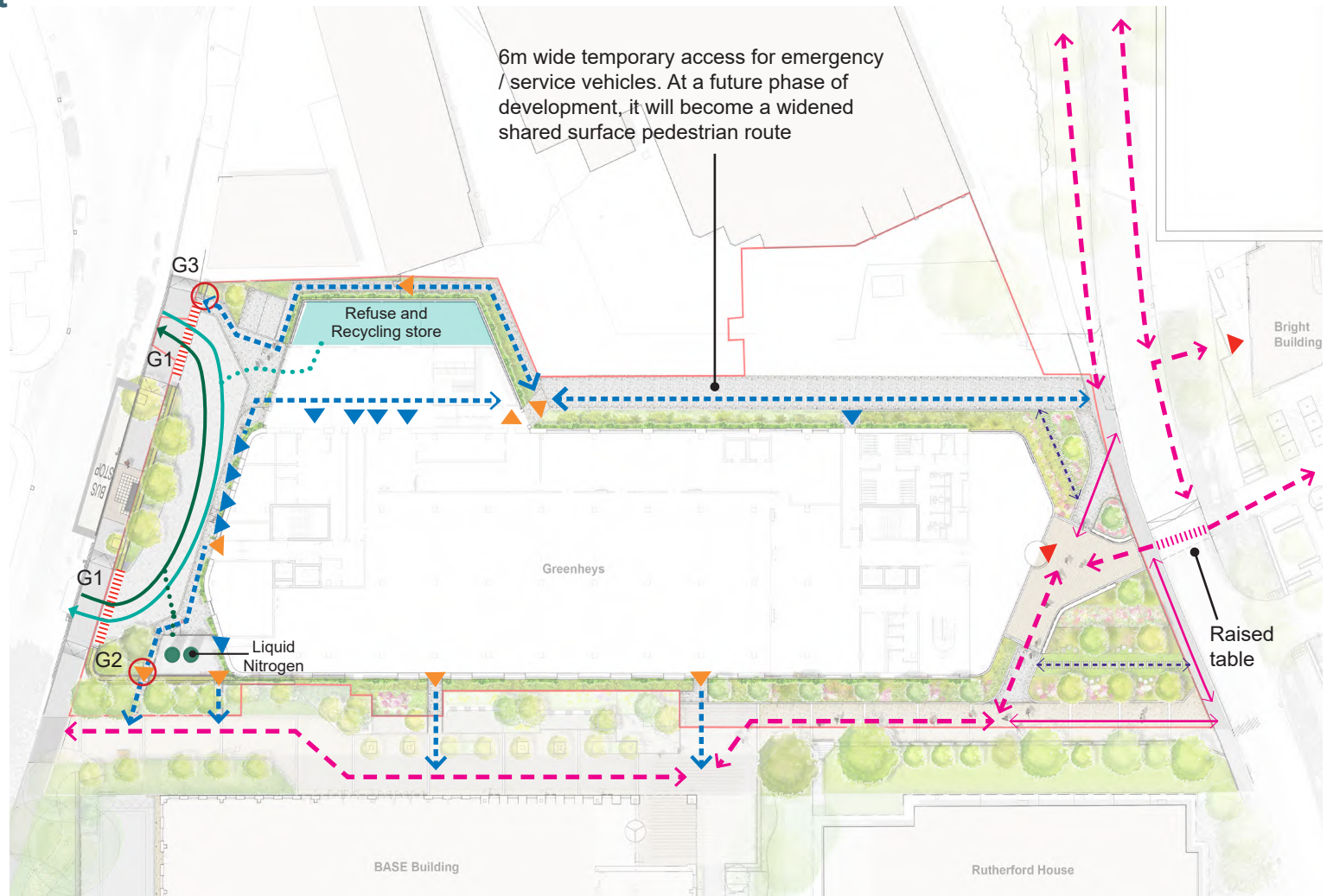


8.9 Access and Movement Diagram

The Access and Movement diagram illustrates the existing and proposed connections for pedestrian / cycle and vehicle movement. A number of desire lines exist, through to Bright Building and the wider MSP campus.

For safety, controlled access sliding gates allow permitted vehicles to move through the western service entrance.

Diagrams provided within the specialist consultant report support proposed access for service vehicles. General vehicles / refuse vehicles will access via the north entry gate and exit to the south, whilst the strategy for liquid nitrogen deliveries is to enter from the south, to be able to reverse and fill the tanks, then exit to the north.



KEY

- Main pedestrian Movement
- Secondary Pedestrian Movement
- Tertiary Pedestrian Movement
- Emergency/Maintenance Route
- Liquid Nitrogen Vehicle Route

- Refuse Store Vehicle Route
- ▲ Main Building access
- ▲ Fire escape exit
- ▲ Service Access
- ||||| 'G1' Sliding security Gate
- 'G2' Fire Escape Gate, 'G3' Pedestrian Gate

8.10 Boundary Treatment Strategy



Vertical flat bar Railing, 2400mm high, security fence for service yard, visually softened by a double height hedge



Vertical slatted louvred Railing, 2400mm high, green colour, for liquid nitrogen tank store



KEY

- Sliding security gate 2400mm high
- Double height hedge
- Security Fence 2400mm high
- Security Fence with slatted louver to liquid nitrogen store - 2400mm high

- Open frontage to Pencroft Way
- Boundary planting
- Main / public entrance to building
- Controlled pedestrian access
- Escape only gate from service yard / gas compound
- Controlled access as part of building facade

