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ares  
LANDSCAPE  
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26th March 2024  
Design & Access Statement

# Cardiff and Vale College

## Barry Waterfront Campus



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Project Number: 6653

Project Title: Cardiff and Vale College-Barry Waterfront Campus

Rev	Date	Status	Issue Purpose	Originator	Authorised
P01	18/12/23	S2	Pre Application Consultation	KK	JJ
P02	16/01/24	S2	Pre Application Consultation Amended	KK	JJ
C01	14/03/24	A2	Planning Application Submission	KK	JJ
C02	21/03/24	A2	Planning Application Submission Amended	KK	JJ
C03	26/03/24	A2	Planning Application Submission Revised	KK	JJ

## 1.0 INTRODUCTION

This Design and Access Statement has been prepared by Sheppard Robson on behalf of Welsh Educational Partnership Company (WEPCo) and Cardiff and Vale College. Additional input has been provided by Ares Landscape Architects, Arup (Building Services and BREEAM consultants), and Lichfields (planning consultants). It accompanies and supports the pre application consultation (PAC) and planning application for Cardiff and Vale College-Barry Waterfront Campus. The statement explains how the proposed development is a suitable response to the site and its setting, and demonstrates that it can be adequately accessed by prospective users.

This document accompanies the planning application for Barry Waterfront Campus, CF62 5QT. It is intended to supplement the information required by Vale of Glamorgan by summarising the functional requirements of the brief, together with the architect's interpretation of the site context and the response to it.

Section 42 of 2004 Town and Country Planning Act substituted the Section 62 of the 1990 Act so as to provide a statement covering design concepts, principle and access issues submitted with an application for planning permission. It states that one statement should cover both design and access, allowing applicants to demonstrate an integrated design approach that would deliver inclusive design and address a full range of access requirements throughout the design process.

A key purpose of the Design and Access Statement is to achieve good design, supporting the role in the delivery of sustainable development through the planning system. This is a fundamental objective of the Planning Policy and as such is reflected in the National Planning Policy Framework.

This DAS has been written with reference to the guidance document 'Design and Access Statements in Wales' (April 2017, prepared for the Welsh Government by the Design Commission for Wales). It is intended that this DAS will cover all of the required aspects set out in the guidance document.

This document has been developed in conjunction with feedback received from various pre-application meetings held with the Local Authority, Design Commission for Wales and the pre-application advice report issued by the LPA.

## 2.0 DEVELOPMENT BRIEF

Cardiff and Vale College is one of the largest colleges in the UK, delivering high quality education and training within the Capital Region of Wales.

Across six sites the college has more than 30,000 learners each year in full-time and part-time college courses, university qualifications and apprenticeship programmes, along with dedicated training provision for employers.

The project is to provide a new Further Education facility in the Innovation Quarter Southern Development site, replacing the current campus at Colcot Road Barry by new facilities at the Barry Waterfront Campus (BWC) and the Advanced Technology Centre (ATC). The projects are being developed in parallel, with a focus on creating 'state of the art' facilities and inspiring learning environment for staff, students and visitors with an identity of being a landmark community and business facility that will deliver the skill and training necessary for this strategically important waterfront location and Southern Innovation Quarter development area.

Barry Waterfront Campus will have 855 students enrolled, a mix of full and part time, and 79 staff. Not all learners and staff will be at the college at any one time, so the daily utilisation occupancy will be less.



## 2.1 Location

The proposed site for the new Barry Waterfront Campus is located within the Waterfront area of Barry between Hood Road and Ffordd Y Mileniwm, to the west of Barry Dock.

The existing Barry Campus (to be replaced) is located within 1.2 miles of the new Barry Waterfront Campus site and the new Advanced Technology Centre will be located approximately 4 miles away, in close proximity to the International Centre for Aerospace Training.

## 2.2 Stakeholders

The design team have engaged extensively with the Client team to meet the Brief which has been the basis of the development proposals described in this DAS.

