



Cardiff Edge Design and Access Statement

Corstorphine & Wright

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Revision Log

Revision	Date	Notes
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1.0 Introduction

1.1 Overview

This document supports the proposed development of a new two storey office/laboratory building and a new two storey multi-use hub building (café/gym/workspace) with associated parking and landscaping

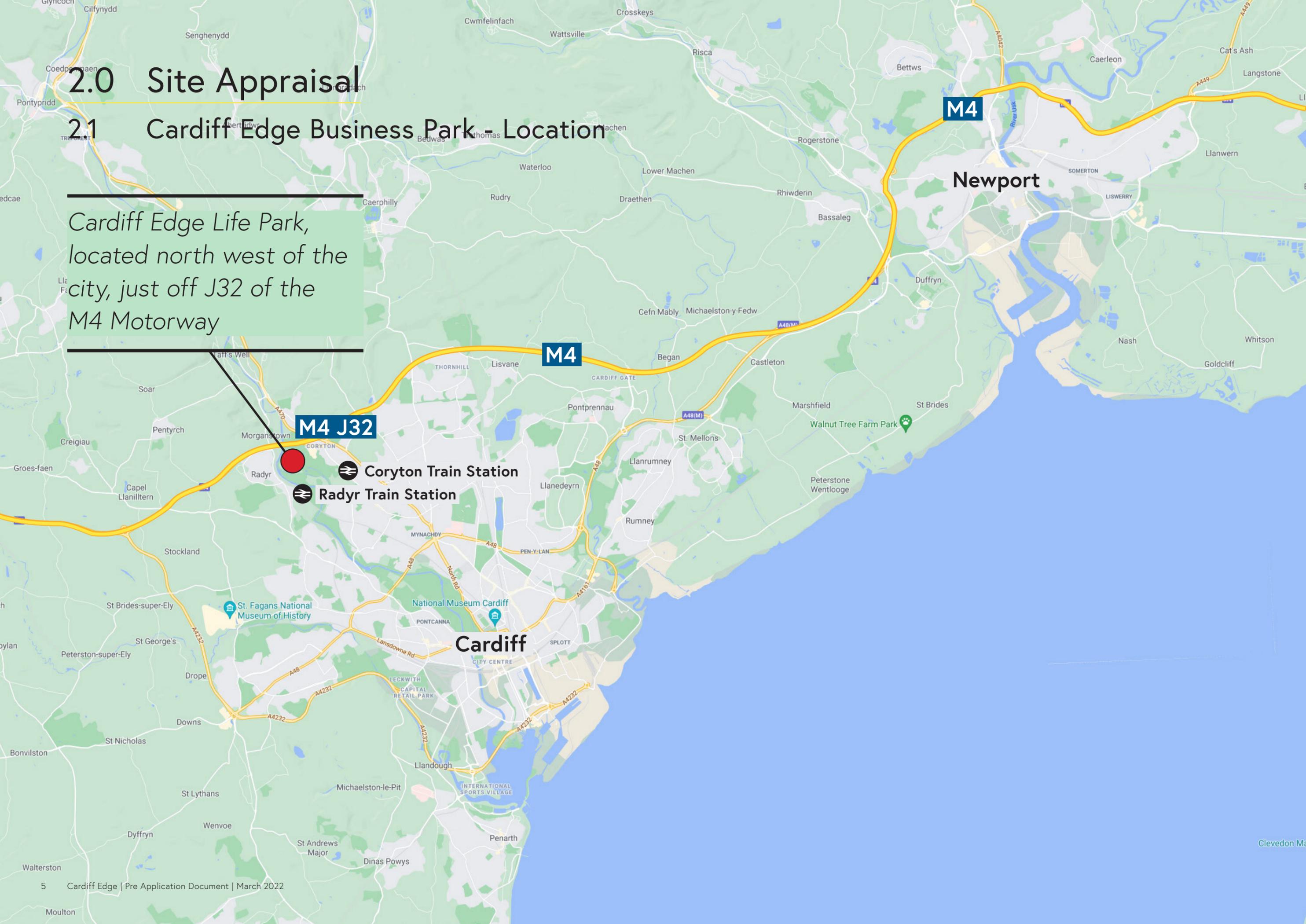
To facilitate early delivery and enable the science park to be more attractive for future/current tenants, an early, Full Application for an office/laboratory building and a hub are being progressed. A subsequent Outline Application to include the whole park and associated improvements will be submitted at a later date.



2.0 Site Appraisal

2.1 Cardiff Edge Business Park - Location

Cardiff Edge Life Park, located north west of the city, just off J32 of the M4 Motorway



M4 J32

 **Coryton Train Station**
 **Radyr Train Station**

Cardiff

2.2 The Existing Park

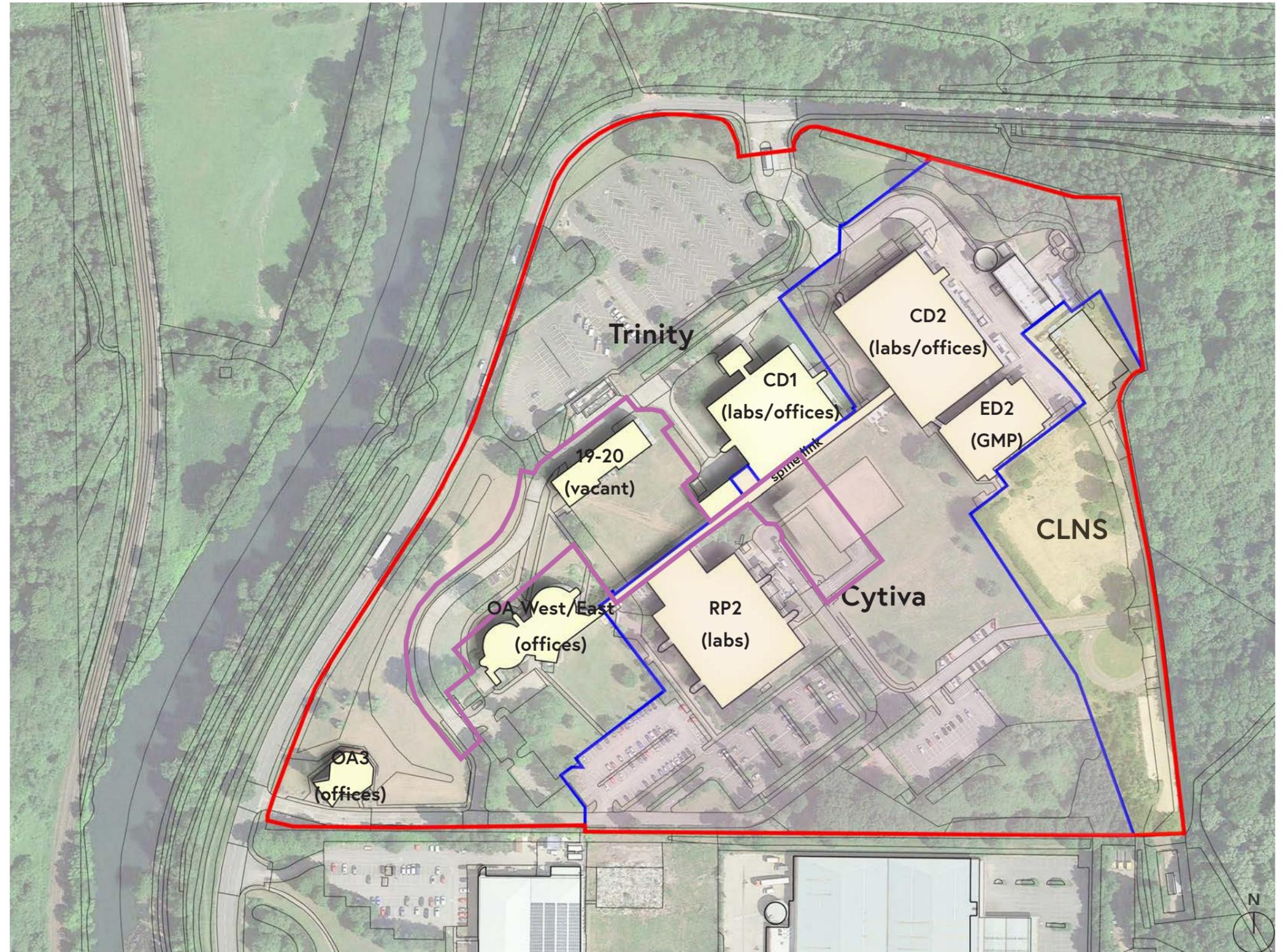
Cardiff Edge is a 27-acre Business Park. It was acquired by WAPG and Harrison Street April 2021.

It comprises life sciences, R&D and office space extending to 180,000 sq ft across seven buildings, which are 98% let.

Existing occupiers include Cytiva (who let the south of the park) and the UK Government's Department for Environment, Food and Rural Affairs (Defra), with a significant laboratory pre-let under offer.

The NHS will occupy building CD1 and have taken 200 spaces in the car park to the north.

The make up of the park is a series of double height offices and warehouses linked by a double height 'spine' corridor. Comparing the original built form to today a number of the building have been since removed or reconfigured with subsequent development.



- Total Ownership
- Land Let to Cytiva
- Application Boundary

2.3 We Are Pioneer Group (WAPG)

Trinity took a strategic decision to focus a core part of its business on the life science sector back in 2015 and since then it has acquired with its partners nine Science Parks totalling in excess of 2.6 million sq ft. The floorspace comprise a mix of labs, offices, manufacturing, storage and amenity facilities. As the science parks have thrived under Trinity's management there are now approximately 7,000 people working in more than 600 companies across the parks.

Trinity are currently seeing a step change in activity in the life sciences sector and the Government's support of the sector, including the availability of grant funding, is having a positive impact on growth. Trinity want to ensure that all their parks have the expansion space to meet this demand and contribute towards the creation of new skilled jobs opportunities. We are seeing strong demand from science and health related businesses who want to come to Cardiff Edge if we can deliver the purpose built space they require. Cardiff Edge is currently one of the smallest parks we own but we see the opportunity to make it one of the best if we can improve its critical mass and offering.

Trinity has always been focused on innovation and providing not only the type and quality of space that businesses need but creating an ecosystem which supports growth and collaboration. This led to the creation of the Knowledge Factory.

Trinity's recent acquisition of BioCity, the largest UK life science incubation and accelerator business, takes the services and support it can provide to SMEs to the next level and fulfils a long held aspiration to become the UK's leading operator in this sector. To capitalise on this Trinity has created the 'We Are Pioneer Group' ('WAPG') through the merger of its Knowledge Factory brand with BioCity.

WAPG is expanding its accelerator programme to help early stage firms scale up more quickly by navigating them through the early fund raising stages and by connecting them with potential partners and promoting tech transfer between universities, research institutions and the private sector. 35 new companies have been identified and grown through the accelerator programmes to date, attracting £63M worth of investment and, creating many new jobs. These include companies such as, BiVicTriX Therapeutics and Roylance.

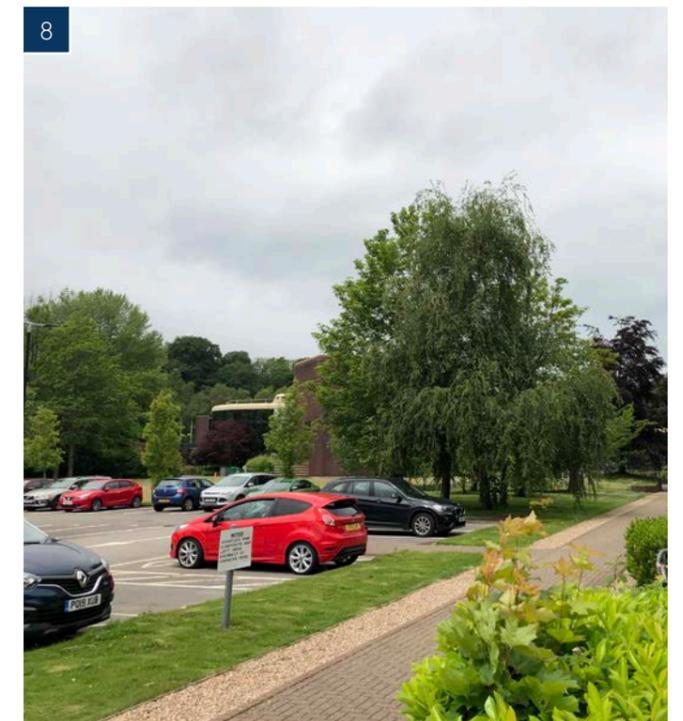
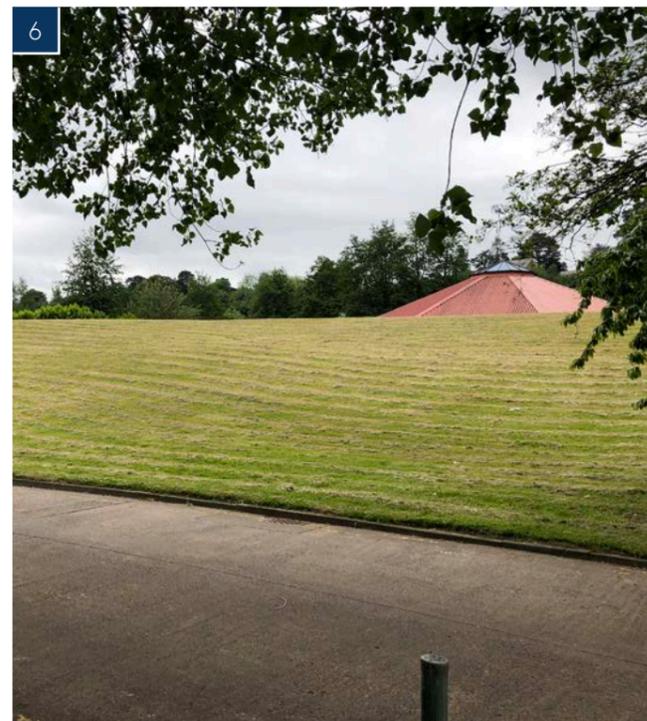
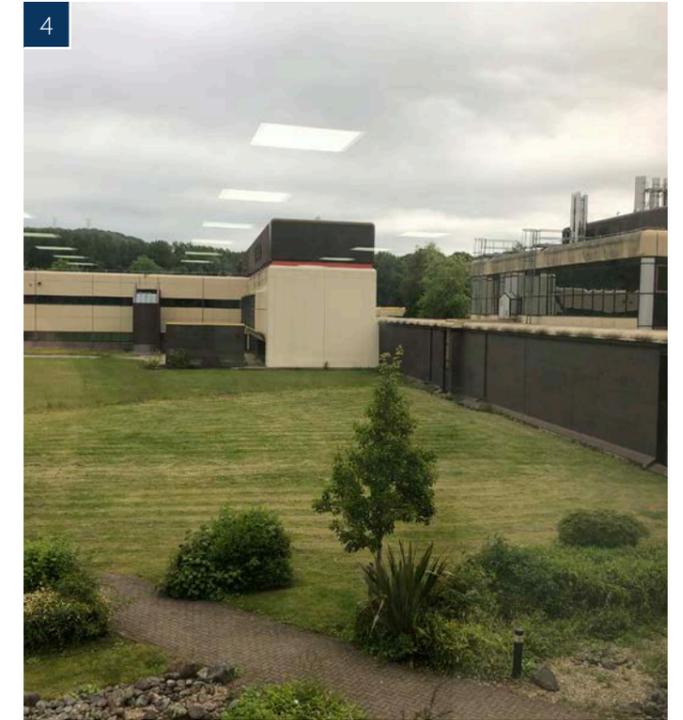
WAPG has unique knowledge of the UK life science and innovation sectors through their national coverage. Through this Trinity has a better understanding of how to create and grow ecosystems which is the focus at Cardiff Edge and it will aim to identify five to 10 new companies a year at Cardiff Edge investing several hundred thousand into each successful company through their early stage development.



3.0 Photographic Assessment

- 1. OA West/East
- 2. Spine Link
- 3. View from Spine Link
- 4. Southern Access Road