8.11 Site Topography

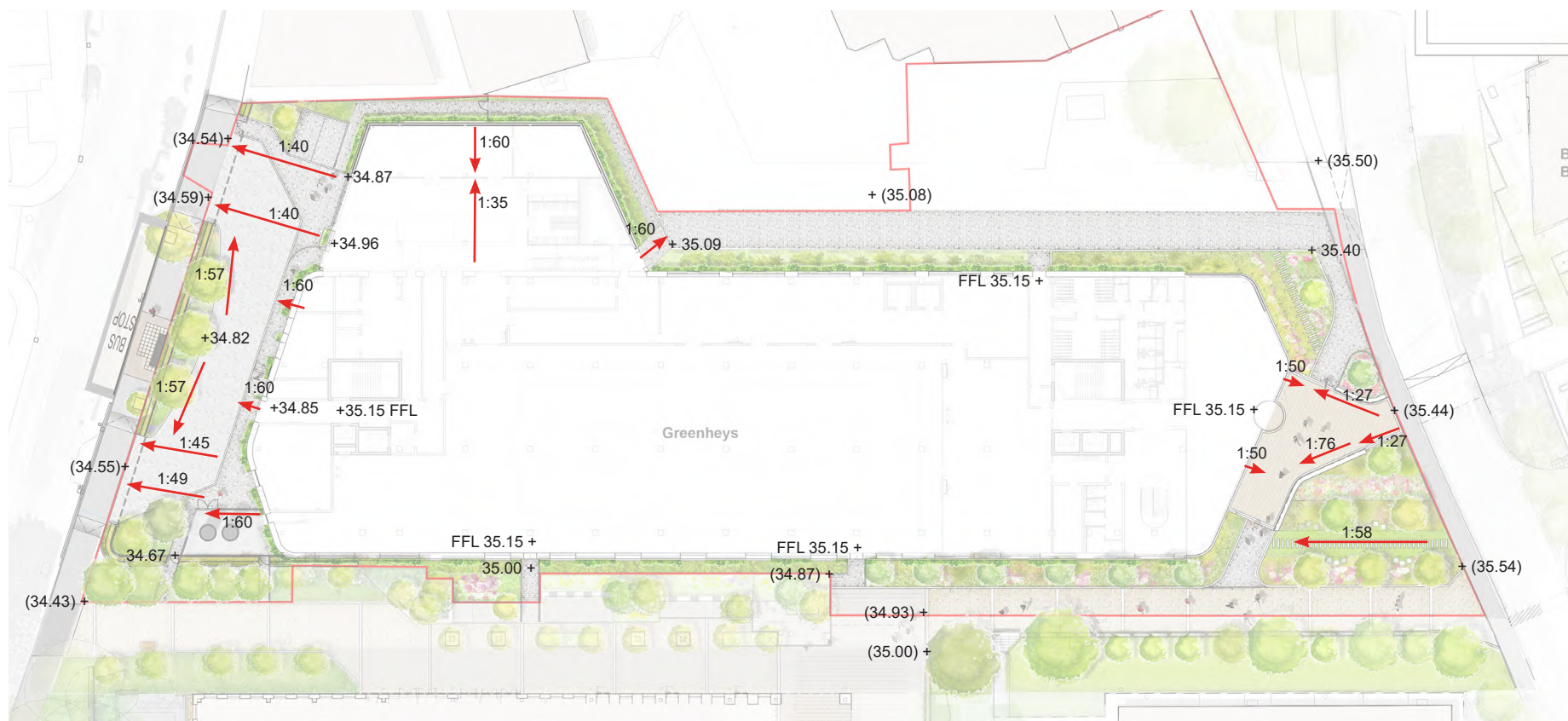
The Building finished floor level (FFL) corresponds to that of BASE Building to the south. There are a number of physical connections for fire escape access to the south of Greenheys which tie into the pedestrian movement spine along the north of the BASE Building. These levels along the spine route are level, and provide a good east-west pedestrian access.

To the west of the building, the general gradient within the service yard is 1:40, falling down towards Greenheys Lane. A pedestrian zone with raised kerb is created around the building to create a safe pedestrian movement zone. The general gradient of this zone is 1:60 away from the building.

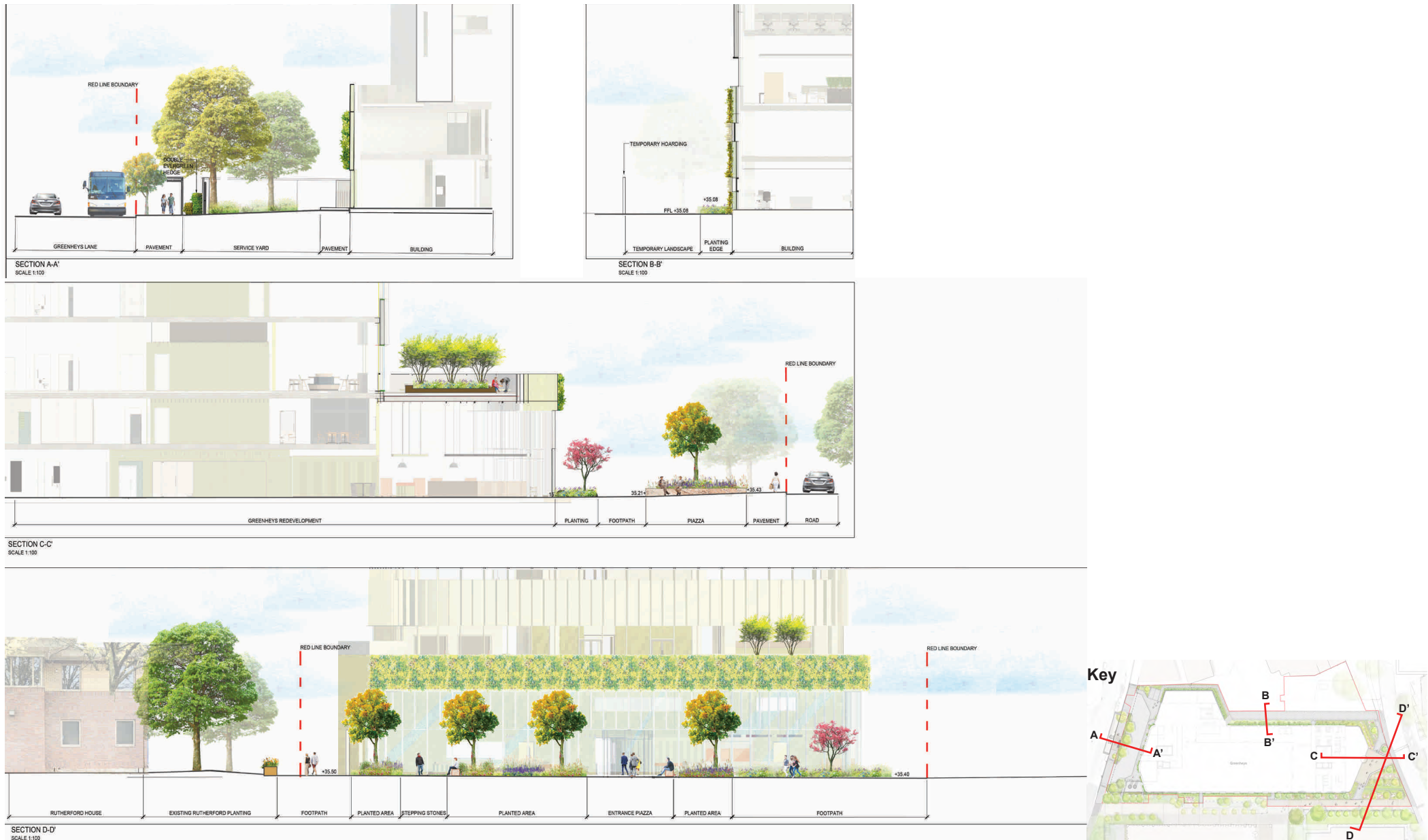
To the east of the building the gradient falls from Pencroft Way towards the building entrance. Within the entrance piazza space, the proposed soft landscape zone shown on the Masterplan can accommodate the change in level. At the point where the piazza ties into Pencroft Way, the gradient varies to respond to existing site topography. There is a 1:50 gradient away from the building. There will be an extension to the existing raised table crossing over Pencroft Way, to create an improved pedestrian connection between Greenheys and Bright Building.