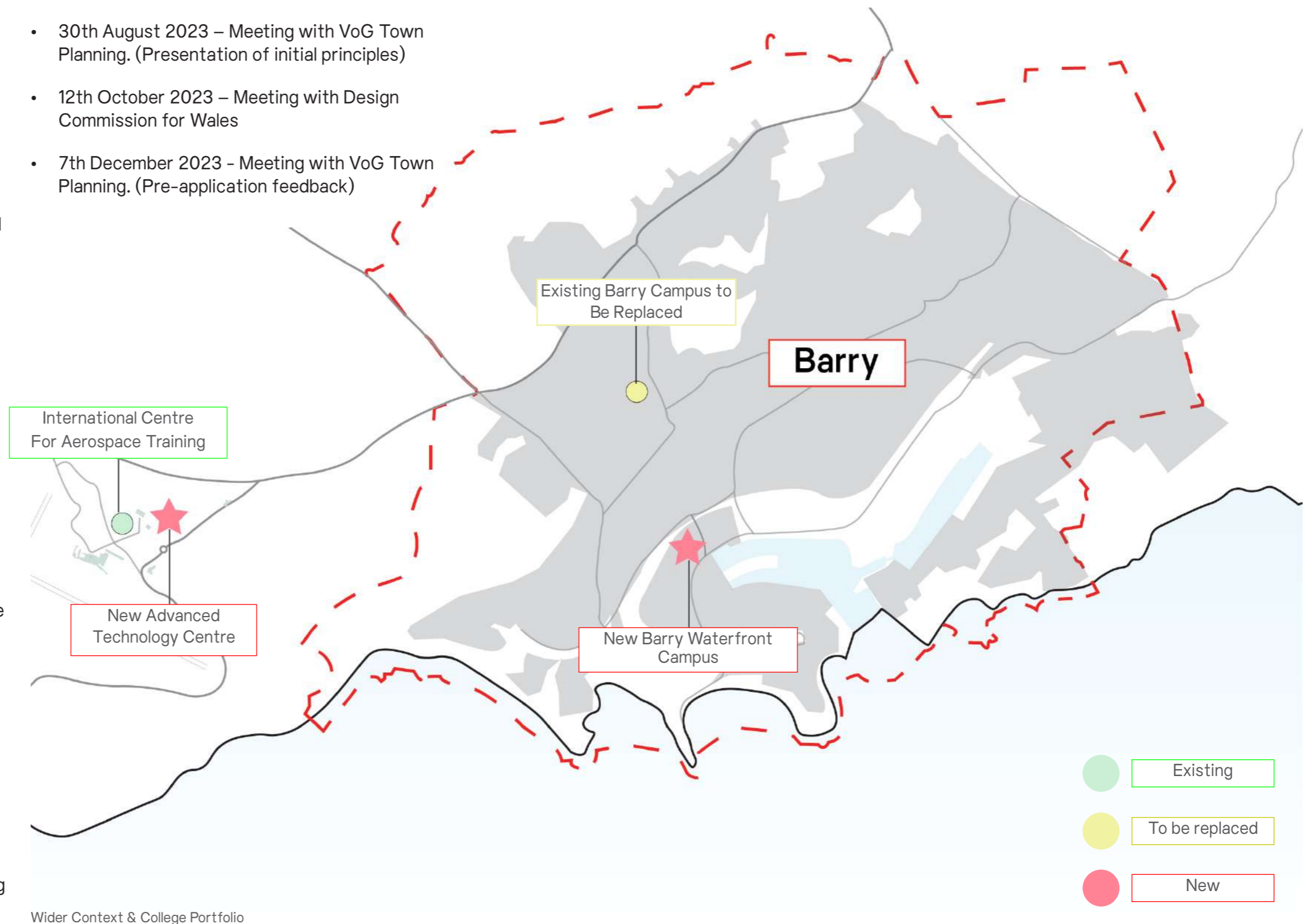
The principal stakeholder is WEPCo, which is a joint venture between the Development Bank of Wales (on behalf of Welsh Ministers) and Meridiam, a long term investor in sustainable infrastructure benefiting communities around the world and leading advocate of the United Nations Sustainable Development Goals. The purpose of WEPCo is to create and drive forward innovative value for money development solutions under the 21st Century Schools and Colleges (Band B) Programme that improve the education estate of today for the generations of tomorrow. Cardiff and Vale College are the end user.