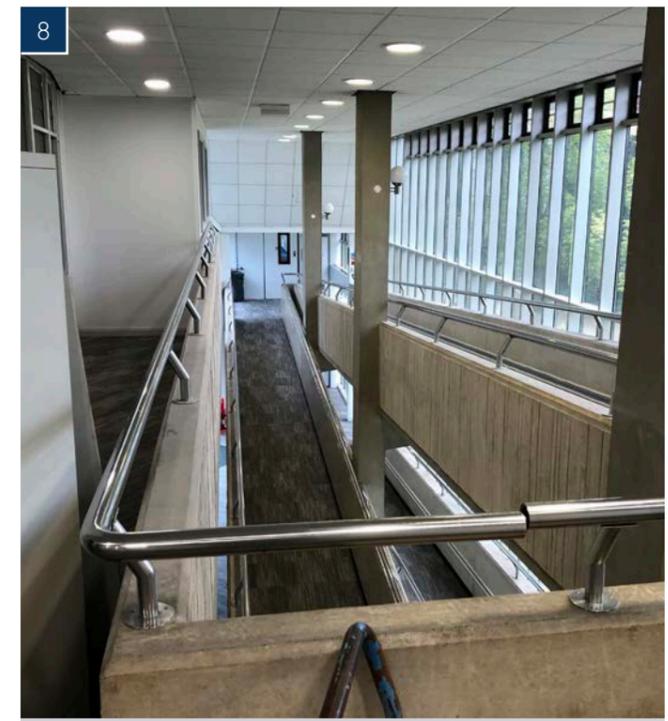
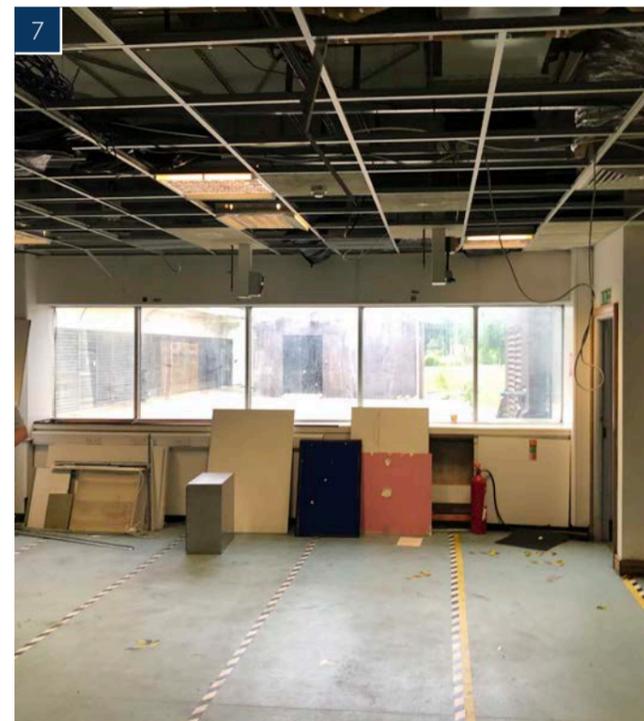
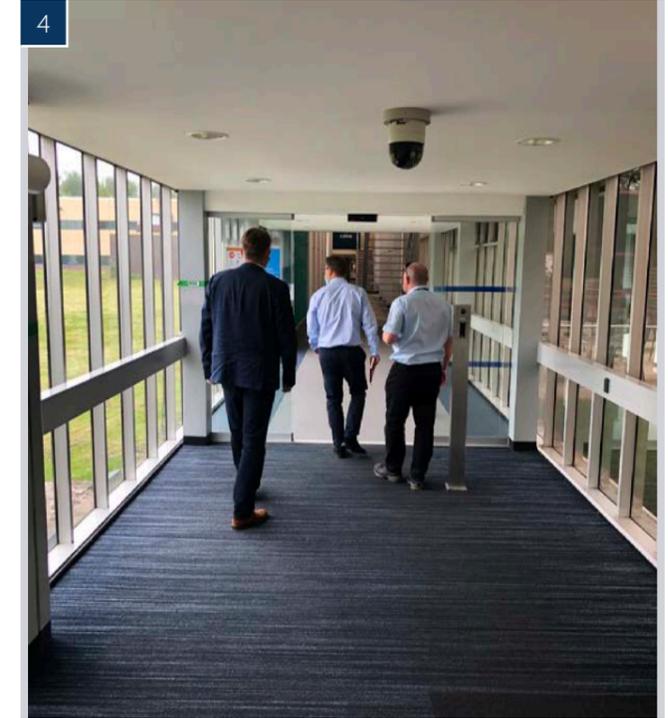
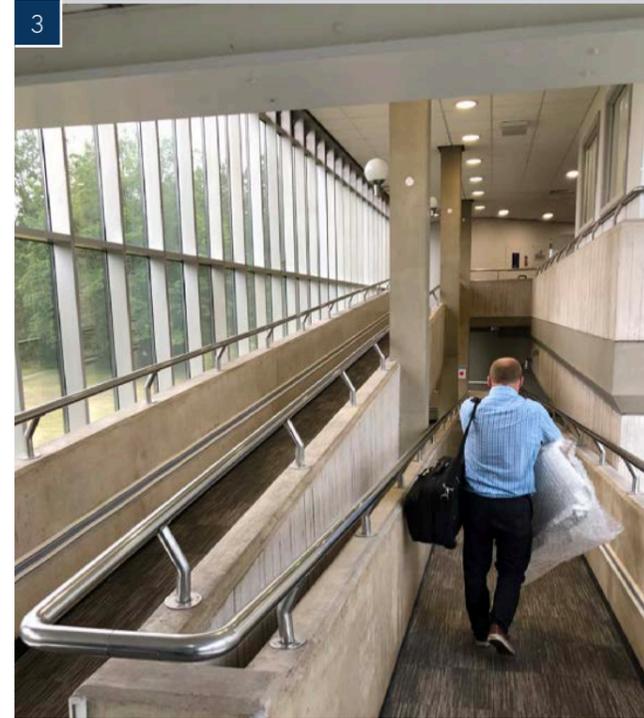
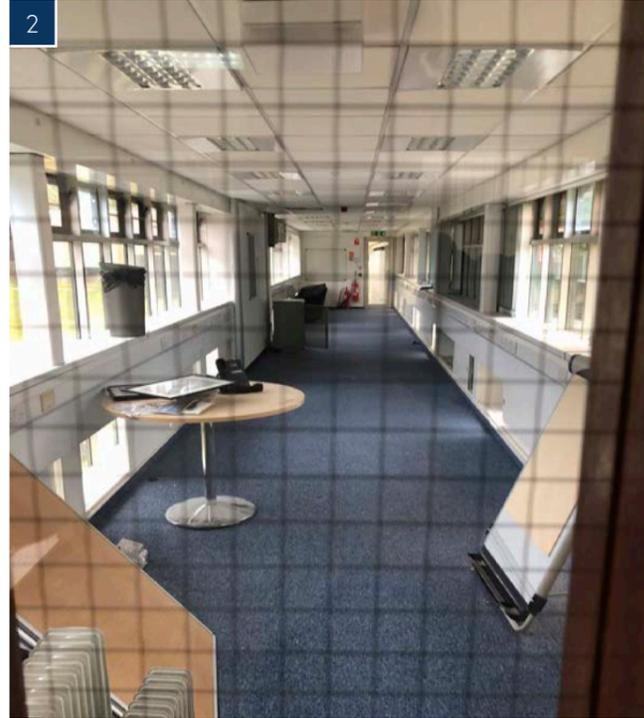
- 5. Bunding near OA3
- 6. Building 19
- 7. Car Park 4



3.1 Photographic Assessment

- 1. Service Area adjacent to CD1
- 2. Upper Level Spine Link
- 3. Ramps in Spine Link near OA East
- 4. Lower Level Spine Link

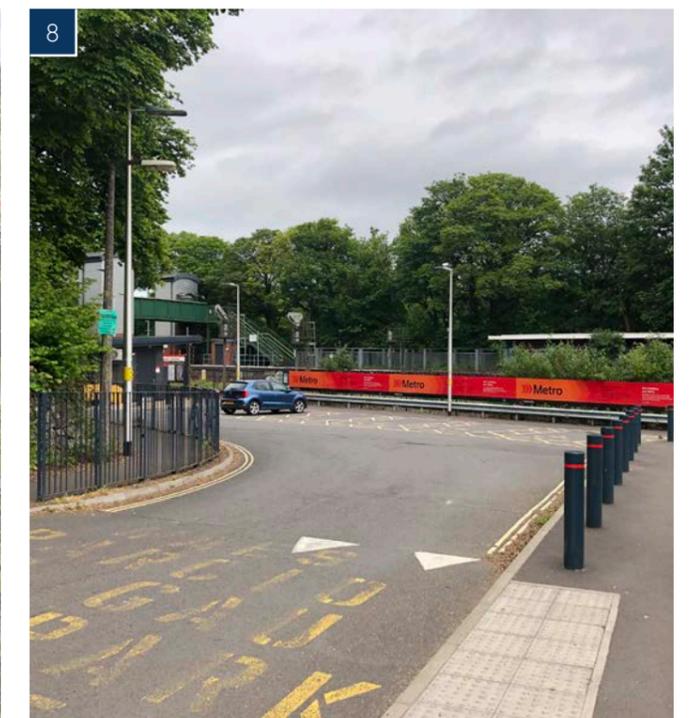
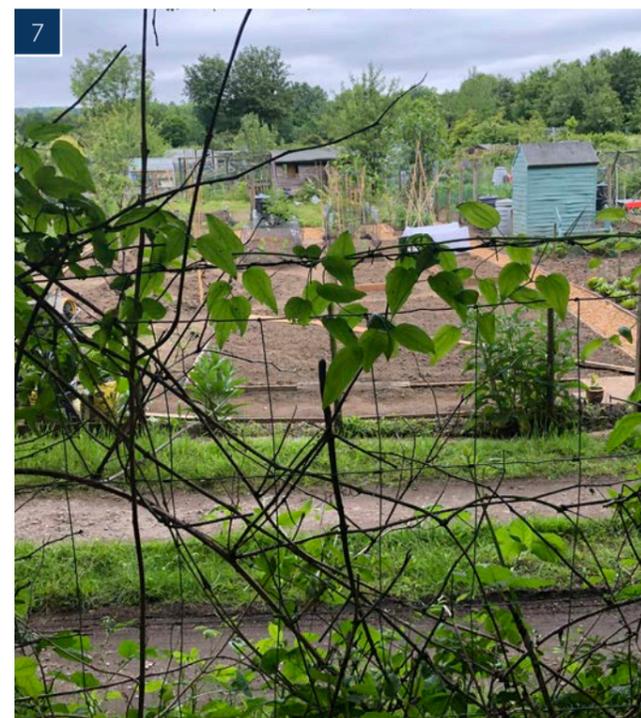
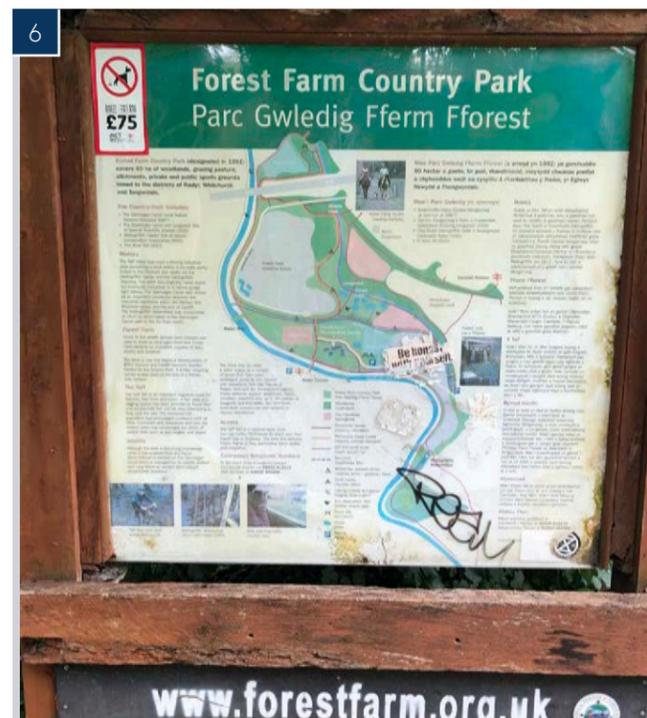
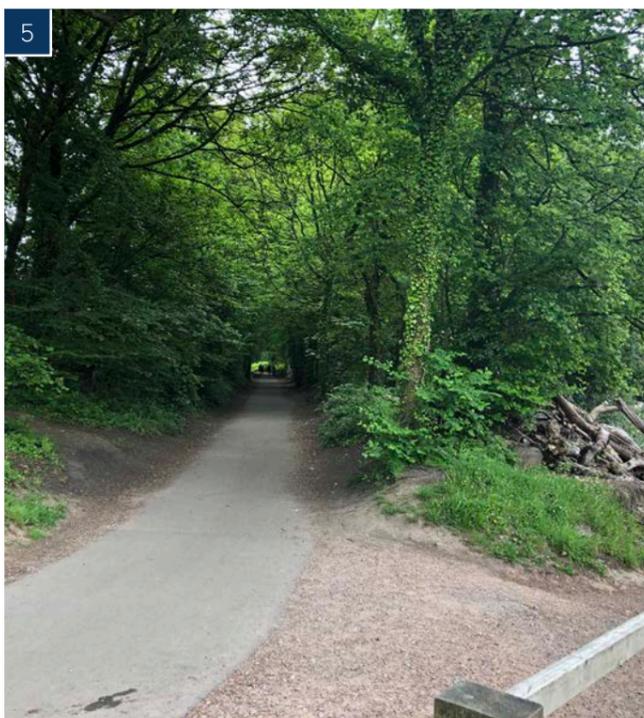
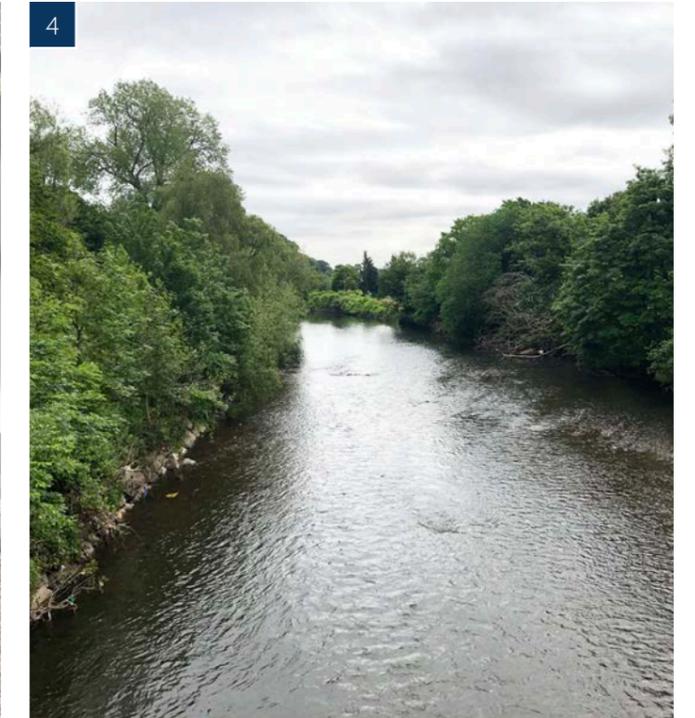
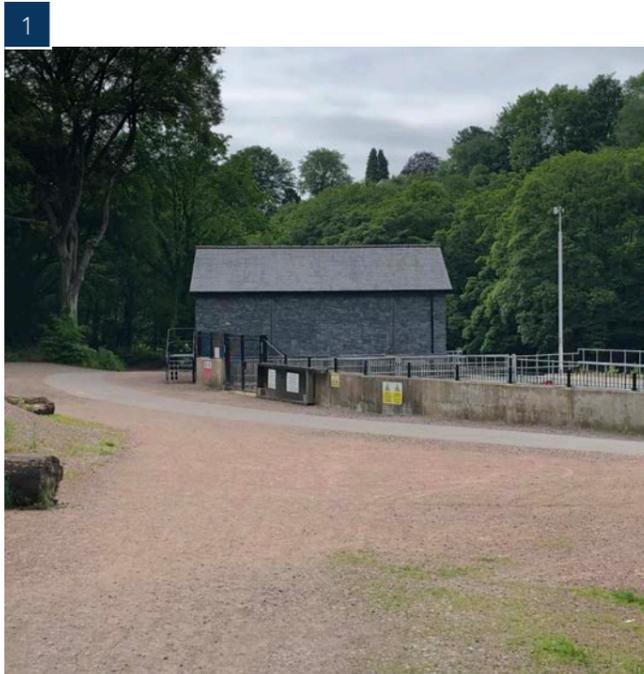
- 5. Interior of CD1
- 6. Reception of OA West/East
- 7. Interior of CD1
- 8. Ramps in Spine Link



3.2 Photographic Assessment

1. Radyr Weir
2. Radyr Weir
3. Radyr Weir
4. River Taff

5. Route to Radyr Train Station along the Taff
6. Forest Farm Country Park
7. Allotments along the route
8. Radyr Station

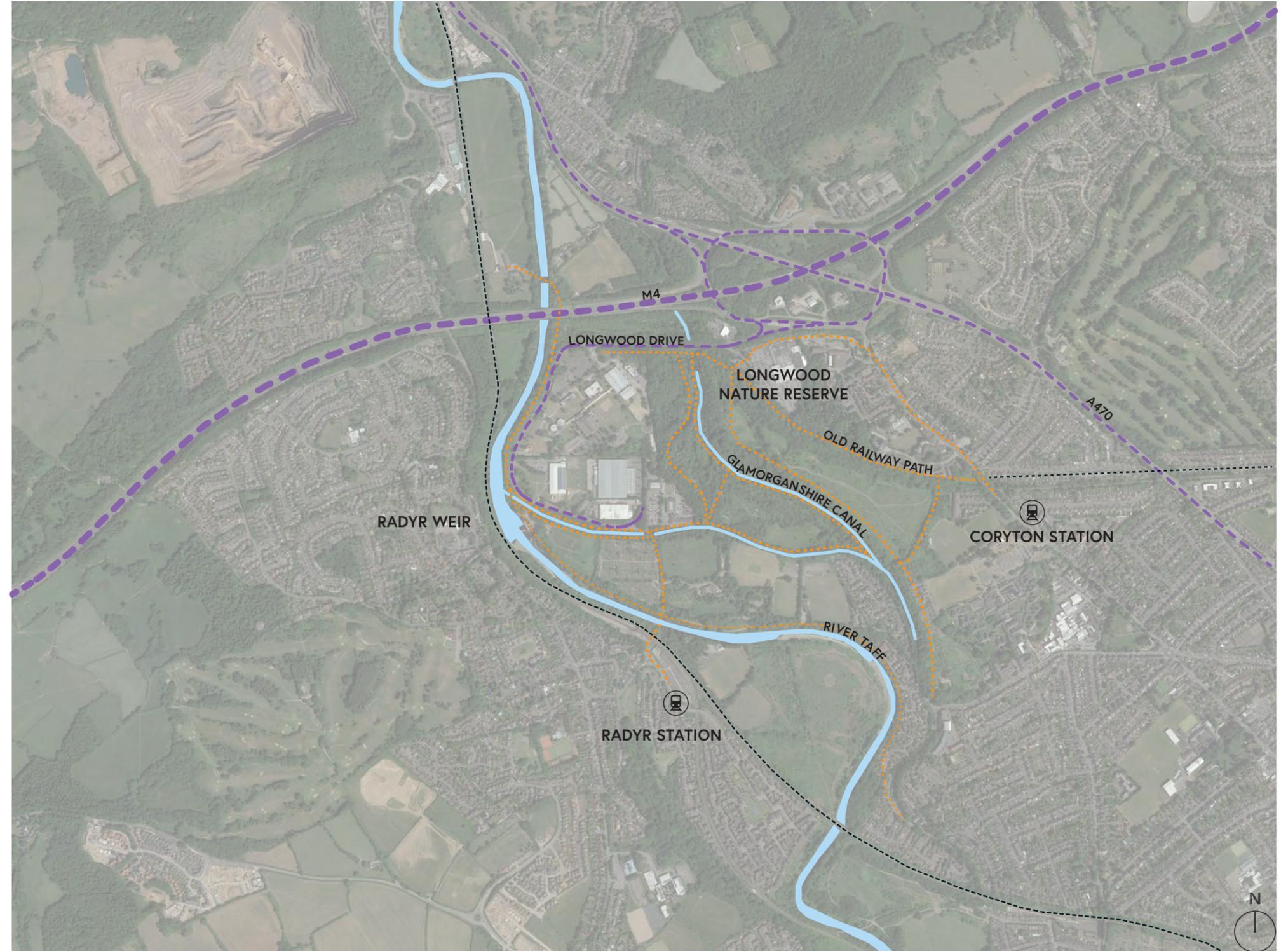


3.3 Site Wide Connectivity

The site can be accessed from the M4 via Longwood Drive.

The nearest accessible railway station is Radyr Station, approximately a 15 minute walk away.

There is an existing cycle route along the River Taff.