All pedestrian levels will be DDA compliant in accordance with Building Regs. Approved Document Part M. Surfaces will be smooth, even and slip resistant.

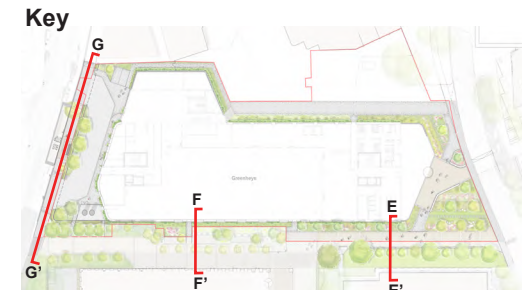
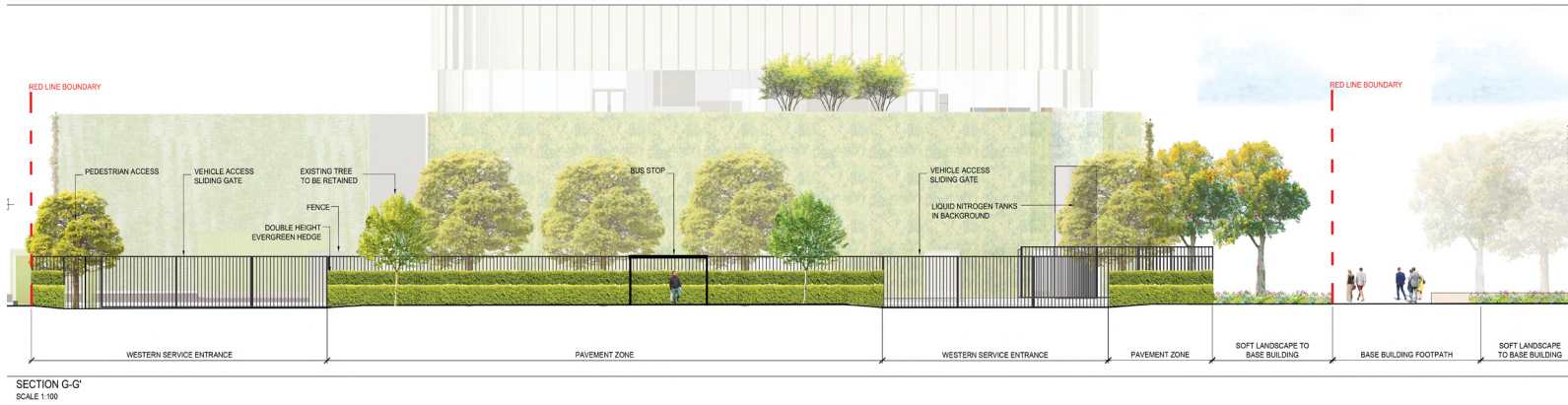
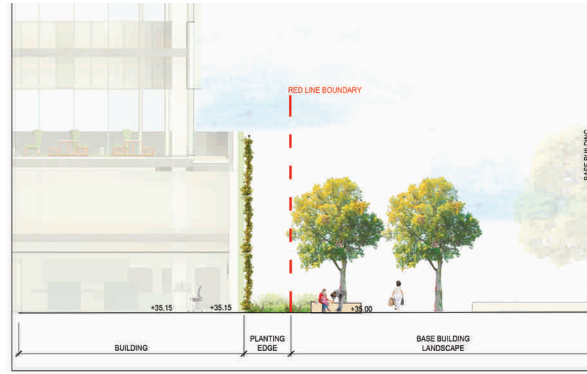
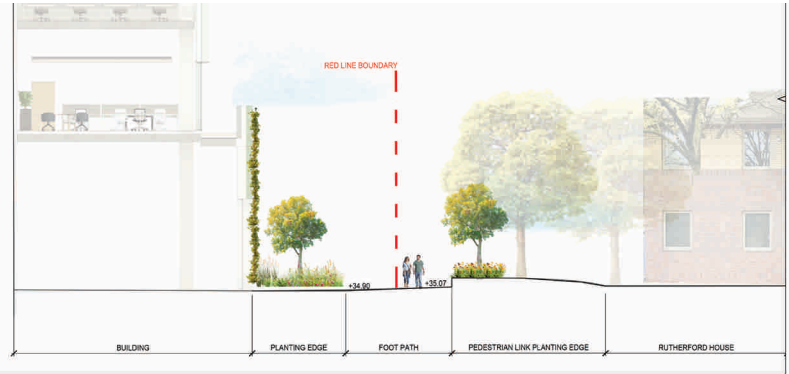
Refer to detailed level drawings as part of planning application, GRE-BDP-ZZ-XX-DR-L-00-501.