Key representatives from WEPCo and the College have been consulted with extensively throughout the early stages of design, by means of Client Engagement Meetings (CEMS) and more detailed Departmental Briefings with department heads and other relevant staff. To support this process, Technical Advisor (TA) reviews were also undertaken at key project stages.

Consultations have been conducted with the Vale of Glamorgan, the Design Commission for Wales and the Welsh Government. The key principles of the projects were presented, including the building

setting, massing, façade finishes, entrances, landscape, and SuDs. The overall feedback on the projects has been positive, and all comments have been considered. The following meetings have been held:

- 16th August 2023 – Meeting with VoG Economic Development Team
- 30th August 2023 – Meeting with VoG Town Planning. (Presentation of initial principles)
- 12th October 2023 – Meeting with Design Commission for Wales
- 7th December 2023 - Meeting with VoG Town Planning. (Pre-application feedback)



## 2.3 Project's Origin

The background to this development lies in the continued improvement of the Cardiff and Vale College estate to meet various long term strategic objectives. These relate to broader goals including: Welsh Government education and training policy, responding to demographic and economic trends, moving towards net zero carbon, increasing community benefits etc. The Projects (ATC and BWC) are the Pathfinder for future college schemes to be delivered under the Welsh Government's Mutual Investment Model (MIM).

The main benefits of the proposed development, as set out in the Outline Business Case (revised) approved by the Welsh Government in 2023, are:

- Condition – removing all of the college's "Category D" accommodation in the Vale of Glamorgan and the associated £14.9m of backlog maintenance cost.
- Increasing places – the publication in August 2021 by Stats Wales of new projections for 16 year olds in Wales showed that the increase in the Vale of Glamorgan will peak at 15% higher than 2022 by 2028, and still be 7% higher than 2022 in 2043. That is the second highest sustained growth by 2043 and one of only four Welsh Counties who will not have a reduction in the post 16 demographic.
- Increasing Welsh provision – in line with the Vale of Glamorgan's own projections for the increase in places in its Welsh Medium Secondary schools – this will lead to an increase in the demand for Welsh medium and bilingual post 16 provision.
- Reducing running costs – as a result of a modern energy efficient build the cost per sqm will reduce, the design and operation standards implicit in the MIM ACRs will reduce the ongoing maintenance costs over the following 25 years and space utilisation will improve.
- Climate change / Net Zero Carbon (NZC) – the project is being taken forward as the FE sector NZC pilot project, so not only will the campus support the WG and Vale of Glamorgan's priorities to address climate change, it will provide important "lessons learnt" for future NZC developments in the FE sector.
- Innovation Quarter – this development will provide a key focus and community destination as part of the development of the Barry Waterfront Innovation Quarter and contribute to the regeneration of that part of the town. It will support economic regeneration at Barry Waterfront.
- Substantial increase in community facilities – the proposed development will provide community facilities, including at evenings, weekends and outside traditional college terms, supporting our social engagement mission, including training and meeting space for Third Sector partners.
- Substantial improvement in VoG educational provision – the proposed development will provide training facilities and courses for employers and adults as well as the "traditional" Full Time 16-19 cohorts and Apprenticeships. This will in turn provide routes into employment in key foundation economy areas and provide inspirational, attractive and functional learning environments in the Vale of Glamorgan, providing "parity" with those available in Cardiff.



Photographs of the existing Barry Campus on Colcot Road

## 2.4 Client/ Project Aspirations

The key objective of the project is to provide modern new-build facilities which will support the college in delivering their current and future curriculum while operating sustainably.

Barry Waterfront Campus will accommodate 855 students, a mix of full and part time, and 79 staff. The building will contain the following departments:

- Hospitality (contains public functions)
- Hair and Beauty (contains public functions)
- Wellbeing
- General Classrooms
- Student Services
- Business & IT
- Independent Living Skills
- Learning & Skills Centre
- Art & Design
- Care

and various admin, non curriculum and support spaces for the college. The total Gross Internal Floor Area is proposed to be 6000m<sup>2</sup>.