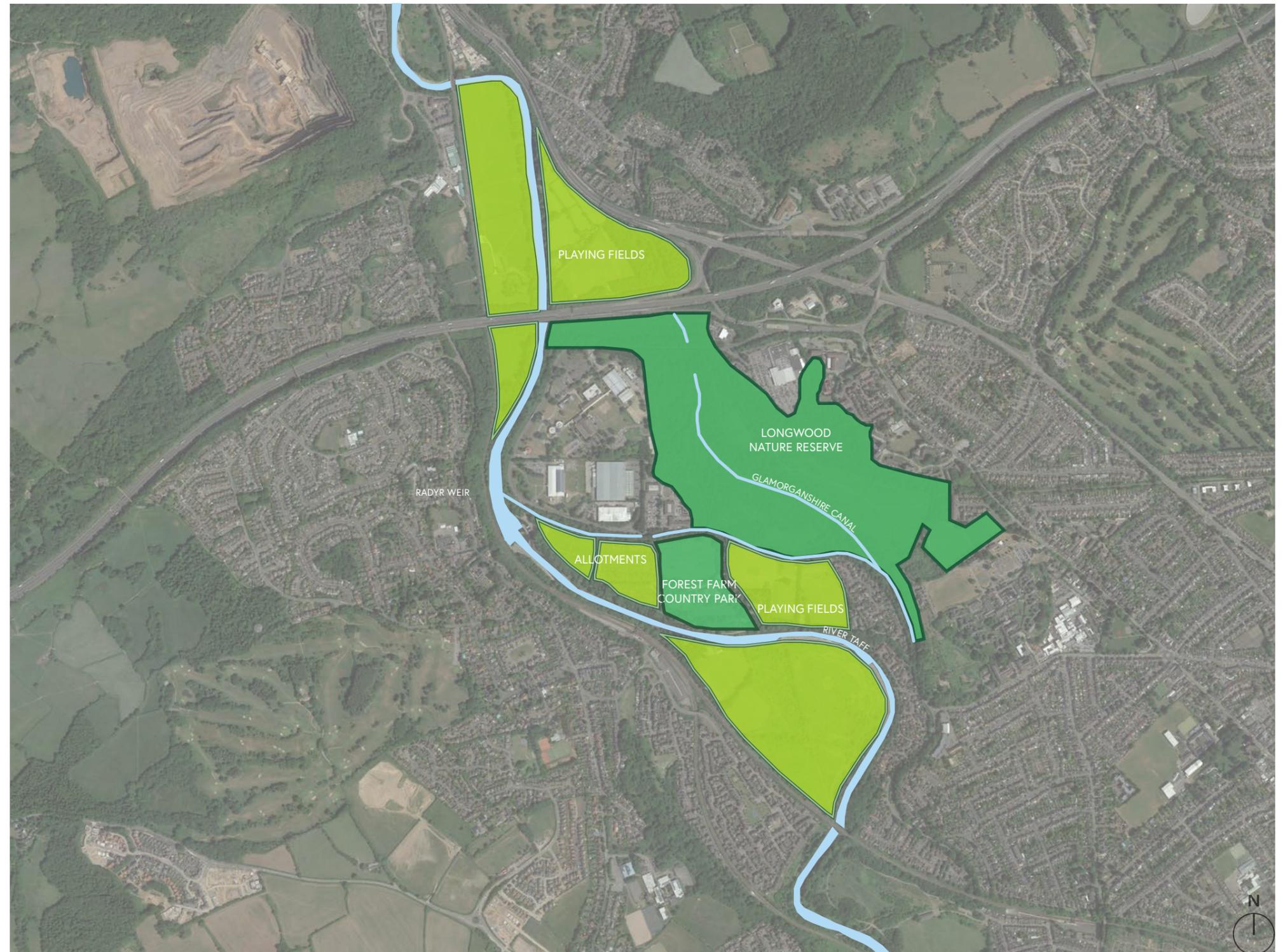
- Key:
- Pedestrian/ Cycle Route
 - Vehicular Route

3.4 Blue/Green Infrastructure

The park benefits from established river and canal setting as well as wooded and open green spaces.

This includes the River Taff which runs to the west of the site and Glamorgan Canal to the south east.

The Longwood Nature Reserve, Forest Farm Country Park and green space around the Taff create contribute to a rich natural surrounding to the perimeter of the park.

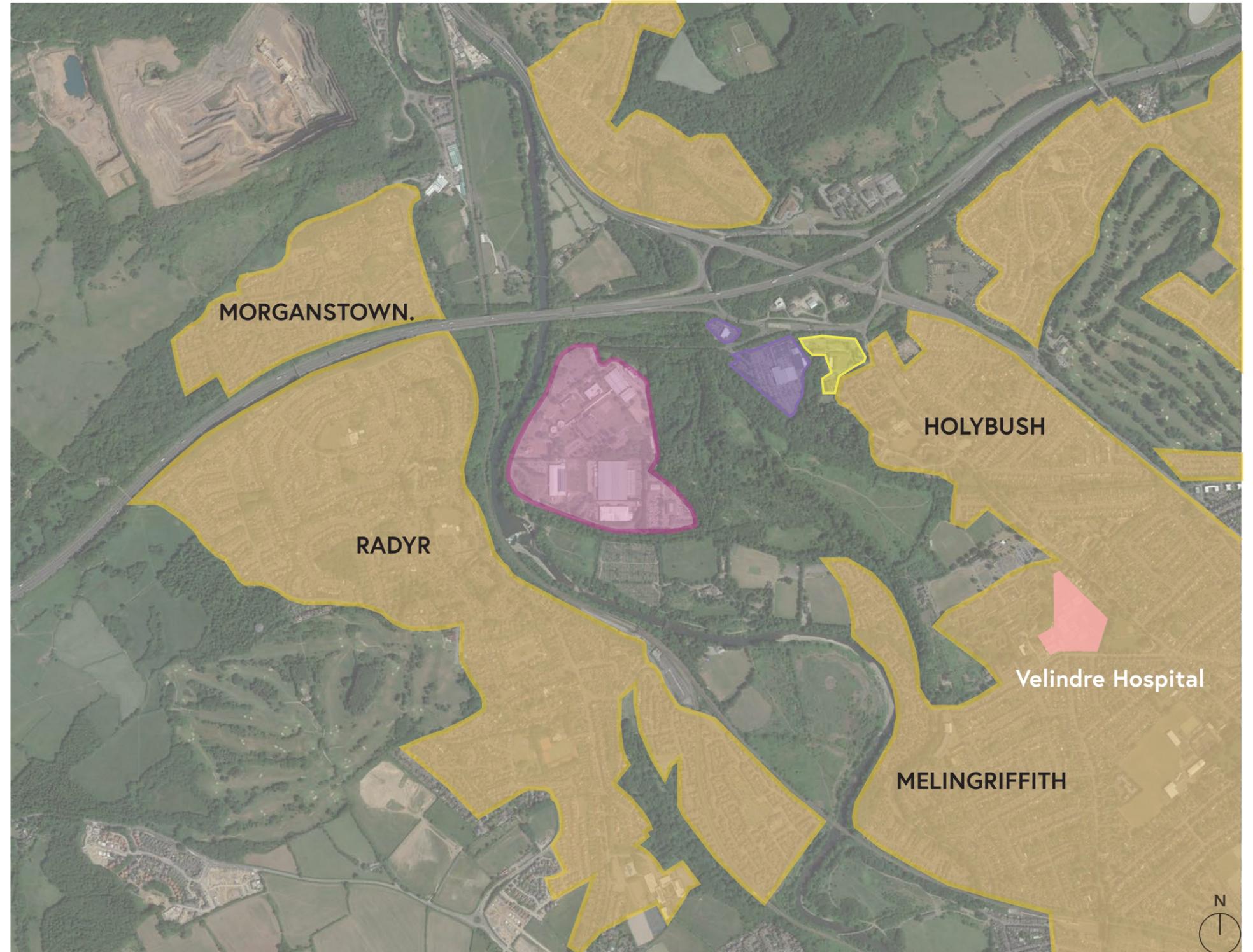


3.5 Existing Uses

The park and area to the south is occupied by commercial units and classified as an employment area.

To the east of the site is edge of town retail which includes a supermarket, drive through units and a hotel.

The site is surrounded by the residential neighbourhoods



Uses:

- Residential
- Employment
- Hospitality
- Retail
- Healthcare

3.6 Site Constraints

The topography of the site existing site has a 3m drop from north to south. The site is generally graded with the exception of the bank from the plateau of car park 1 and a turfed bund on the south-west edge of the site.

The existing vegetation is in clusters around the site, with the largest grouping on the south eastern boundary.

All the buildings are currently occupied with the exception of unit 19/20.



Key:

- P Parking
- Building
- Vegetation
- Bunding

4.0 Involvement

As part of the design process there have been a number of pre-application discussions as well as site visits.

The application of the principles set out in the Whitchurch Forest Farm Vision was encouraged in the current and future developments.

The **Whitchurch Forest Farm Vision** sets out masterplan for the employment zone and surrounding area.

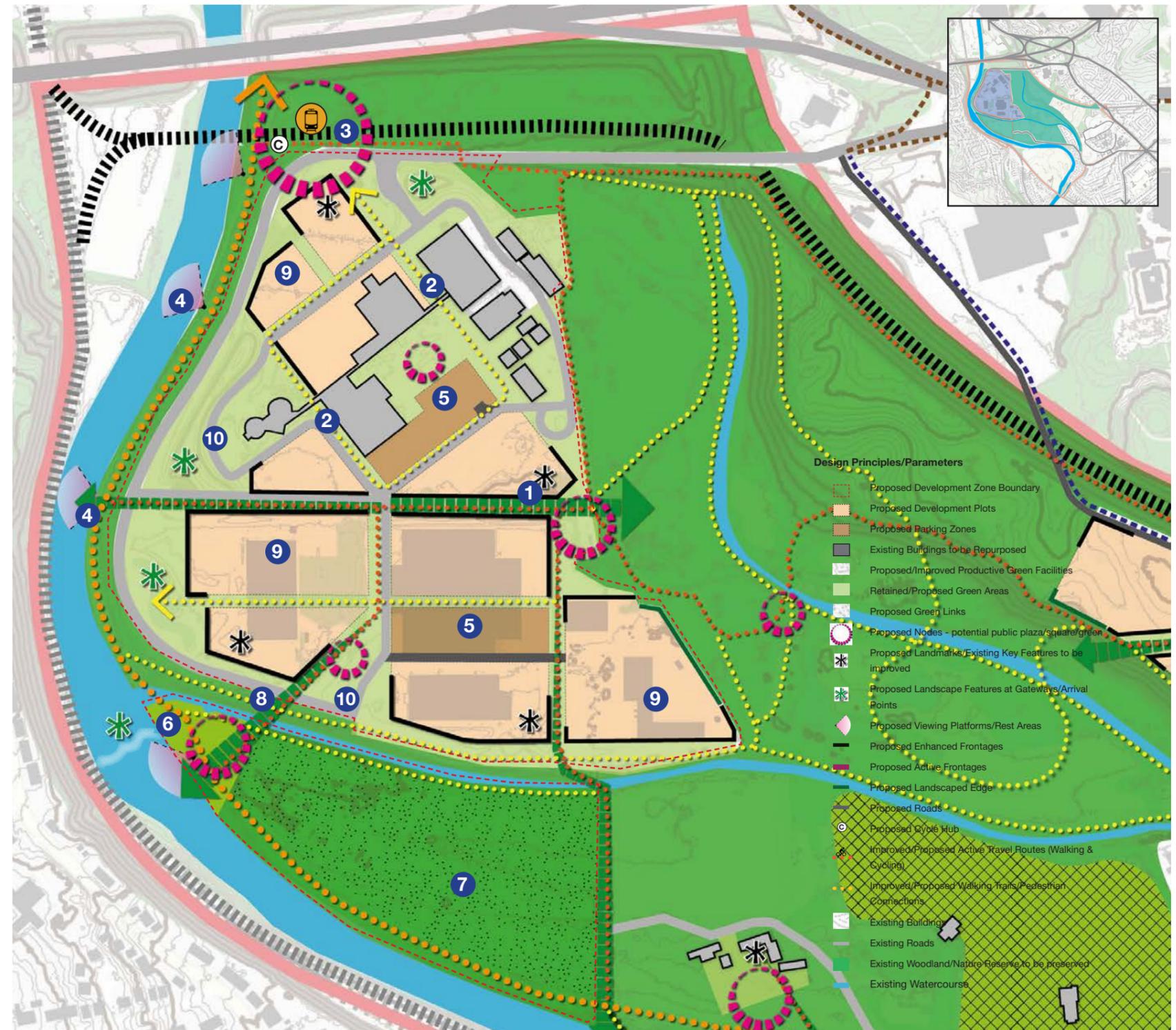
The extract adjacent references the secure campus option from page 35 of the document.

Included in the vision is a new Longwood Metro Station, north of the park.

The vision sets out development components, many of which are environmental and landscape led. This includes the creation of a green network in and around the site.

As discussed the although some of the principles can be applied, the need for a secure campus for existing and potential occupiers means aspirations for public connectivity would not be possible.

It was agreed that a new secure connection should be made on the south east corner to create a link to the Nature reserve, Velindre Hospital and Coryton Station.



Green Network



Metro station

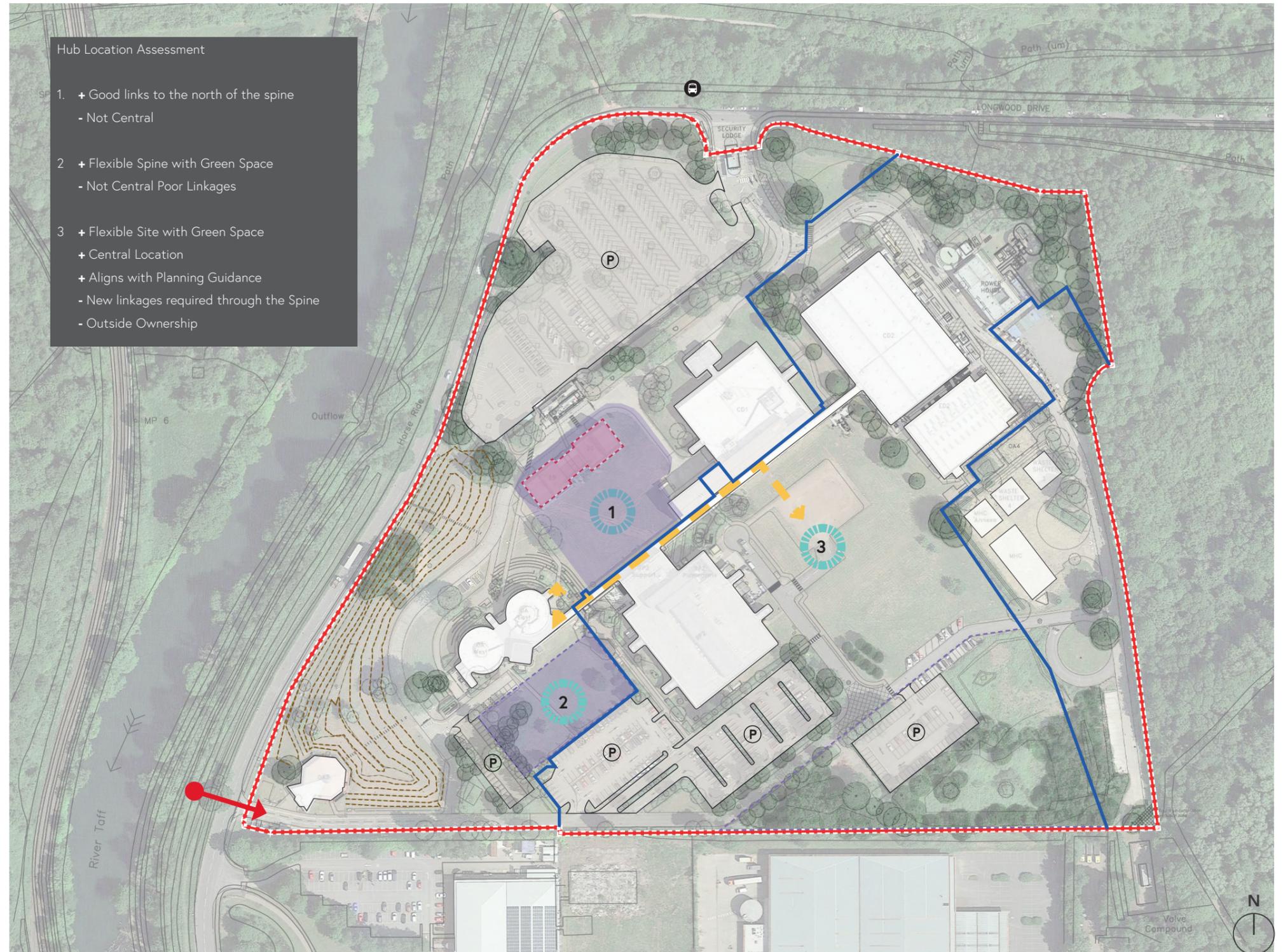
5.0 Evaluation

5.1 Site Considerations and Opportunities

There are a number of potential sites around the park that will provide opportunities for development a majority of which where buildings have been demolished.

Within the ownership the largest most unconstrained site sits to the south of building 19/20.

A number of location were assessed to determine the position of the new amenity. Position 3 was considered as the most desirable though it will be important to create a north south link through the spine.