8.12 Site Sections



Site Sections

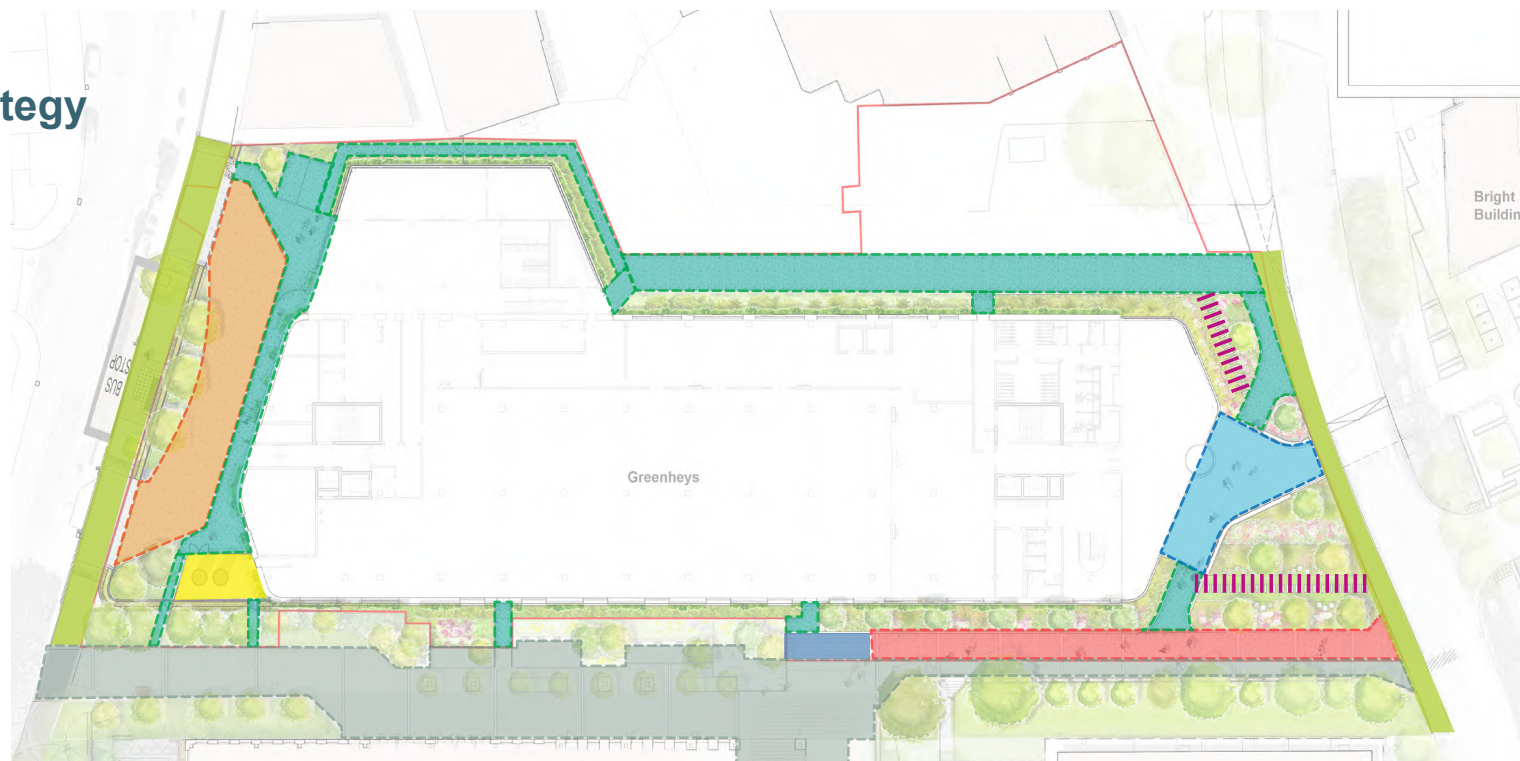


8.13 Hard Landscape Strategy

Hard landscape materiality will be designed to integrate with Bright Building and BASE Building using the same palette of modular concrete paving, with character distinction created through feature paving within the proposed entrance piazza to highlight it as a key destination. Seating / seat walls will be incorporated to create a comfortable and welcoming space, and resting points for pedestrians to enjoy. (Refer to L-00-004 drawing)

Within the western service area the hard surface will be suitable for vehicle overrun and turning, such as interlocking concrete block paving, as per BASE Building service yard.

Across Pencroft Way there is scope to extend the existing raised table, to facilitate level / flush pedestrian movement as a direct connection between Greenheys and Bright Building. During later phases of development the intent is to pedestrianise Pencroft Way, and bring the road level up to pavement level throughout the length of the road.



KEY

- Service yard concrete block paving
- Kellen paving - Grey blend
- Main spine walkway paving to match BASE walkway paving - Kellen warm blend colours
- Natural stone feature paving
- Insitu Concrete
- Tarmac Pavement
- Paving to match BASE piazza paving
- White Granite stepping stones
- Existing Paving



Torbermore City Pave to service yard



Kellen paving grey blend



Main spine walkway paving

8.14 Furniture

The street furniture is planned to be robust and high quality requiring very little maintenance or upkeep.

The materials will be warm and tactile to encourage people to use the space and pause in the piazza, the seat walls will be positioned to welcome and guide the user through the space into the building or to the walkways.

The cube seats will be located in spots within the planting area and lawn, to create a semiprivate and tranquil space.