Multiple public and commercial functions are incorporated in the proposed department such as a restaurant, hair salon, beauty therapy and cafe. Alongside providing education opportunities the college will become a community hub.

From the outset of the project, the following indicative design parameters have been set for the campus:

- Contemporary, well-designed educational campus facility.
- Sensitively fit into the Innovation Quarter

Masterplan vision with a strong frontage and vibrant street scene onto Ffordd Y Mileniwm with imaginatively designed spaces around the building and integrated public art.

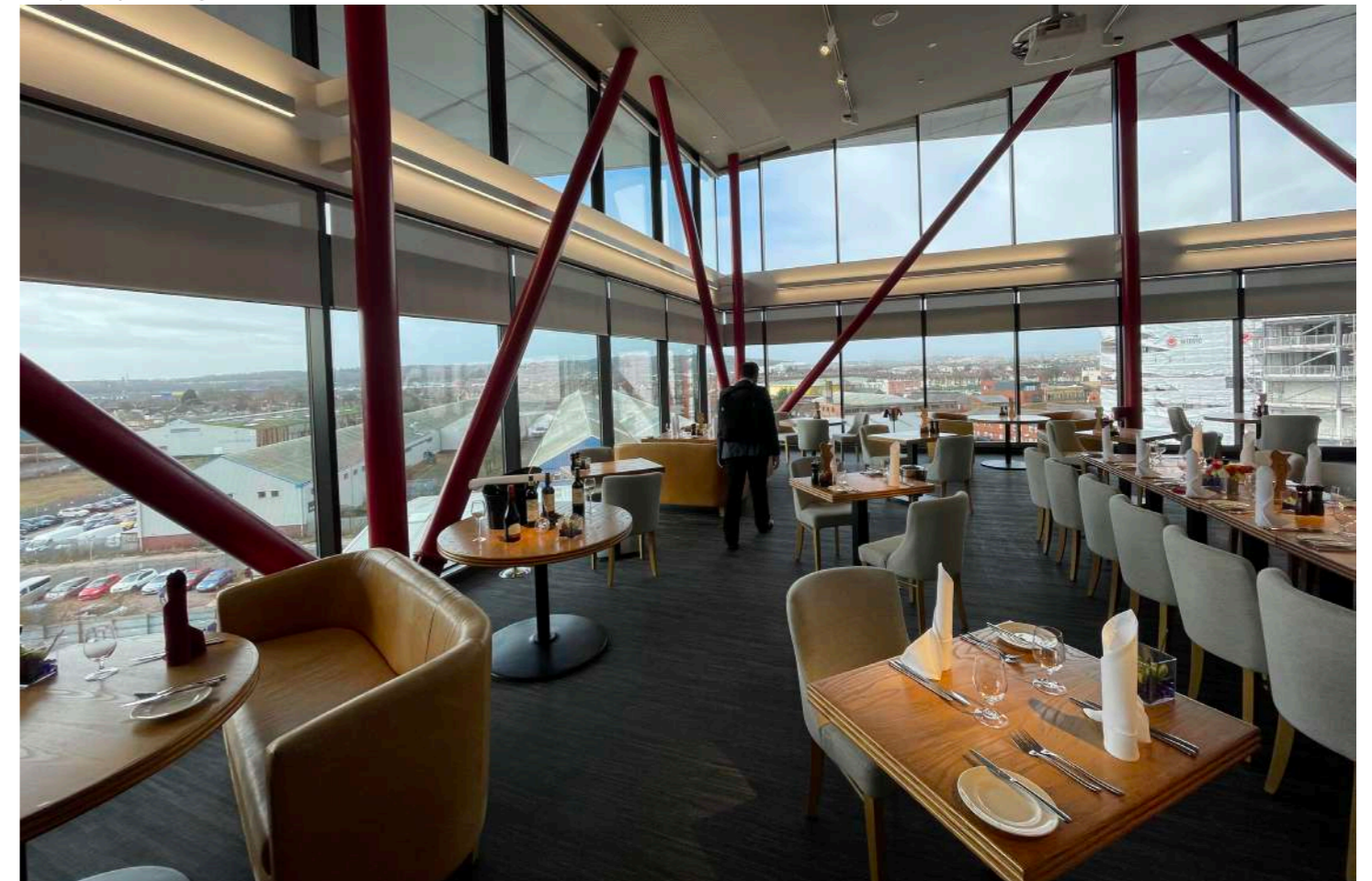
- Achieve a strong sense of place and be of urban scale and massing.
- Consider adjoining Innovation Quarter and other developments.