6.0 Design

6.1 Application Masterplan

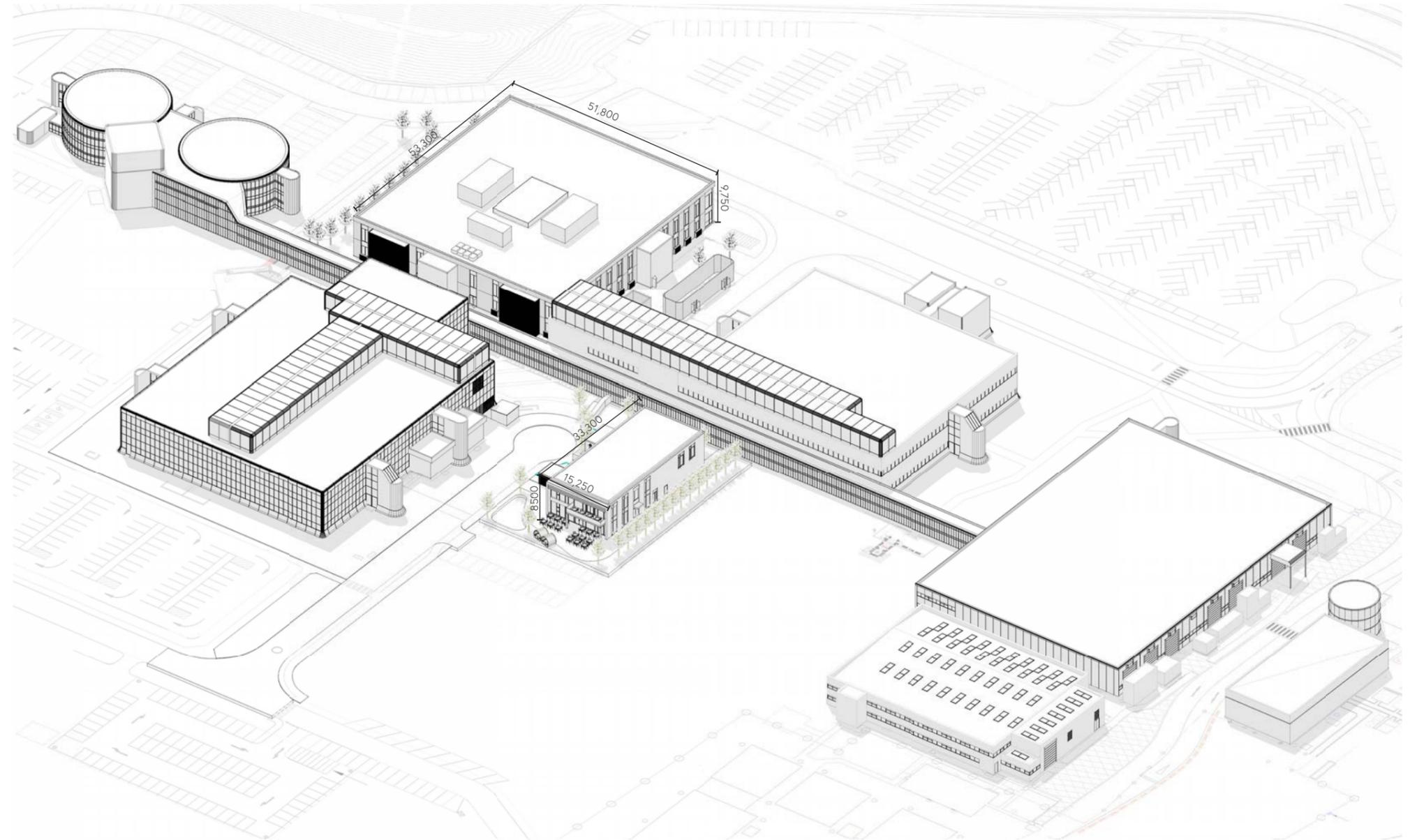


6.2 Scale

The massing and scale of the new development are comparable to the context.

Both developments comprise of two levels.

The new laboratories are equivalent to building RP2 and not much larger in scale than the original building that sat on the site of building 19/20.



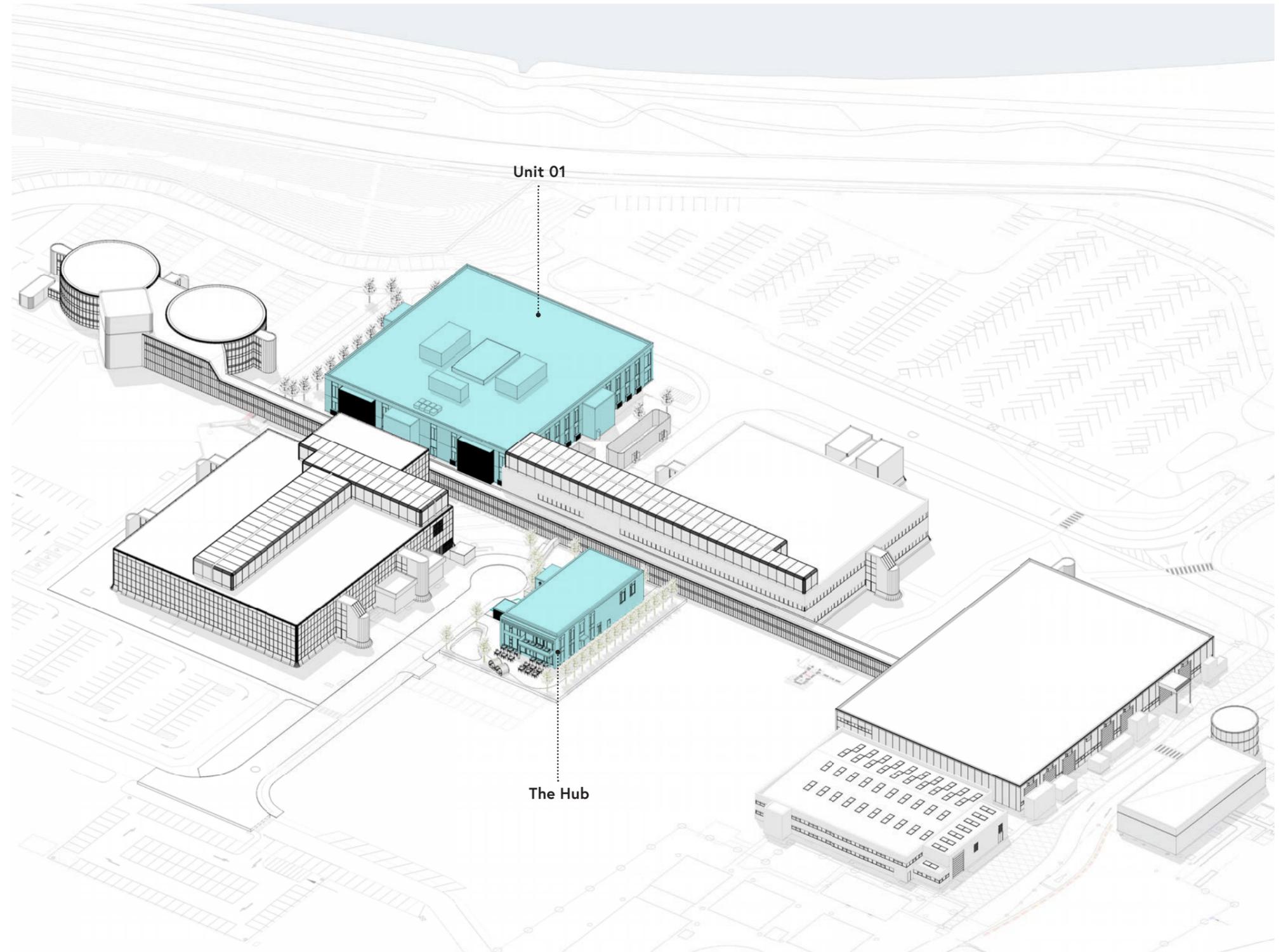
6.3 Use & Amount

The new development will comprise of:

Office/Lab - 5,055m²/54,400 sqft

The Hub - 918m²/9878 sqft

Total - 5,973m²/64,269 sqft



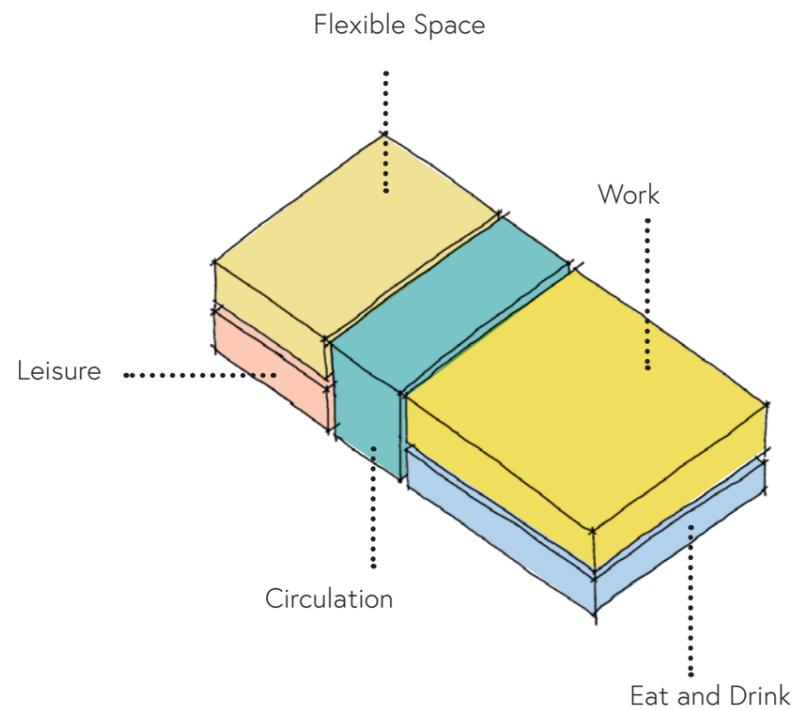
7.0 The Hub

7.1 Design Evolution

As previously discussed, the current park lacks a heart, an informal focal point for collaborative working and sharing of ideas.

The intention is that the Hub performs this role, as well as its primary function as amenity space

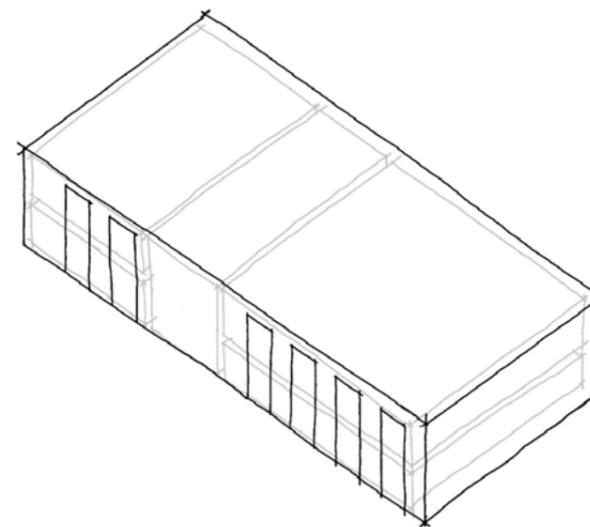
A number of locations were tested as part of the design process. The pros and cons of the location were assessed. The selected location was thought to be the most suitable in the park current context and future expansion.



FUNCTION

Uses that respond to the requirements of the current and future park

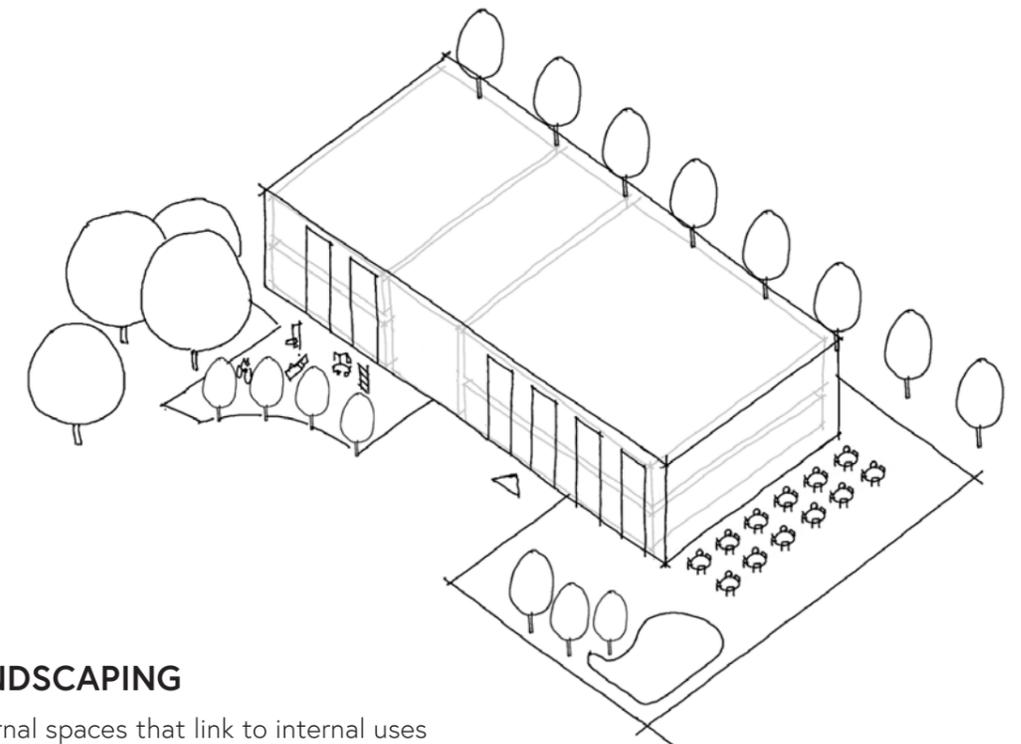
Flexible spaces that can adapt to the changing workplace habits



ARCHITECTURAL PRINCIPLES

Vertical emphasis in the architecture

Where appropriate fenestration that links the inside and outside environments.



LANDSCAPING

External spaces that link to internal uses

Bin stores and cycle stores integrated into the landscape scheme

Natural attenuation

7.2 Case Study - The Hub - Kent Science Park

The development will follow similar principles to new hub building that have been successful other WAPG life science parks, in terms of providing a focal, collaborative amenity space. This includes the Hub at Kent Science Park and The Pioneer Building at Technopole, Edinburgh.

The Hub at Kent Science Park houses high-quality catering with state-of-the-art conference facilities. The double-height café utilises the ground floor for everyday use and the upper mezzanine level available when required.

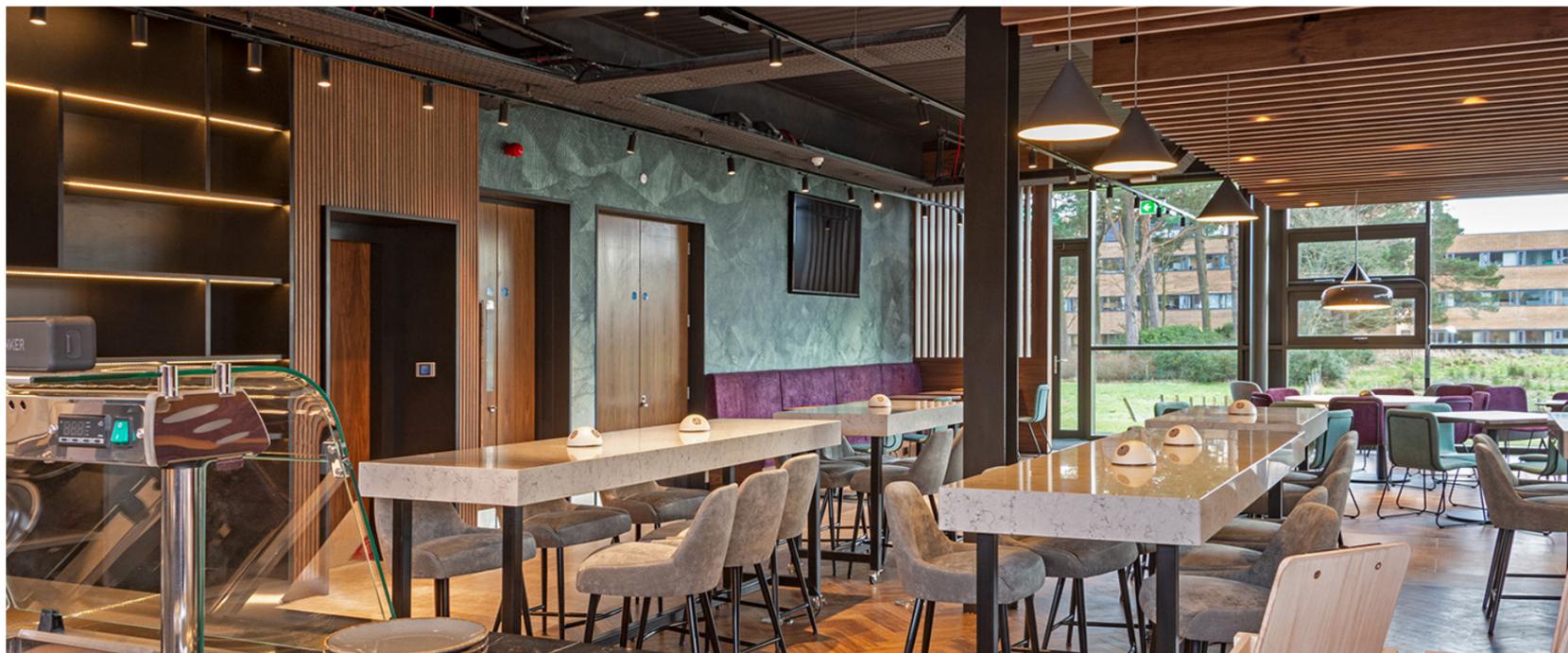
The upper floor acts as breakout space for the meeting rooms and for dining at larger meetings and conferences. The flexible meeting space can be configured to provide 1 to 3 meeting rooms, or up to 170 people in theatre-style seating.

The Hub is the heart of daily life at KSP and is creating a community



7.3 Case Study - Pioneer Building, Technopole, Edinburgh

The Pioneer Building is the brand new collaborative heart of Edinburgh Technopole. It looks out onto the parkland and provides our occupiers with premier meeting and collaboration facilities. The restaurant offers a variety of meals with locally sourced ingredients and can be booked for catering or private events.