In Primary spaces such as the Entrance Plaza seat walls will be highlighted at night with feature lighting to add interest and ensure lux levels are sufficient for safety and security.



8.15 Lighting

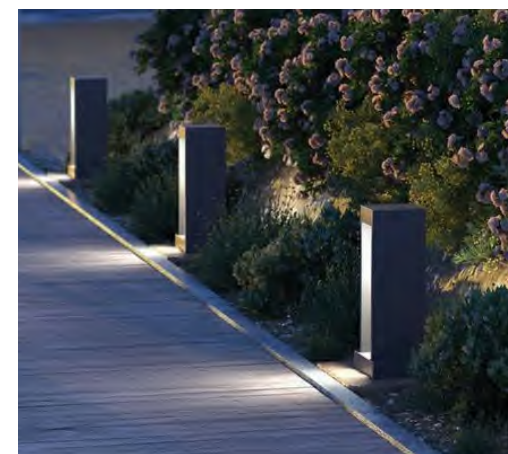
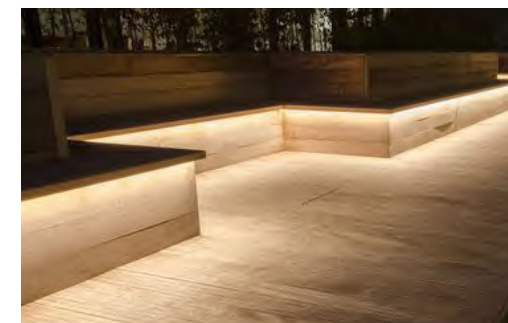
The lighting identifies and illuminates the main pedestrian routes within the site, to secure the health and safety of the visitors throughout the hours of darkness. Sufficient lighting will be provided for a safe environment whilst limiting light pollution to a minimum.

Feature lighting will be selectively employed to enhance the visual appearance of specific elements of landscape and architecture. Elements will be selected and lit according to their inherent form and material, and their relationship to the scheme as a whole.

It will provide effective lighting control to ensure illuminance levels are suitable for the activities taking place whilst also maximising light source life and minimising energy consumption and maintenance.

A cost effective, sustainable and energy efficient system in terms of capital costs and continuing operational use. Select light source types will be chosen for their efficacy, colour rendition and longevity to provide an efficient lighting solution with a predictable maintenance regime.

Lighting images shown to the right are indicative, and subject to final design by lighting designers.



8.16 Planting Strategy

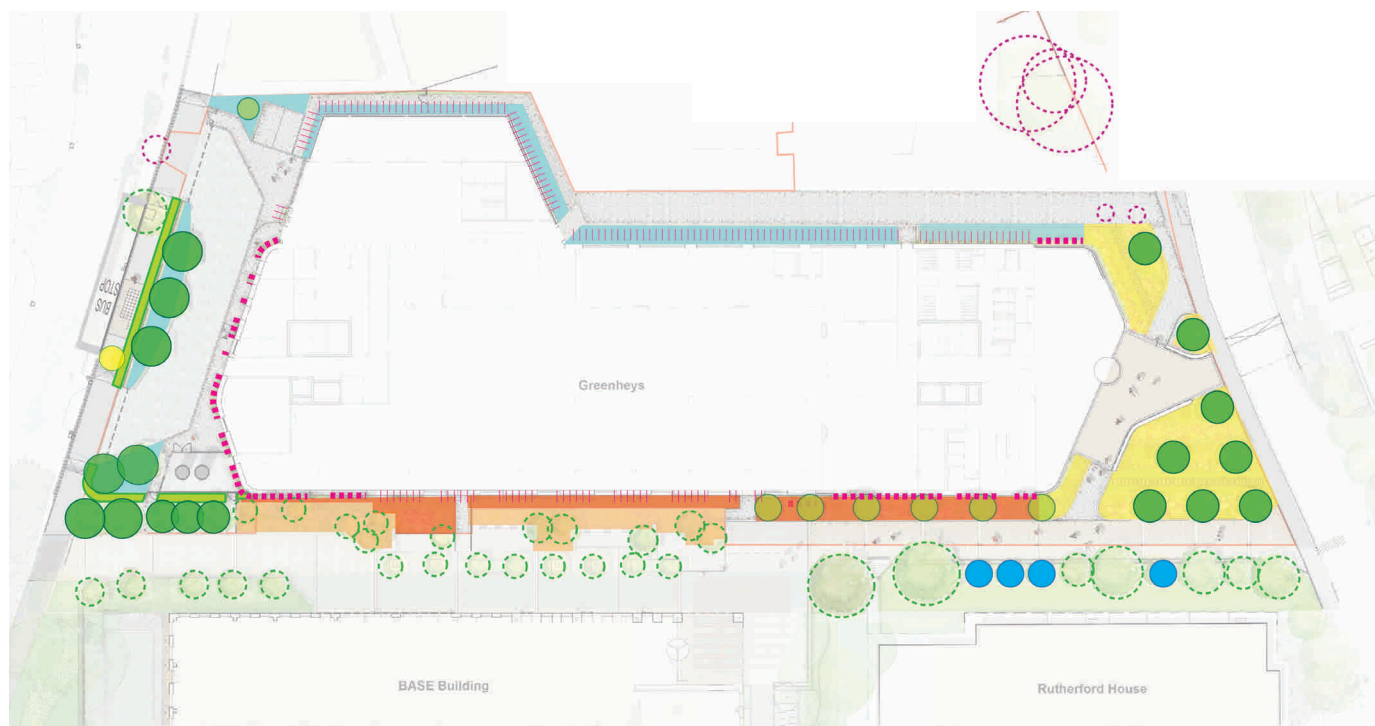
A layered landscape will bring identity and character to the development and continue the 'green wrap' of the building facade around the base of the building. The inclusion of climbing plants, planted green walls and roof terraces will bring vertical textures and colours and give an organic quality to the architecture.