The new campus will be highly sustainable, setting itself accreditation, operational and embodied carbon goals:

- The project aspires to be Net Zero Carbon in Operation (as defined by the UKGBC).
- Embodied Carbon is capped at a maximum energy target of 800kgCO<sub>2</sub>/m<sup>2</sup>
- The project is required to achieve a BREEAM “Excellent” rating, with a minimum standard of ‘Excellent’ for Energy Credits (ENE01) and/or Part L+10%\*, whichever the higher improvement.



Hospitality training



CaVC commercial restaurant at Dumballs Road, Cardiff





CaVC Learning Skills Centre at Dumballs Road, Cardiff



CaVC Hair Salon at Dumballs Road, Cardiff



Art and Design



CaVC Beauty Treatment Room at Dumballs Road, Cardiff

### 3.0 SITE ANALYSIS AND CONTEXT APPRAISAL

#### 3.1 History of Site

The site is shown from earliest mapping (1878) to be part of tidal flats of the Cadoxton River. The site and surrounding area is shown as reclaimed from the 1898 mapping forming part of the Barry Docks, a large industrial area with associated railways, tracks, tanks and coal yards until the late 1990's where the site is disused. Since then, the area has been steadily transformed and regenerated with new homes, shops and supporting highway infrastructure and interlinked pedestrian and cycleway linkages connecting the Waterfront to Barry's town centre and the nearby seaside resort of Barry Island.

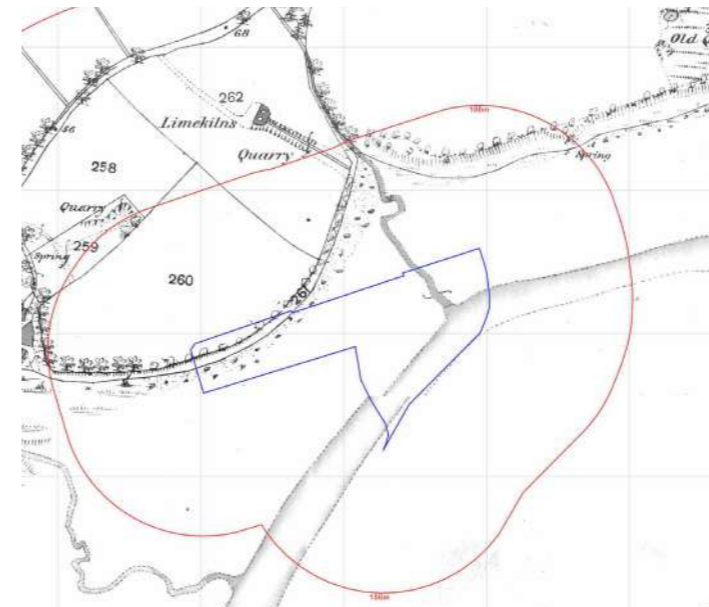
#### 3.2 Wider context and surroundings

The surrounding land use is recorded as predominantly, industrial and residential. The town of Barry is located to the east of the site. The area saw rapid industrial development in the early 1900s reaching its peak towards the 1970s, with a steady decline to present day. Recent developments include residential and commercial development to the north and south of the site.