7.4 Site Layout

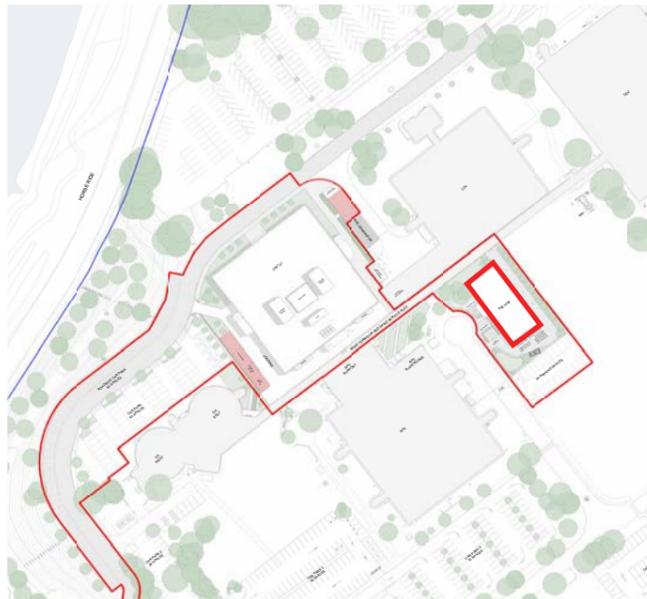
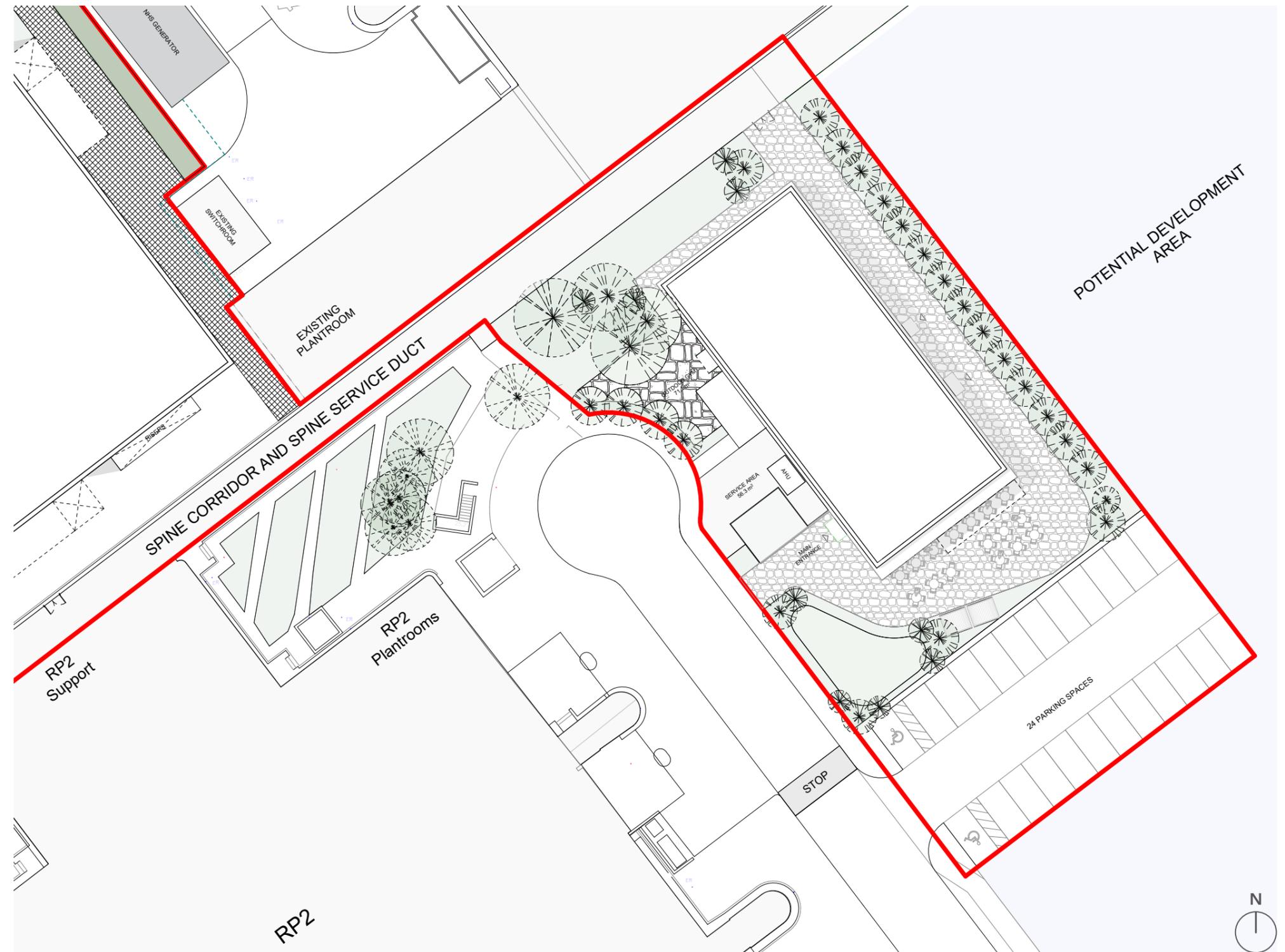
The new building sits on the south of the central spine corridor. It will link in from the existing southern exit point from the spine which leads to front entrance and cafe space.

The intention is to create a new link from the spine to access the east side of the building via a landscaped route. This will also link in with the gym and office facilities.

The outdoor spaces will accommodate for external seating, events and an outdoor gym.

The existing landscaping around the site will be enhanced.

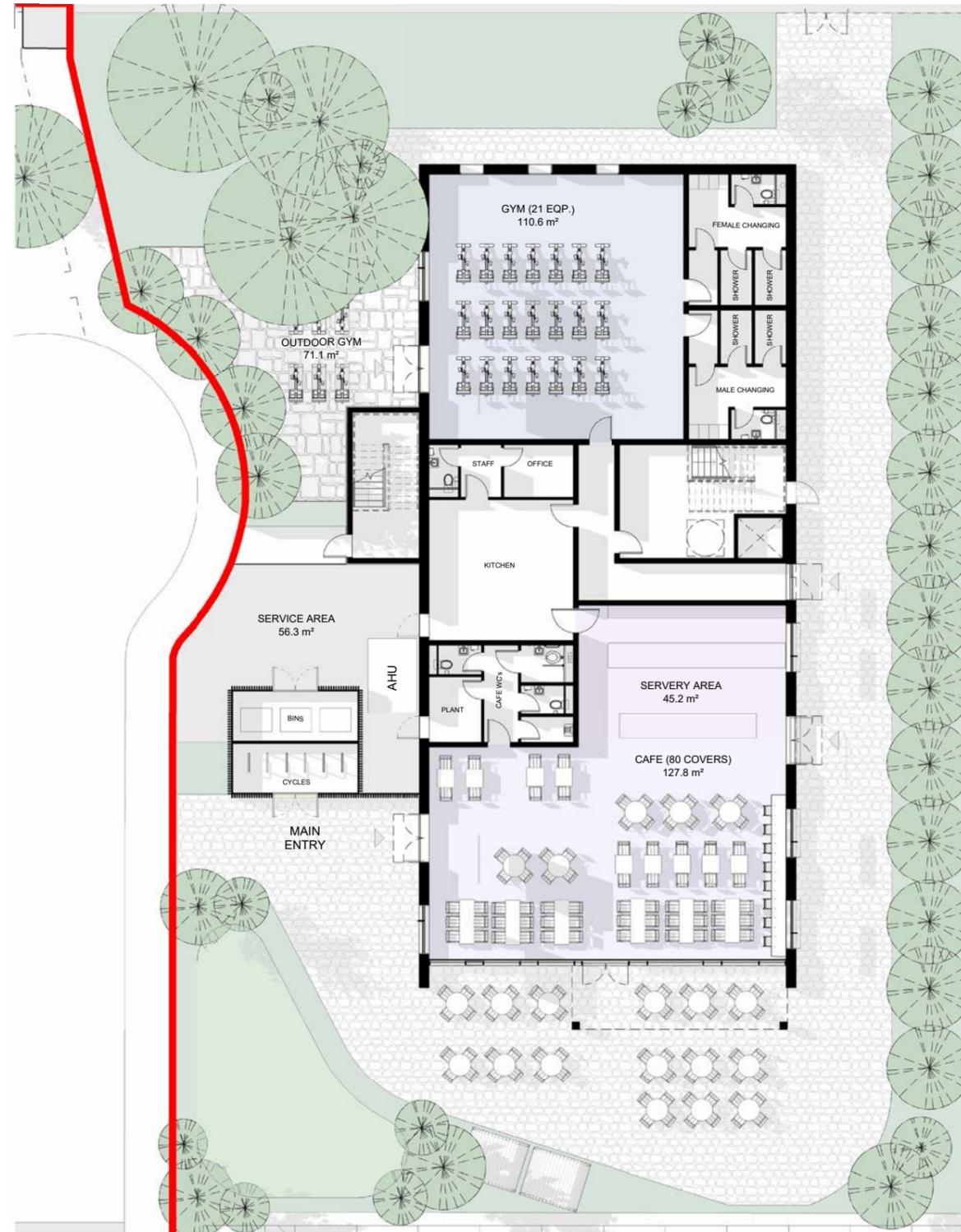
Servicing will be from the existing turning circle. There are 24 new car parking spaces with the development.



7.5 Proposed Plans

The ground level layout consists of 80 cover cafe space with supporting amenities and a gym.

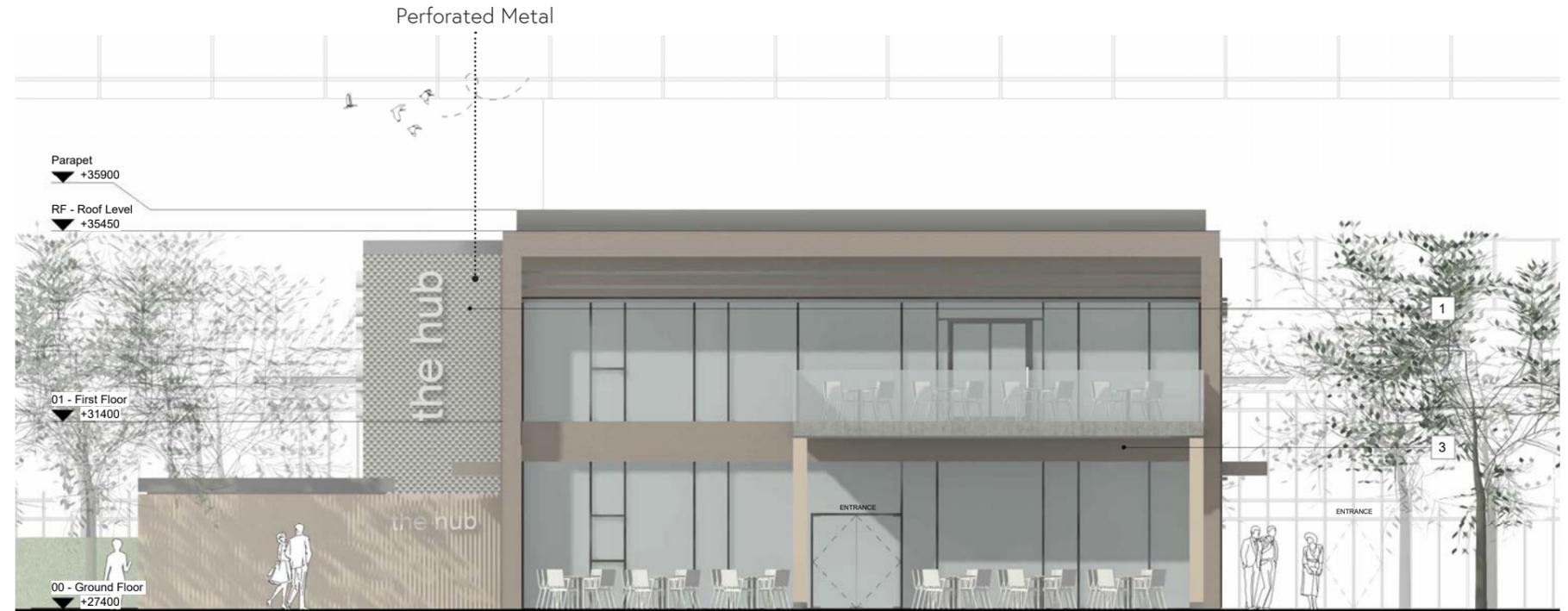
The first floor, will accommodate two flexible spaces which can be utilised for shared working, meetings and conferences.



7.6 Appearance - Elevations

The primary material palette comprises predominantly of:

- Perforated Metal
- Dark Grey Multi-tone Brick
- Light Bronze Colour Reveal and Spandrel Detail



7.7 Appearance - Bay Study

The material palette will consist mainly of dark grey multi-tone brick - to contrast the fenestration detailing such as the reveals, panels and louvres will be in a light bronze colour metal.

The glazing will be in a grey aluminium frame.

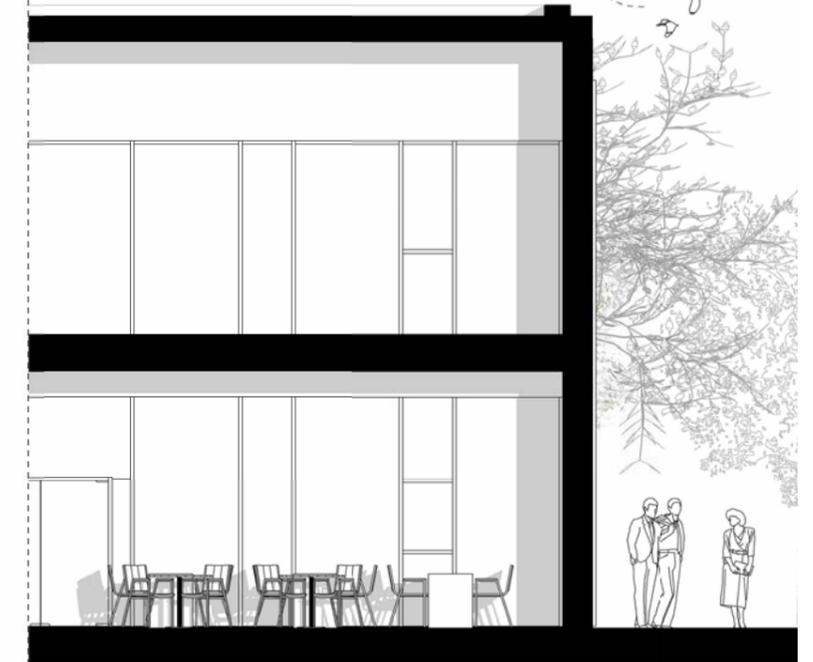
To mitigate solar gain on the southern facade there will be an overhang and horizontal louvres.



RIVP Building Paris



The Double Brick House Slovenia



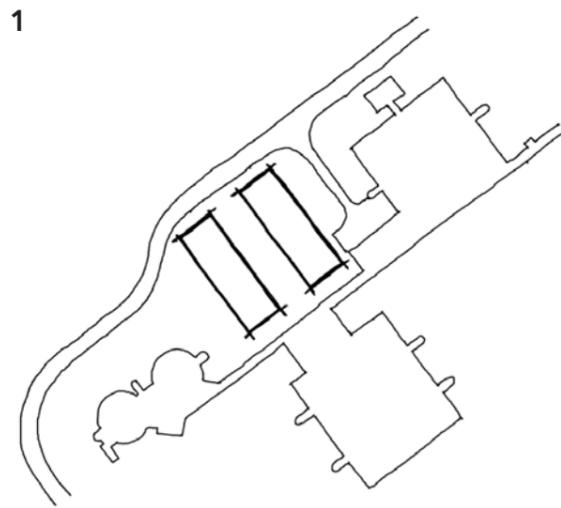
7.8 Visual



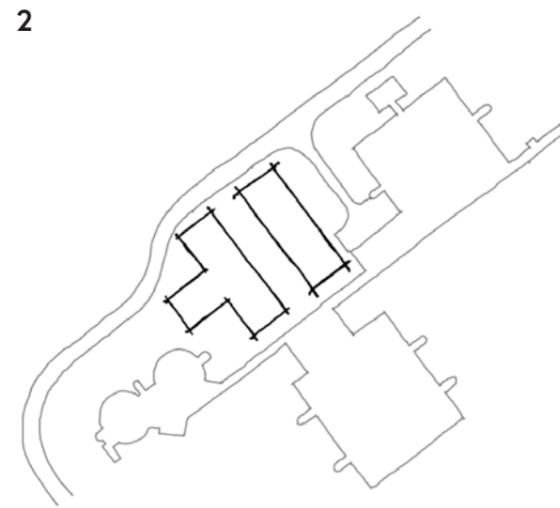
8.0 Unit 01

8.1 Design Evolution

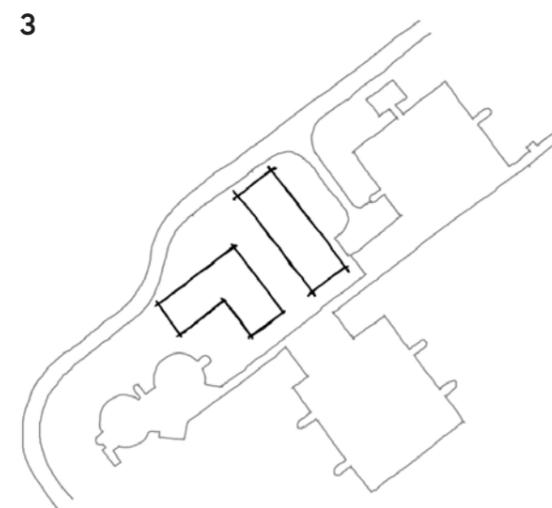
The key design drivers are to produce a fully flexible future proof building that responds to the context and contributes to the campus environment. This has led to a number of different design iterations that have been tested, these are illustrated below:



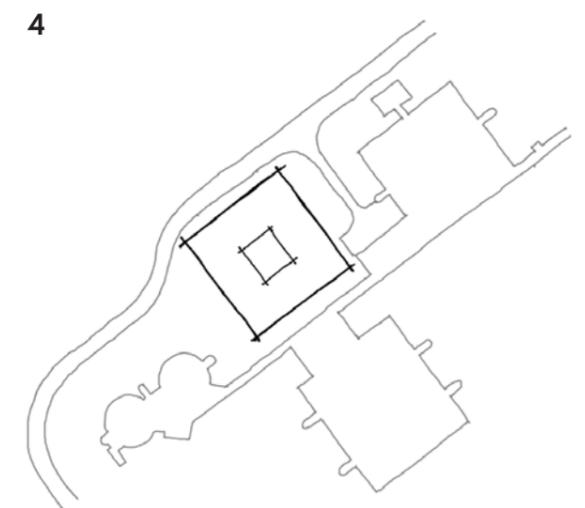
1 The initial thoughts explored two parallel buildings one over 2-3 floors.



2 As a development of this option, looks at an additional wider single storey wing for laboratories.



3 A variation of option 3.



4 After market and cost analysis a single flexible building that allows for multiple tenants was considered as the best approach. This has an internal atrium space which not only bring natural light into the centre of building but provide a space for meeting, collaboration and events.

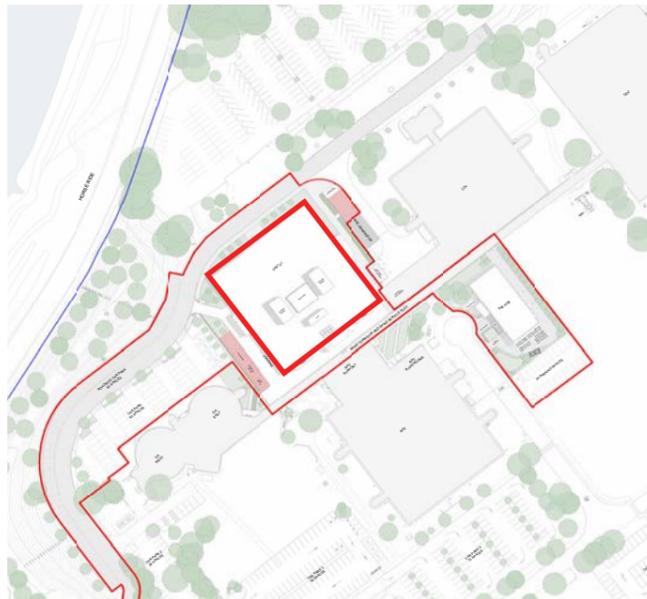


8.2 Site Layout

The development sits on the northern side of the spine next to CD1. The main access point is on the northern facade

It will have 128 car parking spaces on the western side of the building, consisting of 65 surface spaces and 63 roadside spaces. These will be located within enhanced landscaping.