A double height formal hedge will create an attractive boundary along Greenheys Lane, helping to soften the appearance of the 2.4m high secure fence line. Additional street trees and semi-mature trees with evergreen planting in the service yard, will reinforce the existing leafy character along Greenheys Lane and contribute to the public realm amenity value.

Mixed perennials and ornamental grasses, along with feature trees will enhance the building entrance. Tree species will be selected for their ability to filter urban pollutants and have year round interest.

Planting will continue along the southern elevation, where tree species will be selected with a formal habit and clear stems of 2m high, to allow for good visibility along the pedestrian route. The planting will create an attractive all year round interest, and promoting biodiversity and habitat opportunities.

Existing young trees to the north west corner of BASE building are to be repositioned to the pedestrian link between BASE and Bright buildings. New semi-mature and evergreen trees will be introduced to the south west corner of the Greenheys service yard to screen the liquid nitrogen tank and create an instant impact to Greenheys Lane streetscape. (Refer to drawing L-00-202 for further details)



KEY

- ||||| Climbing plant green wall - Stainless steel vertical wire system with climbing plants
- Planted green wall
- ===== Double height instant evergreen hedge to provide a visual layering (H:1000mm, 1500mm)
- () Existing tree to be removed
- Proposed Extra-heavy standard street tree within pavement zone (18 - 20cm girth)
- Proposed Tree - 2m clear stem, semi-mature (25 - 30cm girth)
- Proposed Tree - 2m clear stem, Extra-heavy standard (18 - 20cm girth)
- () Existing tree retained

- Relocated tree
- Green buffer of trees and planting as part of BASE building scheme
- Boulevard Planting - Perennials and ornamental grasses to complement the BASE building planting
- Entrance plaza planting - Open Lawn, Mixed perennials, ornamental grasses
- Boundary planting

8.17 Planting Strategy

Entrance plaza planting



The entrance planting will have a distinct character in colours and texture with accents of bulbs and perennials, species focussing on sensory qualities and increasing biodiversity. Planting consists of a mix of low shrubs, evergreen perennials and trees to create a seasonally attractive entrance.

Open lawn with cube seats and informal stepping stones surrounded by a mix of scented plants releasing the scent as people sit within the area.

Typical tree species include: *Betula utilis*, 2m clear stem semi-mature.

Boulevard planting



Plant species suitable for shade and semi-shade will be used along the pedestrian route. Planting consists of a mix of low shrubs, evergreen perennials, ornamental grasses and trees to create a seasonally attractive boulevard with relaxed sensory qualities.

Typical tree species include: *Liquidambar*, 2m clear stem, extra-heavy standard

Boundary planting



Western boundary double height hedge



Shade tolerant plants with leafy evergreen species, ferns and ornamental grasses punctuated by architectural specimen plants will create a buffer zone to the green walls around the building.

Additionally, to the western boundary a double height hedge will be incorporated to screen the security fence and enhance the street-scape.



Biodiverse species with a long season of flowering interest, to increase biodiversity value. Seasonal / Spring bulbs proposed to extend the flowering season for pollinators.

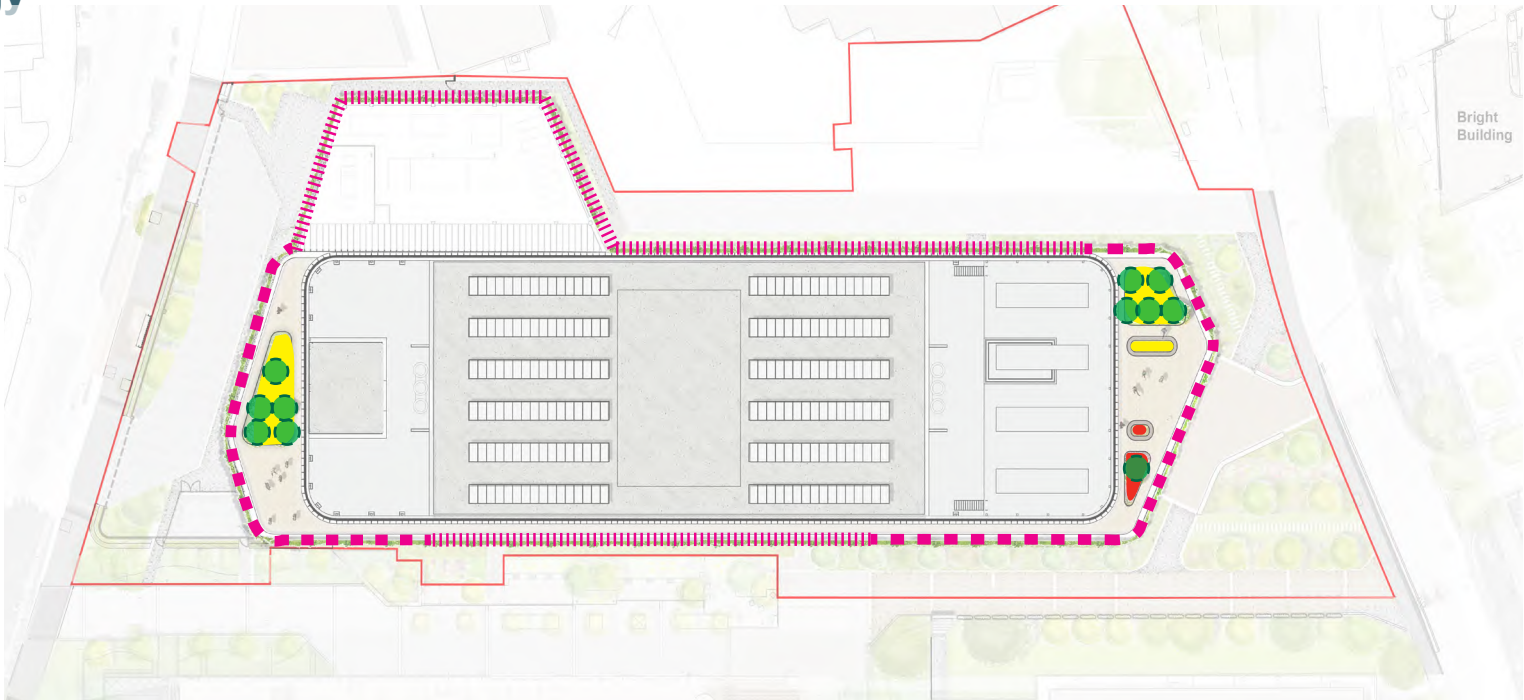
8.18 Roof Planting Strategy

Planting on the first floor terrace will create a relaxing and tranquil space for users, whilst providing additional greenery to the facade when viewed from below. Raised planters will have a layered approach to the vegetation, using different heights of shrubs and perennials, following the building's 'layered' character.