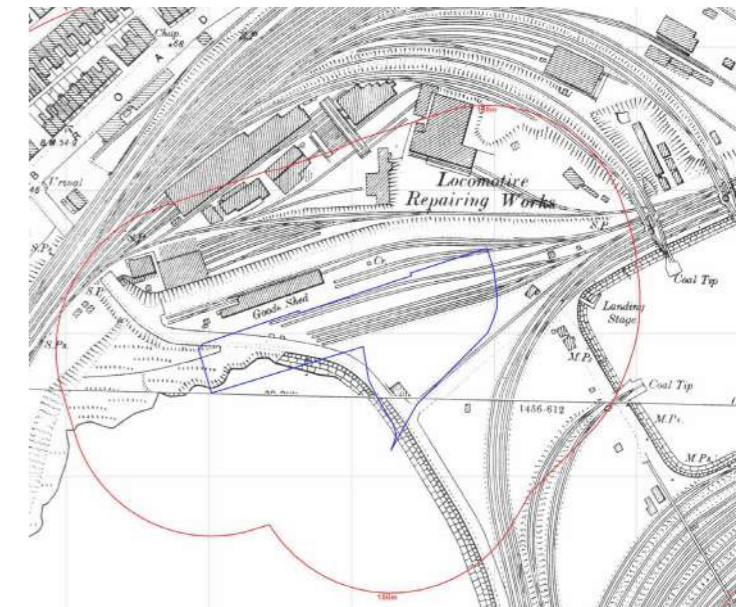
The site is part of the wider Innovation Quarter (IQ) Masterplan, a 19-acre area of former industrial dock land that is aimed at delivering a vibrant mixed use "urban quarter". The IQ is well located in the heart of Barry Waterfront comprehensive dockland development area alongside an ongoing development called the Quays (the second phase of Barry Waterfront).

To date, various developments have been delivered at the IQ including the renovation of a Grade II Listed Hydraulic Pumphouse, a Premier Inn hotel and Brewers Fayre restaurant, West Quay Medical Centre, a primary school and the Business Services Centre. The IQ is also intersected by a tourist railway that connects to Barry Island and hosts various events throughout the year.

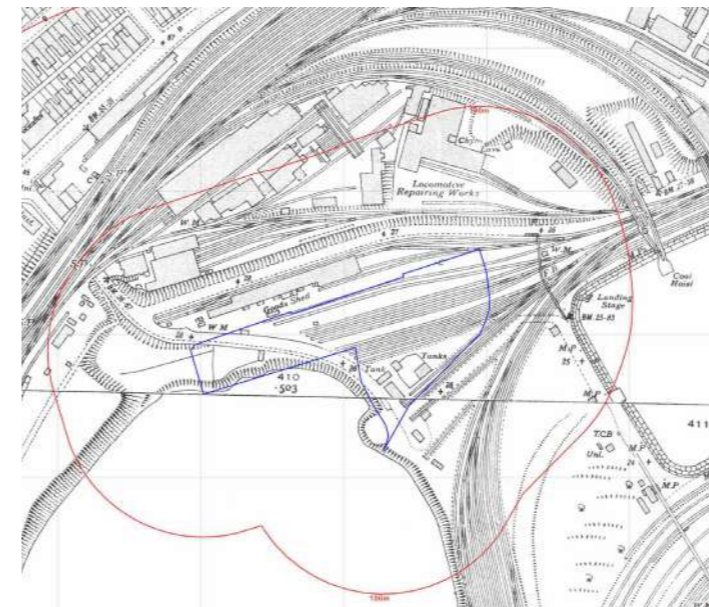
Immediately to the North of the site is the Goodsheds development (some photographs included in section 3.6), a mix use development, comprising live/work residential apartments and commercial units in a shipping container village, a block of residential apartments and the Goods Shed-a property considered to be an important part of Barry's industrial heritage.