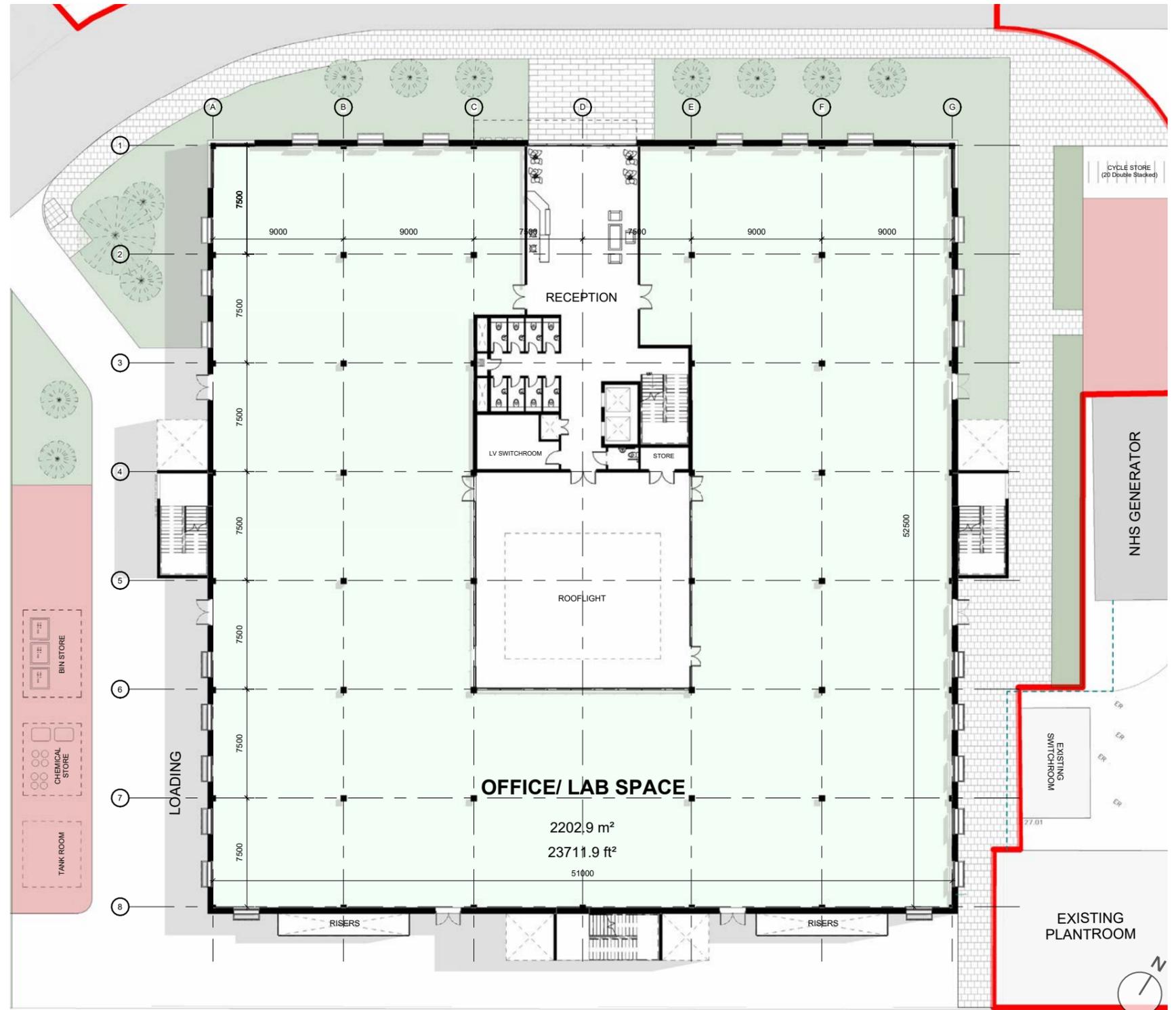
Servicing will be via the existing service access on the east side of the site and a new service route on the adjacent side.



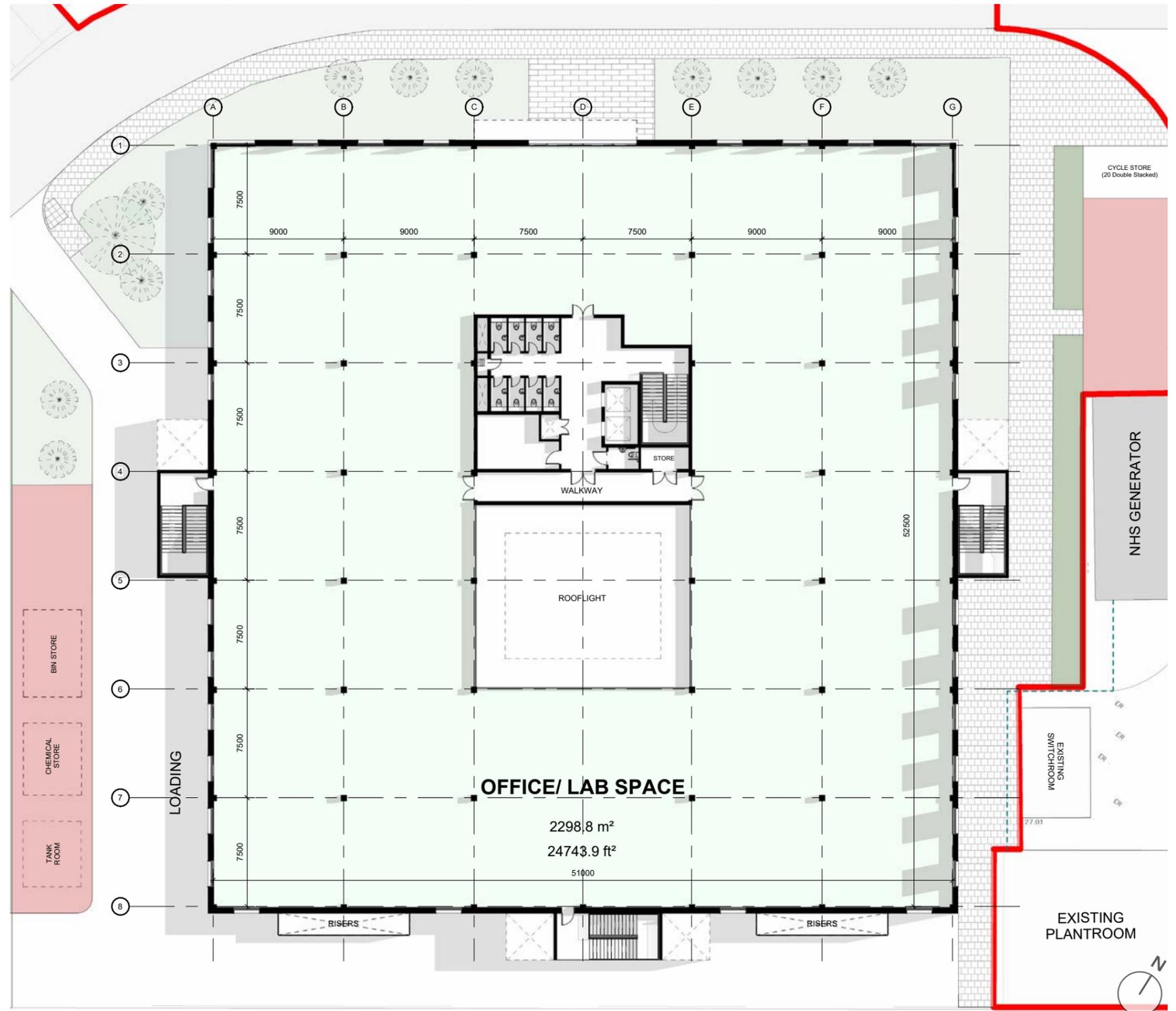
8.3 Proposed Ground Floor

The building will be over two levels with a central lobby reception area which accesses the amenity areas, office/lab areas and glazed atrium.

The central atrium will provide natural light into the office floor plate and a space for collaboration/meeting/event.



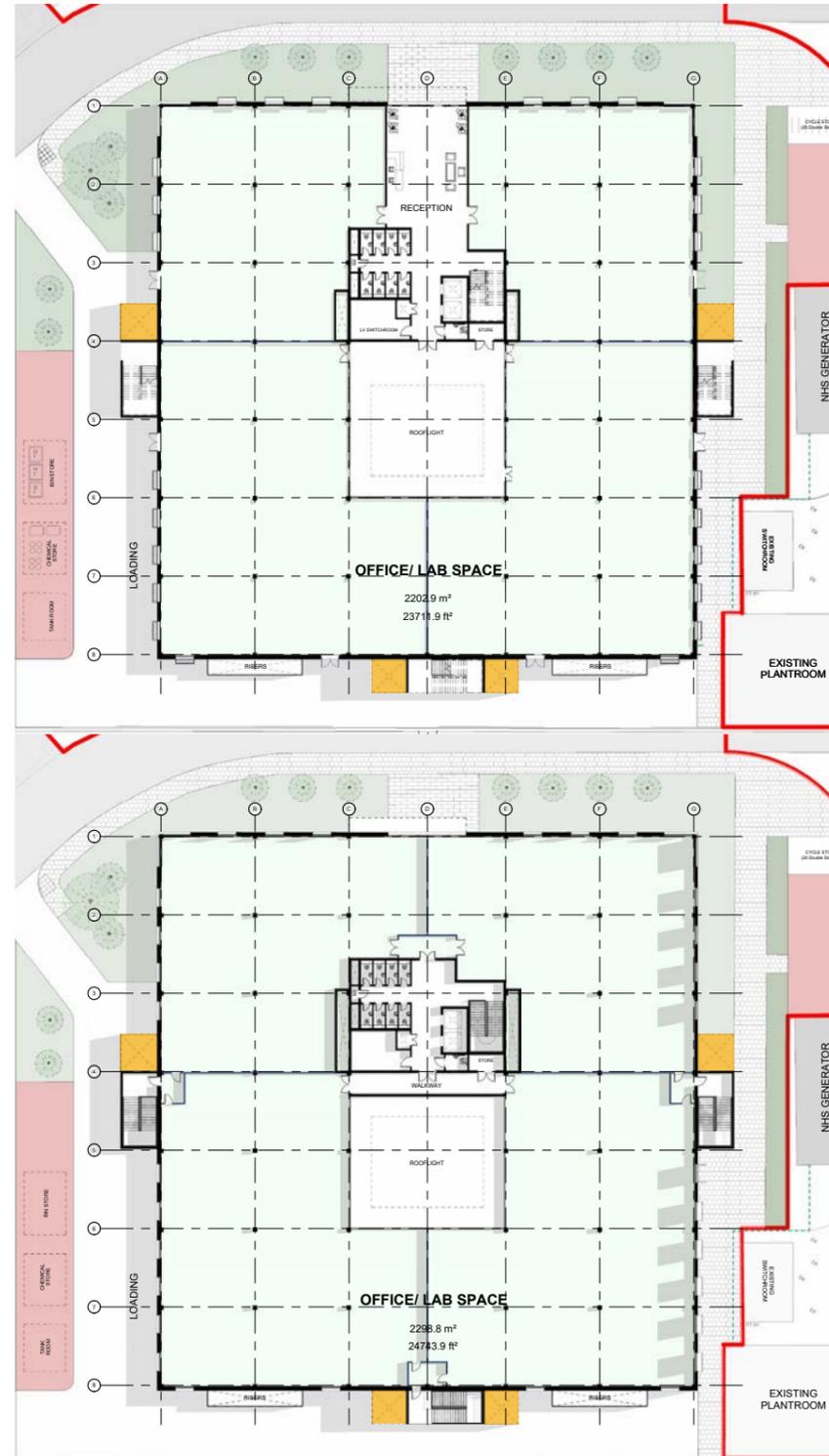
8.4 Proposed First Floor



8.5 Proposed Ground Floor - Subdivision

The scheme will be flexible to allowing office and laboratory use on both levels if required. The multiple external escape stairs allow for subdivision in the floorplate for multiple occupancies.

To ensure this flexibility there may be a requirement for additional good lifts. These are located externally next to the escape stairs (indicated in orange on the adjacent plans)



8.6 Appearance - Elevations

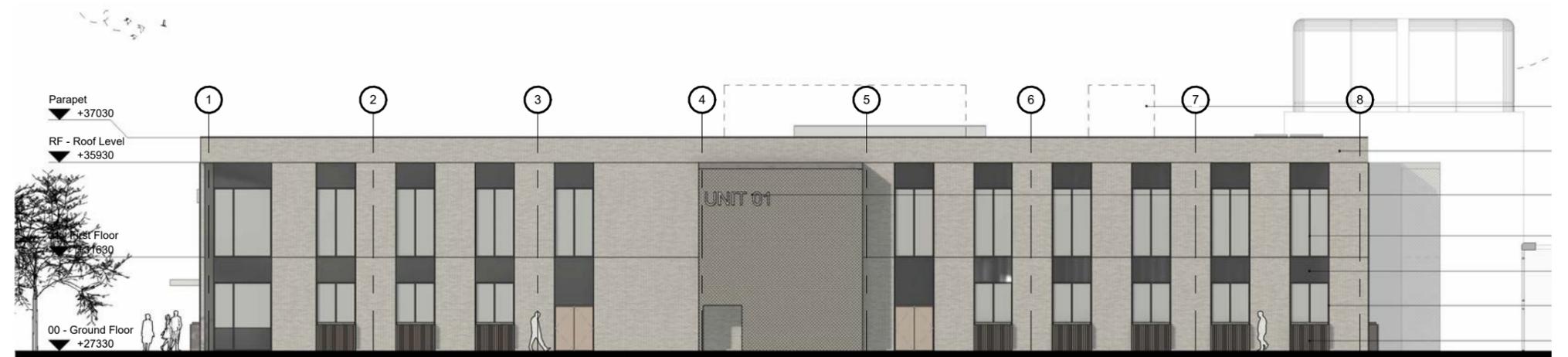
The proposed masterplan will follow a number of key architectural principles

- Contemporary architecture with simple clean lines and detailing
- Vertical format fenestration and cladding
- Legible architecture in elements such as entry points and active frontages .
- Sustainable measures appropriate to the building typology

The general appearance is still be tested, but the typical bay elevation adjacent indicates the broad approach to the architectural appearance.



North Elevation



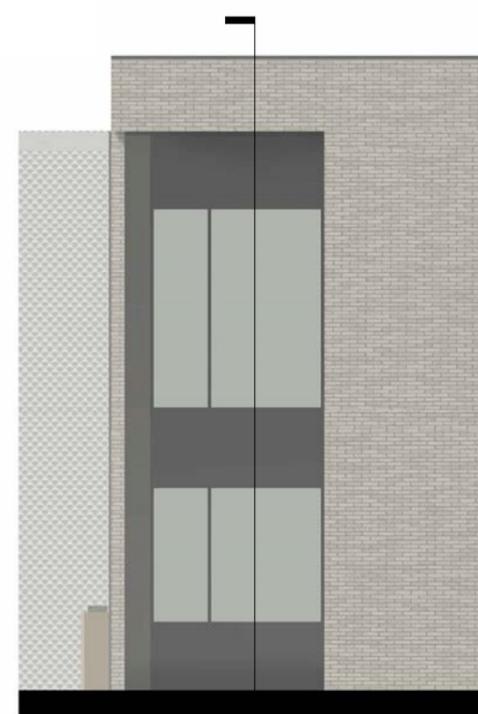
West Elevation

8.7 Appearance - Bay Study

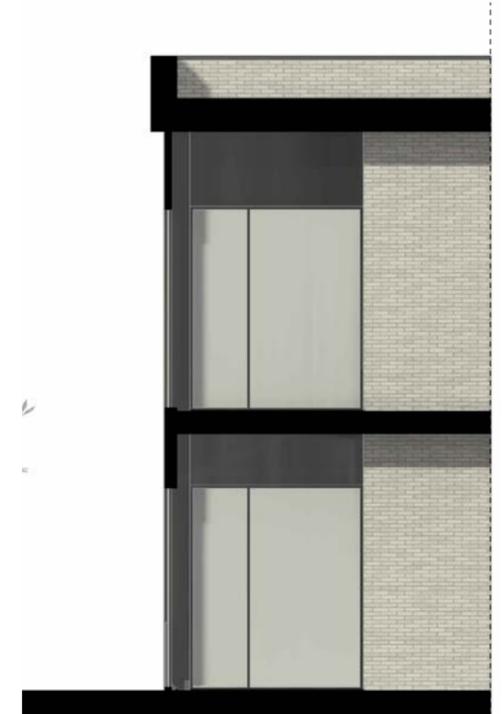
The material palette of the elevation will mostly consist of multi-tone buff brick. In a similar language to the hub building the fenestration will have a detailing on the reveals and panels in a dark bronze.