Multi-stemmed native and ornamental trees provide and give bursts of seasonal floral colour to create interest throughout the year and provide an interesting structural form in winter.

Typical tree species include: Multi-stemmed *Amelanchier lamarckii*, *Prunus serrula* and *Acer campestre*.

Typical shrub/herbaceous species include: Ornamental grasses such as *Carex morrowii* 'Everglow', *Hebe* 'Albicans' and herbaceous Perennials ie *Salvia nemerosa* 'Caradonna'.



- KEY**
- Multi stem trees
 - Raised planters with low height shrubs and perennials to create an all year interest, priority for sensory species
 - Raised planters with medium height Shrubs
 - Stainless steel vertical wine system with shade tolerant climbing plants up to first floor
 - Planted green wall up to first floor

8.19 Vertical Greening

Planted green wall



A key element to the building facades are green walls to increase biodiversity and quality of the street scene. Two different systems are included to ensure healthy plants and a full coverage of the walls, this will be both a wired system and planted green walls.

The east and part of the west facades will be screened by planted green walls. Species will include leafy evergreens and ornamental grasses with a mix of textures to create a visual interest and an all year-round cover and interest.

Species suggested but not limited to shown to the right.



Acorus gramineus 'Ogon'



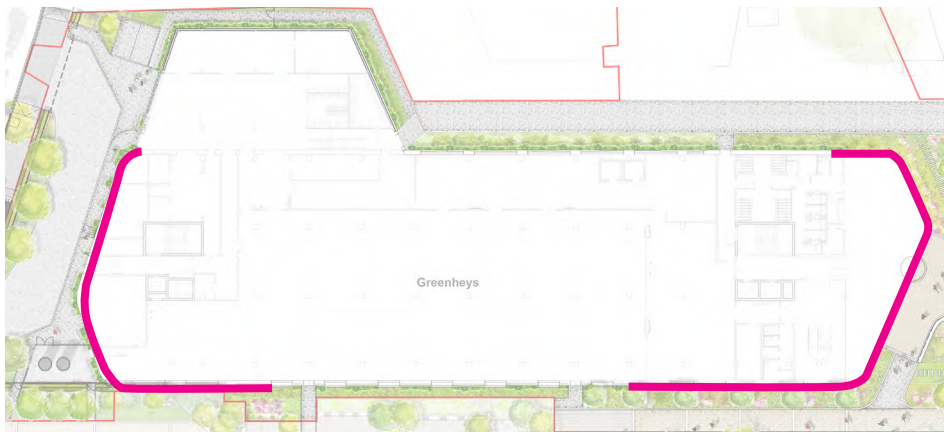
Asplenium scolopendrium wall



Bergenia 'Baby Doll'



Heuchera 'Lime Marmalade'