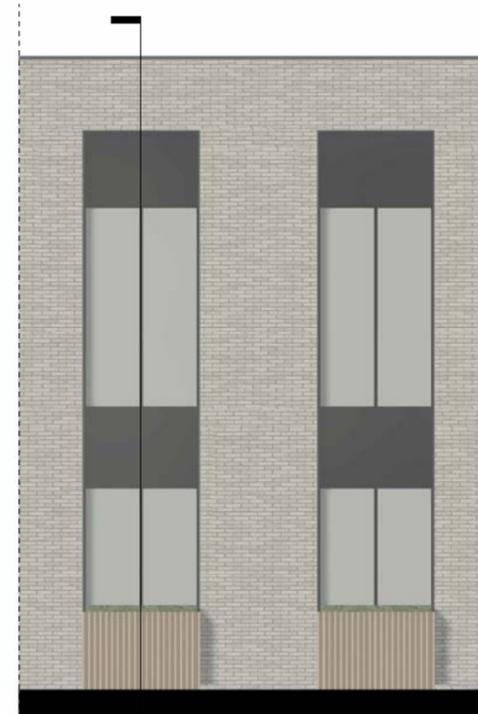
Creek Road Greenwich



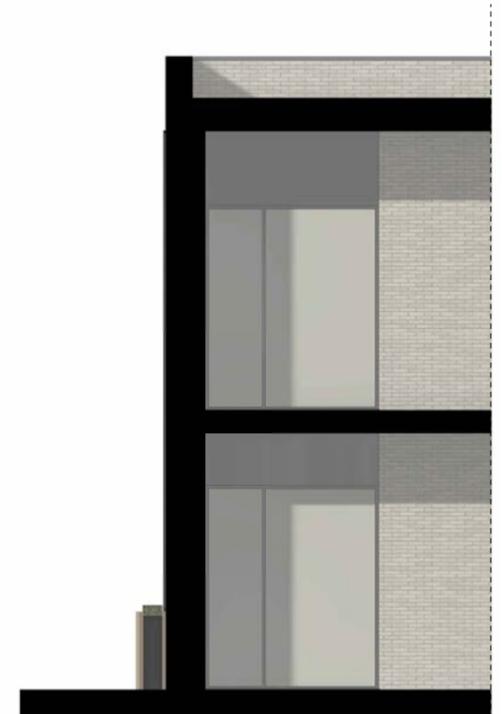
North Elevation



Dundee House Dundee



West Elevation



8.8 Visual



9.0 Landscaping

9.1 The Hub Planting Strategy



Molinia caerulea
'Karl Foerster'



Rudbeckia hirta



Betula utilis
'Jacquemontii'



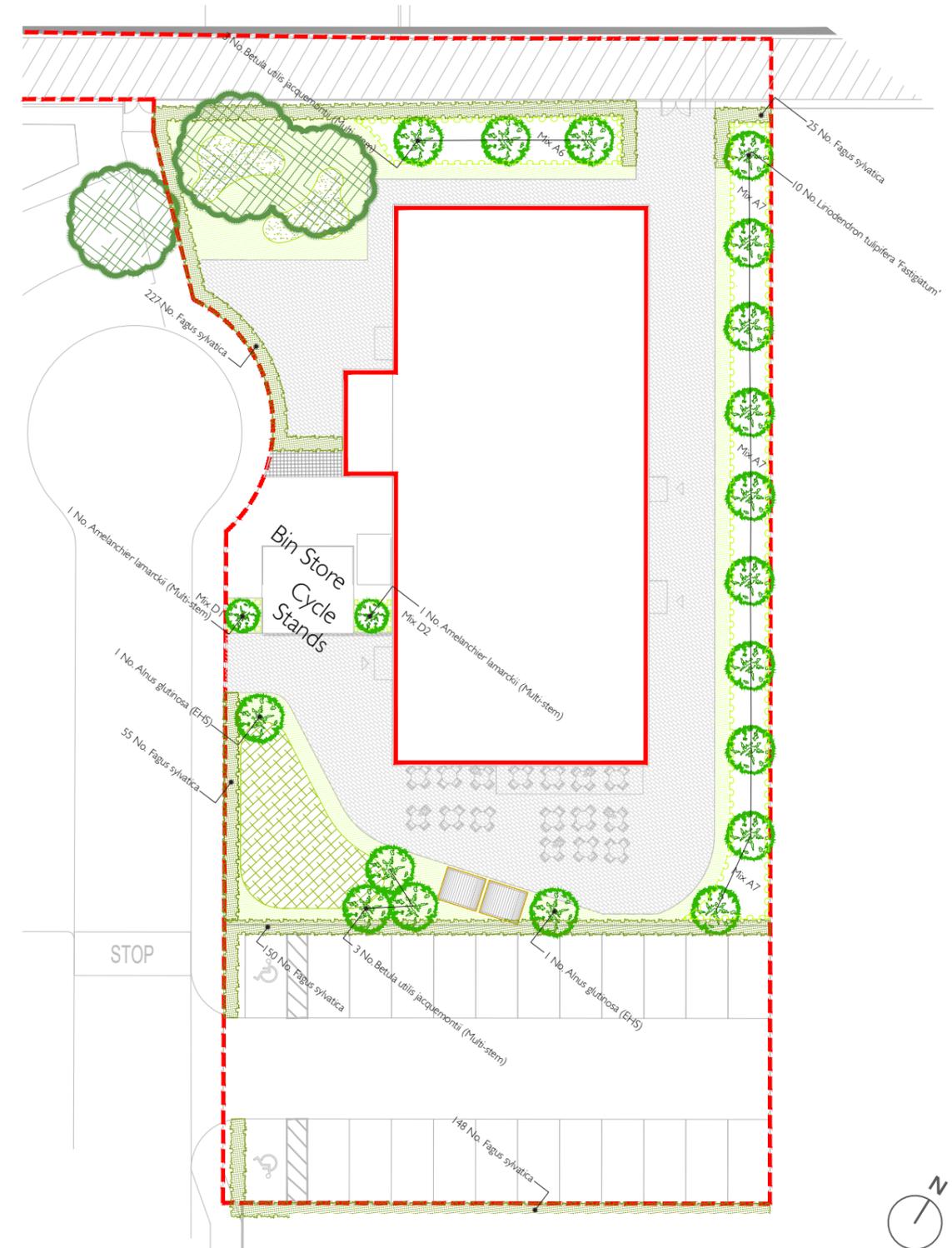
Digitalis 'Apricot
Beauty'



Anemanthele
lessoniana 'Sirocco'



Erysimum



*Refer Planning Application drawing pack

9.2 Unit 01 Planting Strategy



Molinia caerulea
'Karl Foerster'



Rudbeckia hirta



Betula utilis
'Jacquemontii'



Liriodendron tulipifera
'Fastigiata'



Pyrus calleryana
'Chanticleer'



Digitalis 'Apricot
Beauty'



Anemanthele
lessoniana 'Sirocco'



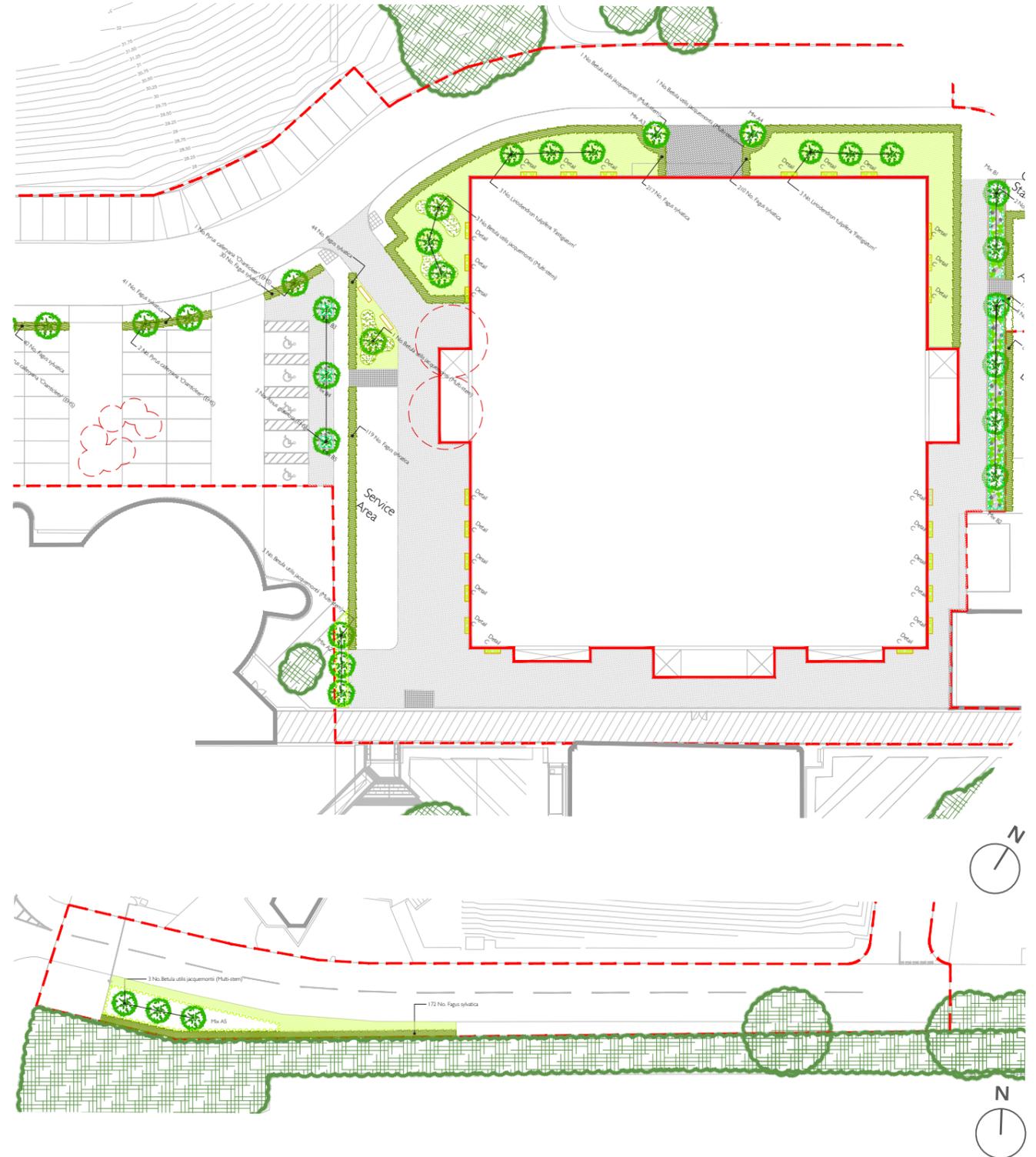
Erysimum



Fagus sylvatica



Wild Flower
Meadow Mix



*Refer Planning Application drawing pack

10.0 Access

Outlined below is the access strategy for the developments. As discussed this will provide a framework for future developments.

Pedestrian

A new bus stop is proposed on Longwood Drive which will allow access to the northern and opened up southern entrance. Where possible parking is to be kept to the perimeter allowing for a walkable environment in the central cluster of buildings.

Cycle

A central cycle route that connect with the Taff Trail and Longwood Nature Reserve routes at the northern and southern entrance is proposed through the site.

External cycle shelters are to be provided adjacent the entrance of both developments.

Servicing

With the new opening up of the southern entrance it is proposed the service vehicles will access at the northern entrance and egress to the south.

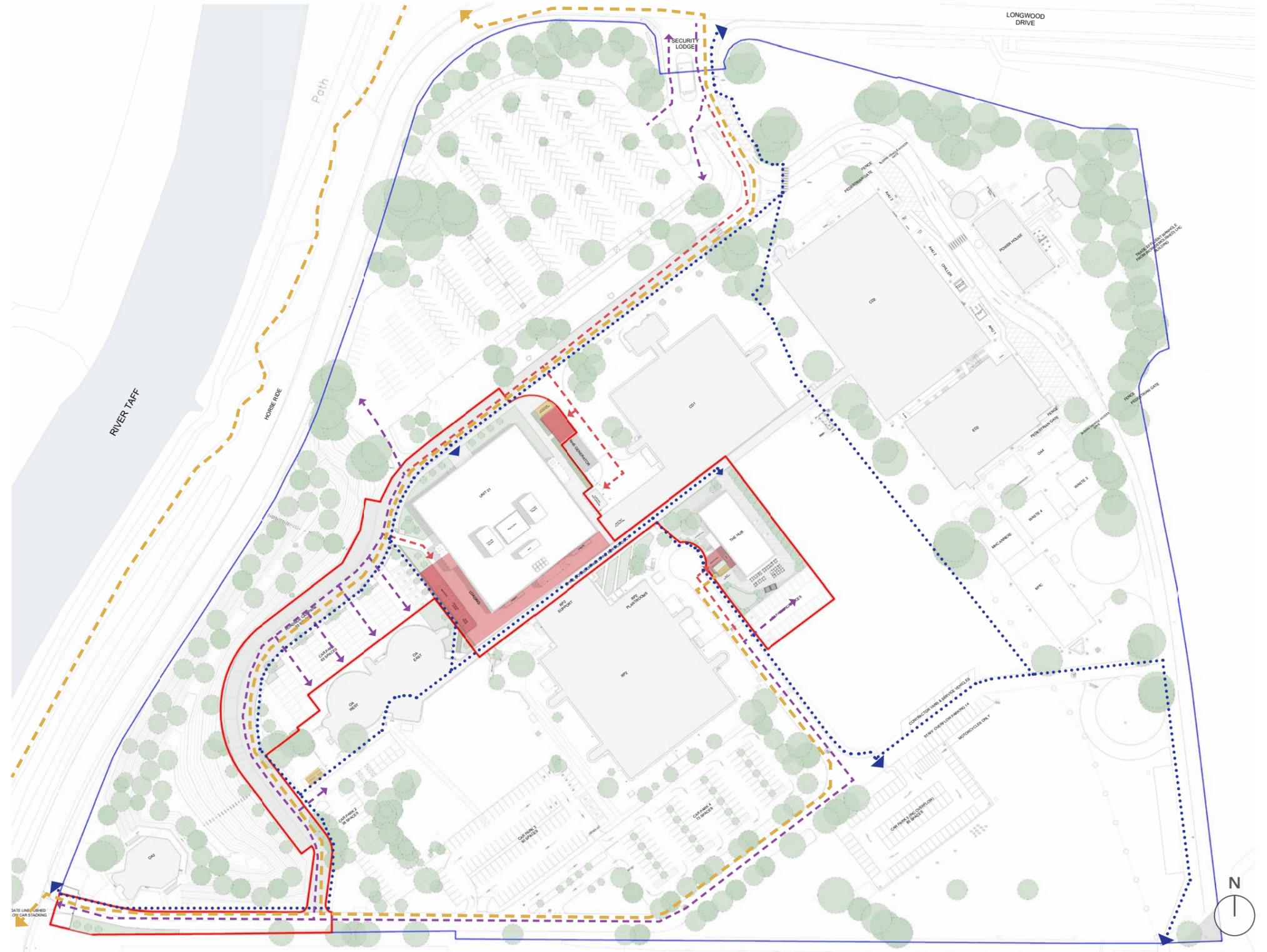
The servicing zones are indicated on the plan

Vehicular

New parking is to provided on both developments. These will be accessed from the southern entrance.

Key:

- - - - - Servicing
- - - - - Vehicular
- - - - - Cycle
- - - - - Pedestrian
- Servicing Zones
- Cycle Stores



10.1 New Southern Entrance

As part of the application the existing southern entrance is to be opened up as an access point.

This creates greater connection to the south of the site and possible future development sites. It also relieves some of the traffic flow north of the spine.



Existing Southern Entrance

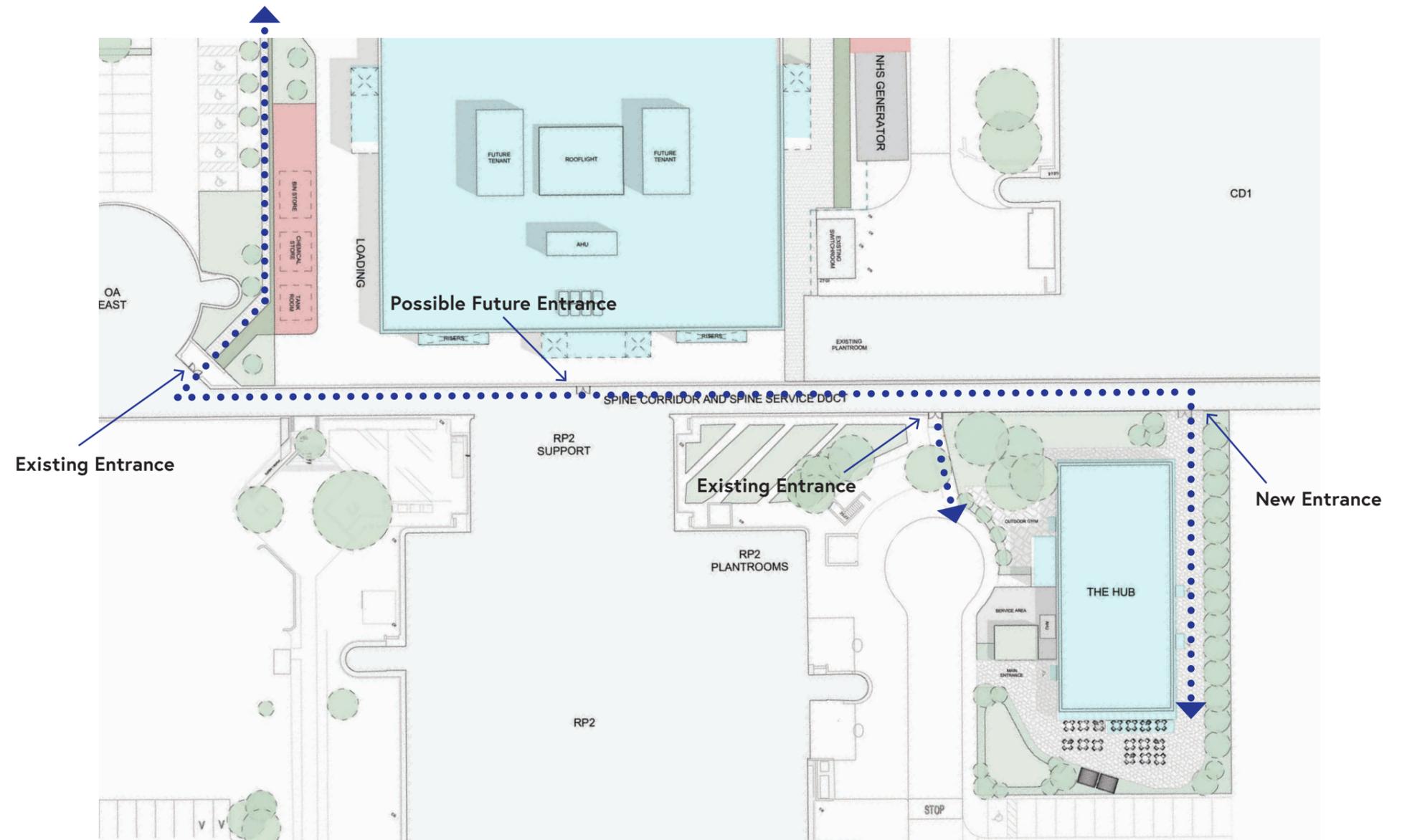


10.2 New Spine Link

As part of the application it is proposed to open up the route along the spine to connect the two developments and allow greater connection for future developments. The existing entry points are to be used, as well as a further entry point on the south side that links into the Hub and future development site.



Existing Spine Entry Point



10.3 New Connection to Nature Reserve

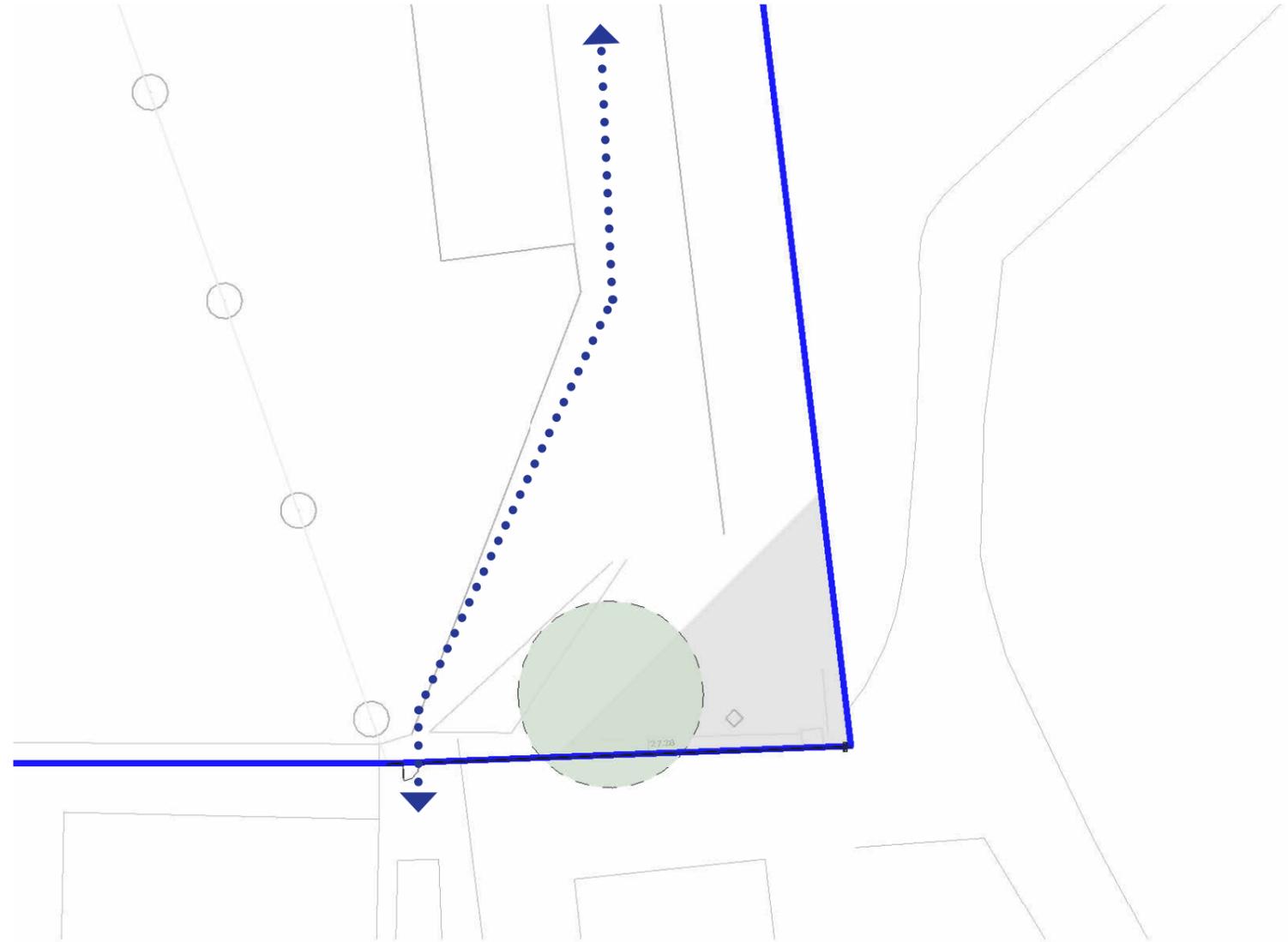
As discussed a new secure is proposed on the south eastern corner of the site to provide connection to the nature reserve and areas beyond..



Looking into the Nature Reserve

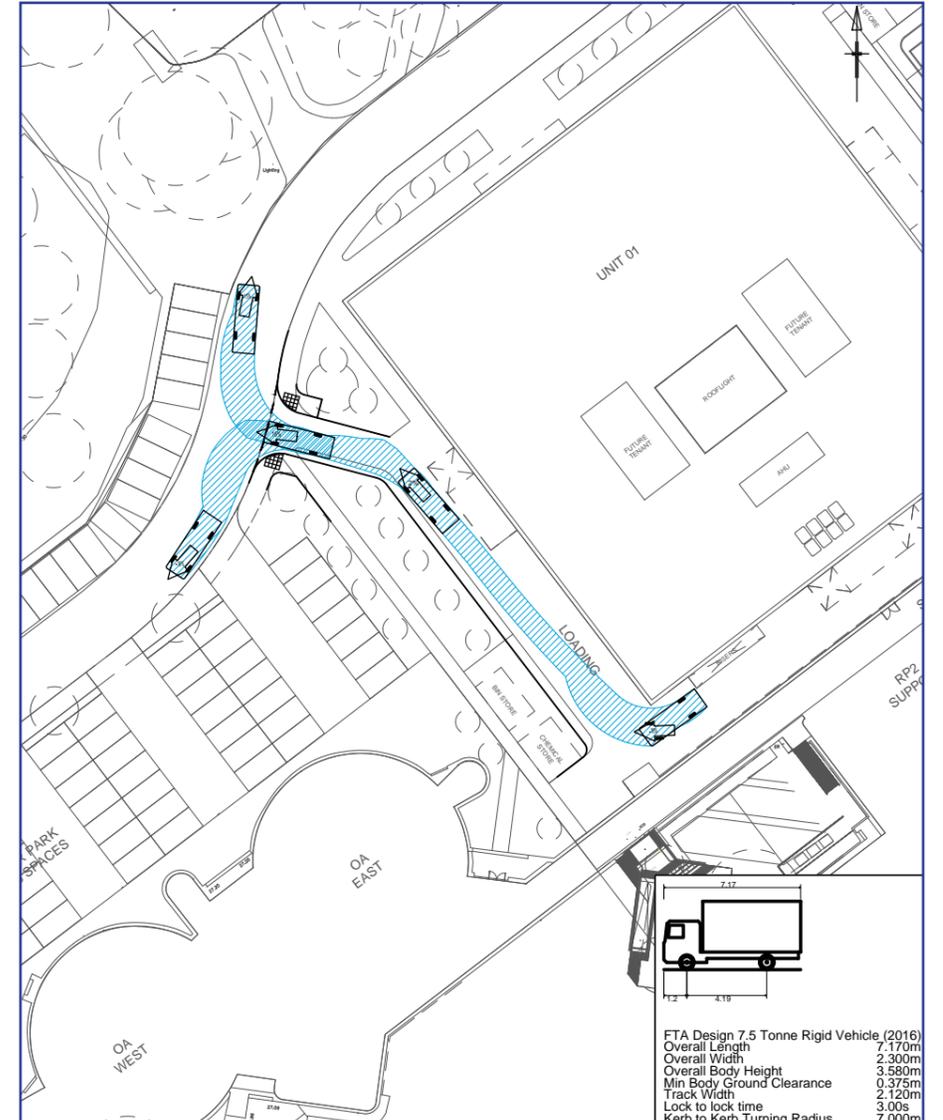
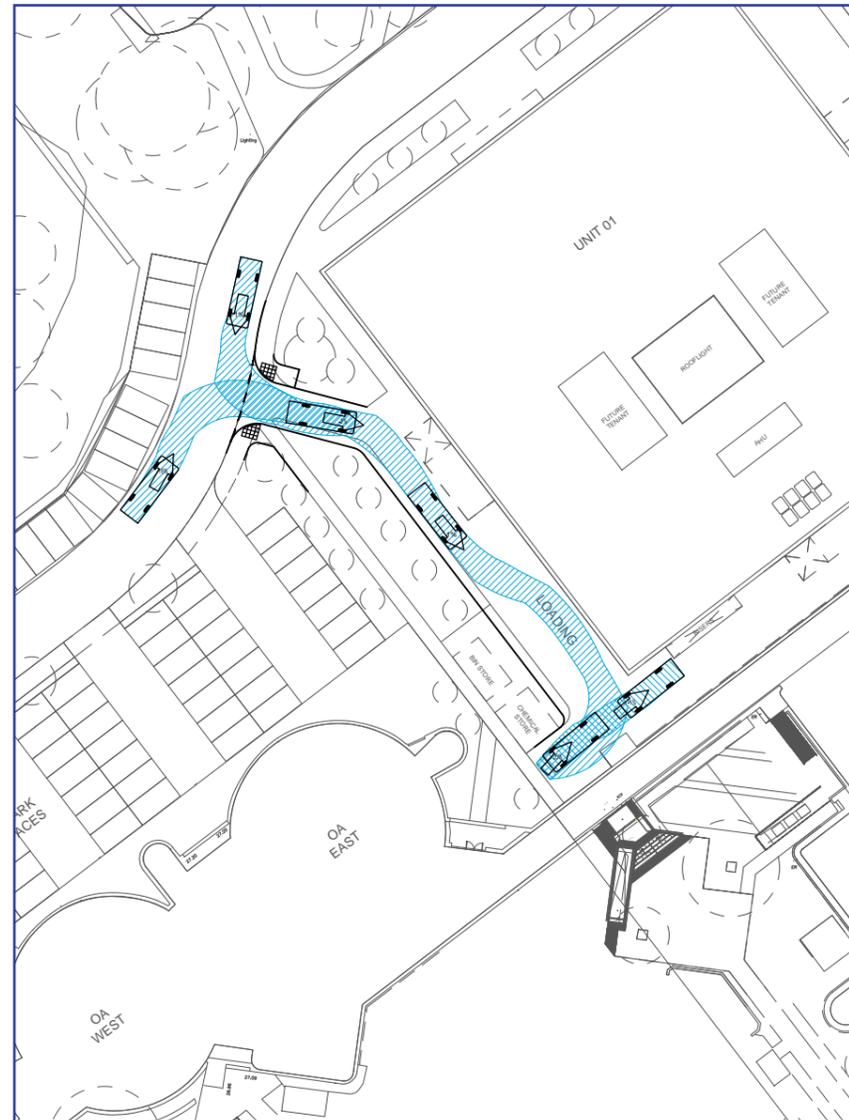


Route to the North



10.4 New Service Area Tracking Analysis

Outlined adjacent are a series tracking analysis diagrams for a 7.5 tonne rigid vehicle.



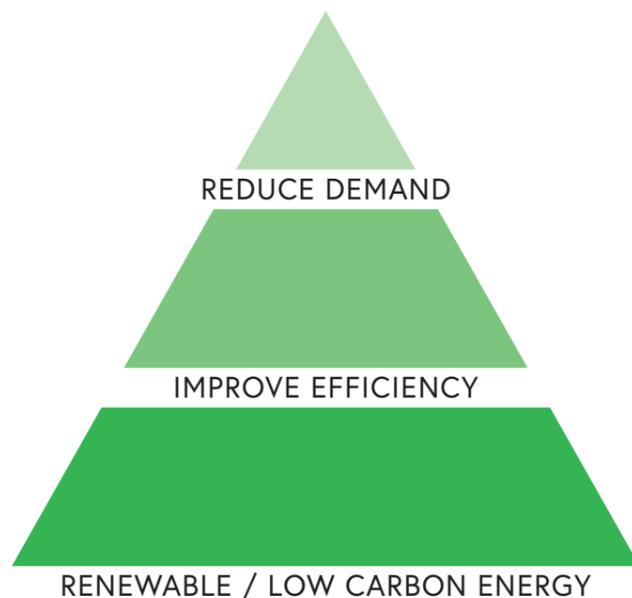
11.0 Sustainable Design

As part of the development sustainability strategy for this site and the ever greater push towards net zero carbon, we have proposed a framework that all buildings will be measured against with the overarching strategy to try and reduce energy requirements.

A passive approach outlined by the Energy Hierarchy Triangle diagram (below) helps to provide a structured strategy. This puts forward a fabric first approach to the overall sustainability strategy

These principles are expanded further in a supporting report.

These principles are expanded further in the supporting energy statement report.



Social Value

- Respect the past and present of Cardiff while improving its future by supporting the city's people and their environment.
- Providing a healthy and convenient environment for all users that supports the principles of community safety, encourages walking and cycling, enables employment, essential services and community facilities to be accessible by sustainable transport and maximises the contribution of networks of multi-functional and connected open spaces to encourage healthier lifestyles.
- Providing a diversity of land uses to create balanced communities and add vibrancy throughout the day.

Resilient + Future Ready

- Each building will incorporate exemplary fabric measures to reduce overall demand - in accordance with LETI standards for office.
- Achieve a resource efficient and climate responsive design that provides sustainable water and waste management solutions and minimise emissions from transport, homes and industry.
- Fostering inclusive design, ensuring buildings, streets and spaces are accessible to all users and is adaptable to future changes in lifestyle.
- Achieving an adaptable design that can respond to future social, economic, technological and environmental requirements.

Healthy Green + Active Spaces

- Creating interconnected streets, squares and spaces as distinctive places, which are safe, accessible, vibrant and secure and incorporate public art where applicable.

Sustainable Urban Drainage

- Part of design process - refer to full report provided in application pack

Transition to Zero Carbon

- Incorporation of low and zero carbon technologies (LZCT) can reduce demand on finite natural energy sources, benefit the environment and reduce running costs.
- This strategy would provide 41.4% saving in carbon emissions for the Hub building and 9.7% for Unit 01.
- At least 40% reduction in carbon emissions on site from Part L2A Building Regulations.

Buildings that Perform

- Use of heat recovery that will constitute towards the predominant means of tempering the fresh air ventilation provision for each building.
- Incorporating measures such as good fabric and glazing, control of solar heat gain whilst providing good levels of day lighting.
- High-performance building fabric, to significantly exceed the minimum criteria set by Building Regulations.
- Reducing the glazing percentage from the south facades will ensure that solar gains are mitigated as much as possible during the most oppressive times in the day.

12.0 Future Park Expansion

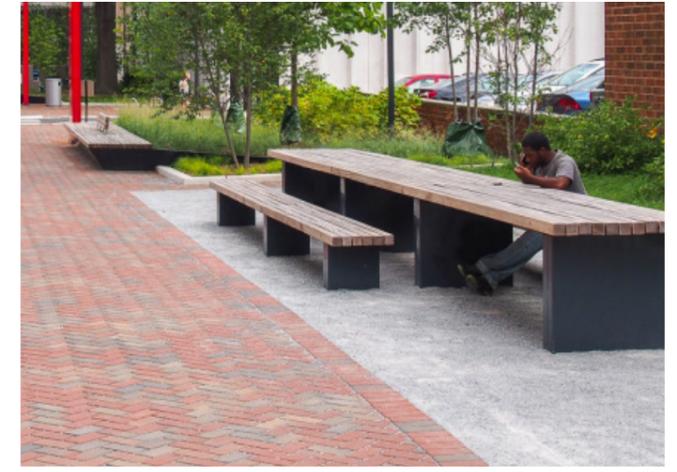
12.1 Landscape Led

The following pages build on the detailed application to create an initial framework for future developments on the park.

In line with many of the principles in the Whitchurch vision, the key aspect is that this will be landscape led to create a pleasant, walkable campus environment.

The principles behind this strategy are set out below:

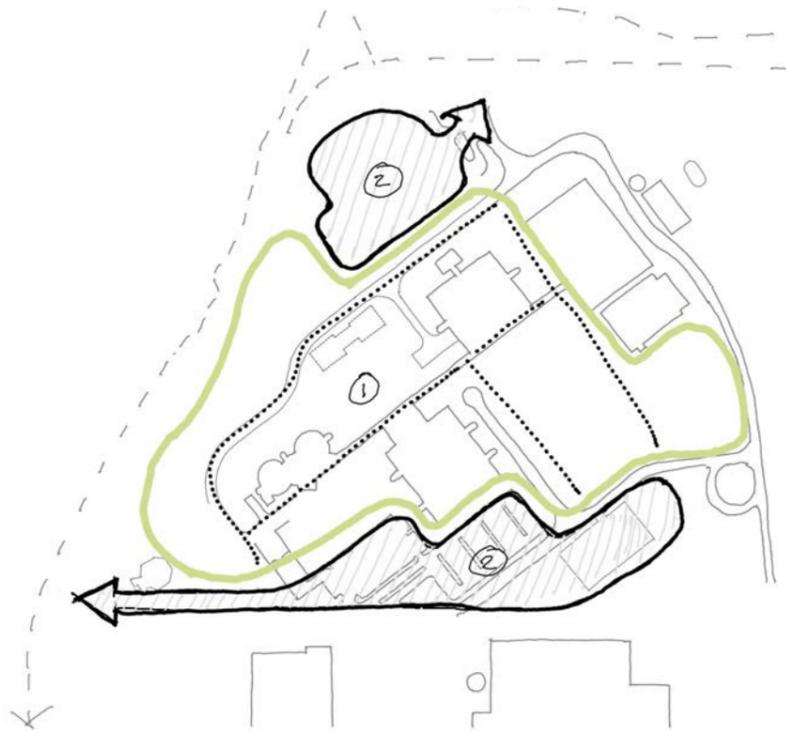
- Breakout spaces from the buildings
- Integration of the parking within landscape
- Areas for social interaction and collaboration
- Attractive setting to the buildings
- Use of recycled materials where appropriate
- Biodiversity and sustainability at the heart of the landscape design



(Indicative Precedents)

12.2 Development Principles

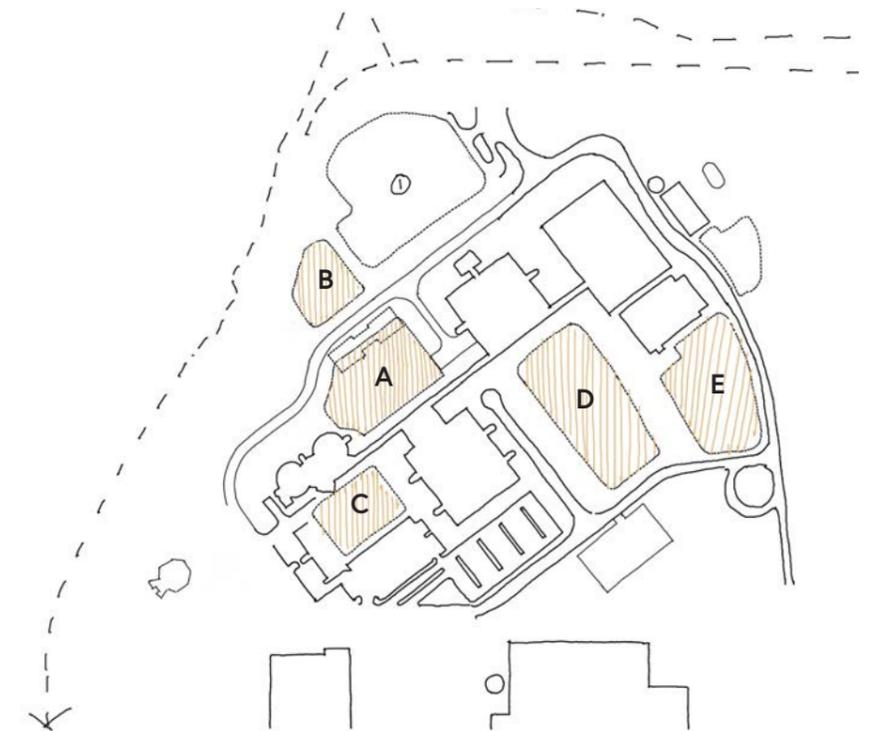
The diagrams below outline how these principles could be applied to the developments forming this application and future applications.



At the heart of the scheme is the desire to create a landscape led walkable campus environment. This means keeping the majority of the parking to the perimeter where possible.



Within this environment green routes are created and where possible the internal spine is opened up to create better north south connections.



New development plots are defined by the routes.

12.3 Illustrative Masterplan



13.0 Conclusion

It is hoped that these two developments will be a catalyst for future expansion and enhancement of the park. In turn this will reinforce the area and region as a life science hub.



Corstorphine & Wright

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