Tellima grandiflora

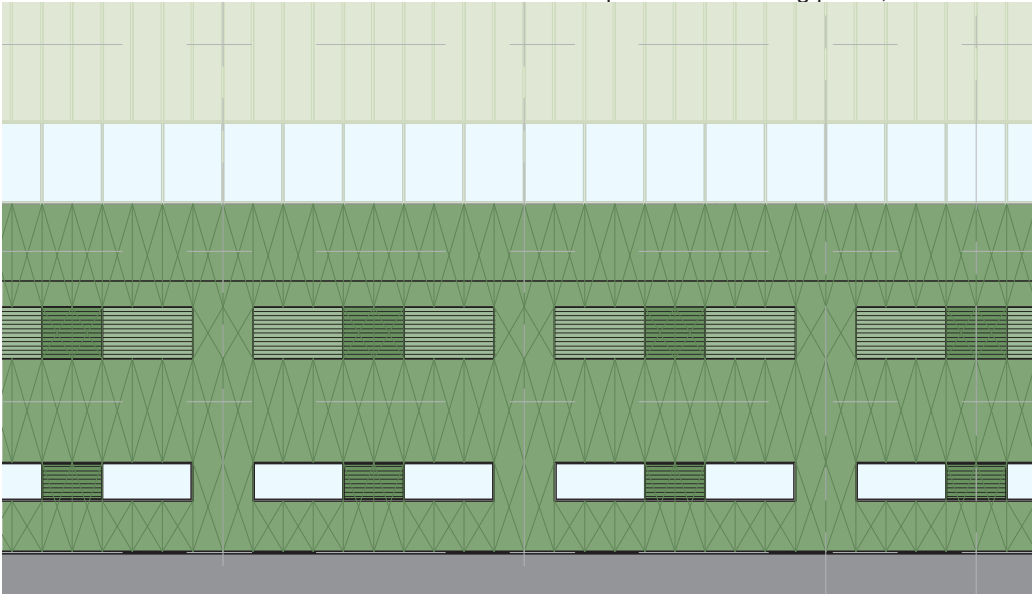


Vinca Major

Climbing plant green wall



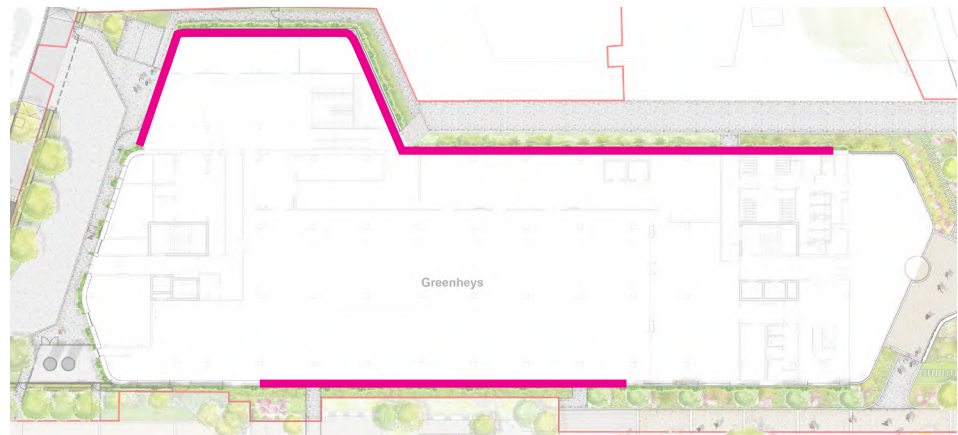
Wire pattern for climbing plants, north facade



Lonicera henrii



Lonicera japonica 'Halliana'



The north and south facades the building will have a wired system with climbing plants.

The plants to consider in the south facade will be evergreen flowering species, to increase the biodiversity value. For the north facade, species will be hardy and resilient to shade.

The adjacent species are recommended evergreen species for south and north facades.



Star Jasmine

A

Appendices

ARCHITECTURAL DRAWING REGISTER

Greenheys Redevelopment

Design & Access Statement Drawing Register

Revision: P04

18th April 2023

00 - GA Existing				
GRE-BDP-ZZ-XX-DR-A-00-001	Existing Site	1:500	A1	P02
GRE-BDP-ZZ-XX-DR-A-00-100	Existing Contextual Elevations	1:300	A1	P02
00 - Site Arrangements				
GRE-BDP-ZZ-XX-DR-A-00-005	Proposed Red & Blue Line	1:1000	A1	P06
GRE-BDP-ZZ-XX-DR-A-00-006	Proposed Site Plan	1:500	A1	P04
20 - General Arrangement				
GRE-BDP-ZZ-00-DR-A-20-900	General arrangement - Ground floor	1:200	A1	P02
GRE-BDP-ZZ-01-DR-A-20-900	General arrangement - First floor	1:200	A1	P02
GRE-BDP-ZZ-02-DR-A-20-900	General arrangement - Second floor	1:200	A1	P01
GRE-BDP-ZZ-03-DR-A-20-900	General arrangement - Third floor	1:200	A1	P01
GRE-BDP-ZZ-04-DR-A-20-900	General arrangement - Fourth floor	1:200	A1	P01
GRE-BDP-ZZ-05-DR-A-20-900	General arrangement - Fifth floor	1:200	A1	P01
GRE-BDP-ZZ-06-DR-A-20-900	General arrangement - Sixth floor (Plant)	1:200	A1	P01
GRE-BDP-ZZ-07-DR-A-20-900	General arrangement - Roof	1:200	A1	P01
GRE-BDP-ZZ-XX-DR-A-20-100	General arrangement - North Elevation	1:250	A1	P12
GRE-BDP-ZZ-XX-DR-A-20-101	General arrangement - South Elevation	1:250	A1	P11
GRE-BDP-ZZ-XX-DR-A-20-102	General arrangement - West Elevation & East Elevation	1:250	A1	P11
GRE-BDP-ZZ-XX-DR-A-20-103	General arrangement - Sections A & B	1:250	A1	P07
GRE-BDP-ZZ-XX-DR-A-20-109	Contextual Elevations	1:300	A1	P03
GRE-BDP-ZZ-XX-DR-A-20-110	Contextual Elevations	1:300	A1	P03
21 - External Walls				
GRE-BDP-ZZ-XX-DR-A-21-901	Section 01	1:50	A1	P01
GRE-BDP-ZZ-XX-DR-A-21-902	Section 02	1:50	A1	P01
GRE-BDP-ZZ-XX-DR-A-21-903	Section 03	1:50	A1	P01
GRE-BDP-ZZ-XX-DR-A-21-904	Section 04	1:50	A1	P01
GRE-BDP-ZZ-XX-DR-A-21-905	Section 05 & 06	1:50	A1	P01

LANDSCAPE DRAWING REGISTER

Greenheys Redevelopment

Design & Access Statement Drawing Register

Revision: P02

18th April 2023

Planning Drawings				
GRE-BDP-ZZ-XX-DR-L-00-002	Landscape Masterplan	1:250	A1	P06
GRE-BDP-ZZ-XX-DR-L-00-003	Landscape Roof Terrace Masterplan	1:250	A1	P04
GRE-BDP-ZZ-XX-DR-L-00-004	Landscape Paving Materials Plan	1:250	A1	P03
GRE-BDP-ZZ-XX-DR-L-00-008	Landscape Planting Strategy Plan	1:250	A1	P03
GRE-BDP-ZZ-XX-DR-L-00-009	Landscape Planting Strategy Plan Upper Floor	1:250	A1	P03
GRE-BDP-ZZ-XX-DR-L-00-101	Landscape General Arrangement Plan	1:250	A1	P06
GRE-BDP-ZZ-XX-DR-L-00-102	Landscape General Arrangement Plan Roof Floor	1:250	A1	P04
GRE-BDP-ZZ-XX-DR-L-00-201	Tree Constraints Plan	1:250	A1	P03
GRE-BDP-ZZ-XX-DR-L-00-401	Landscape Long Sections Sheet 1 of 2	1:100	A1	P01
GRE-BDP-ZZ-XX-DR-L-00-402	Landscape Long Sections Sheet 2 of 2	1:100	A1	P02
GRE-BDP-ZZ-XX-DR-L-00-501	Landscape Levels Strategy Plan	1:250	A1	P04
GRE-BDP-ZZ-XX-DR-L-00-601	Typical Tree Pit Details	1:20	A1	P02
Outline Materials Matrix				
GRE-BDP-01-XX-SP-L-0001	Materials Matrix Landscape Specification	N/A	N/A	P02

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