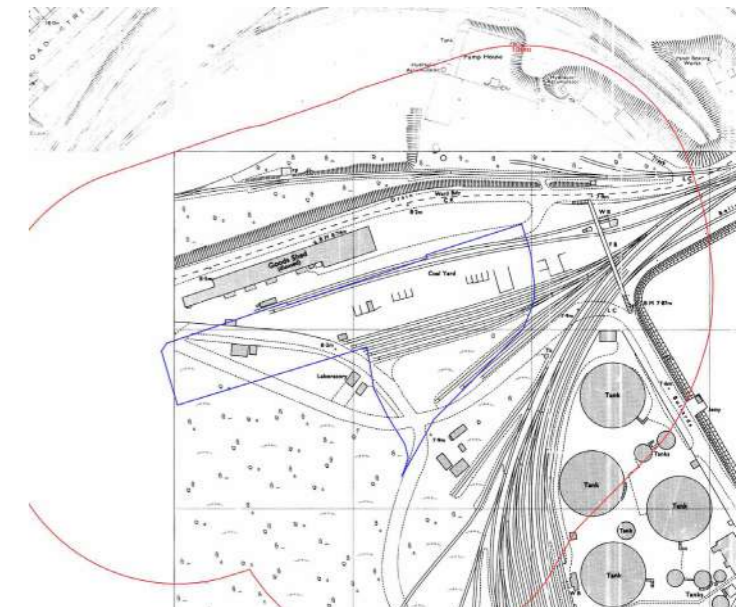
1880-1881 Cadoxton River Part of Site



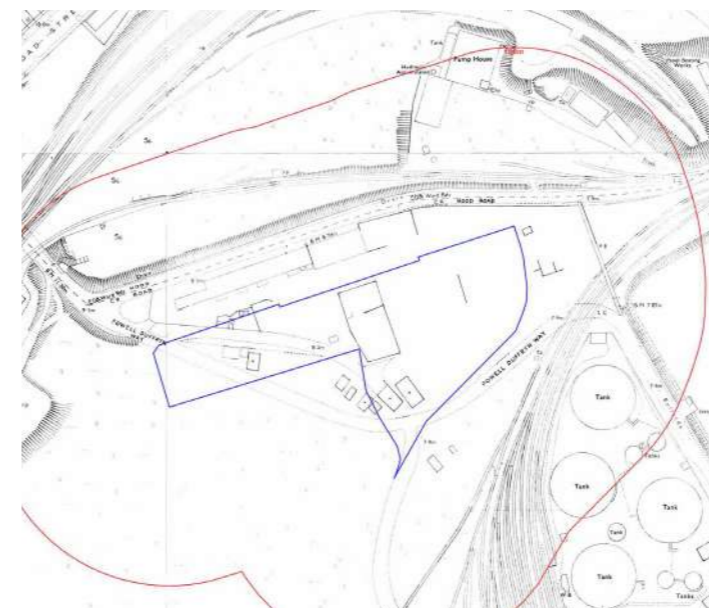
1900 Land Reclaimed



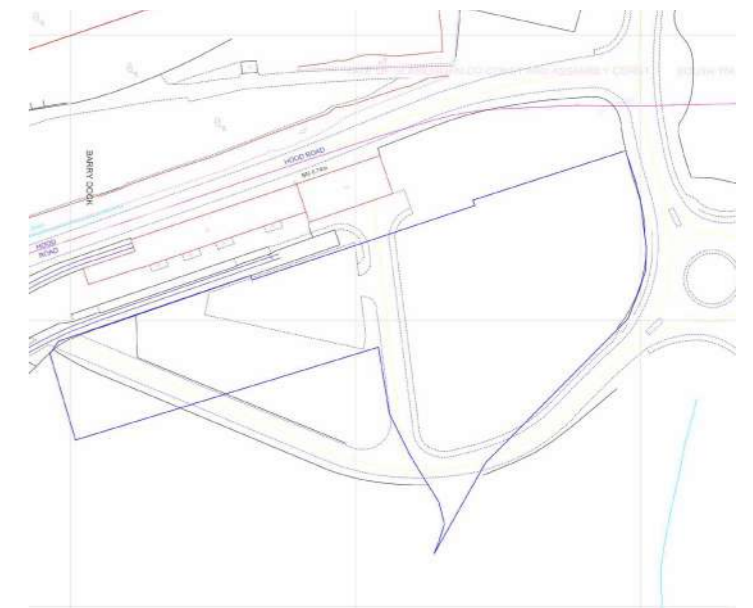
1920s Industrial Growth Between Wars



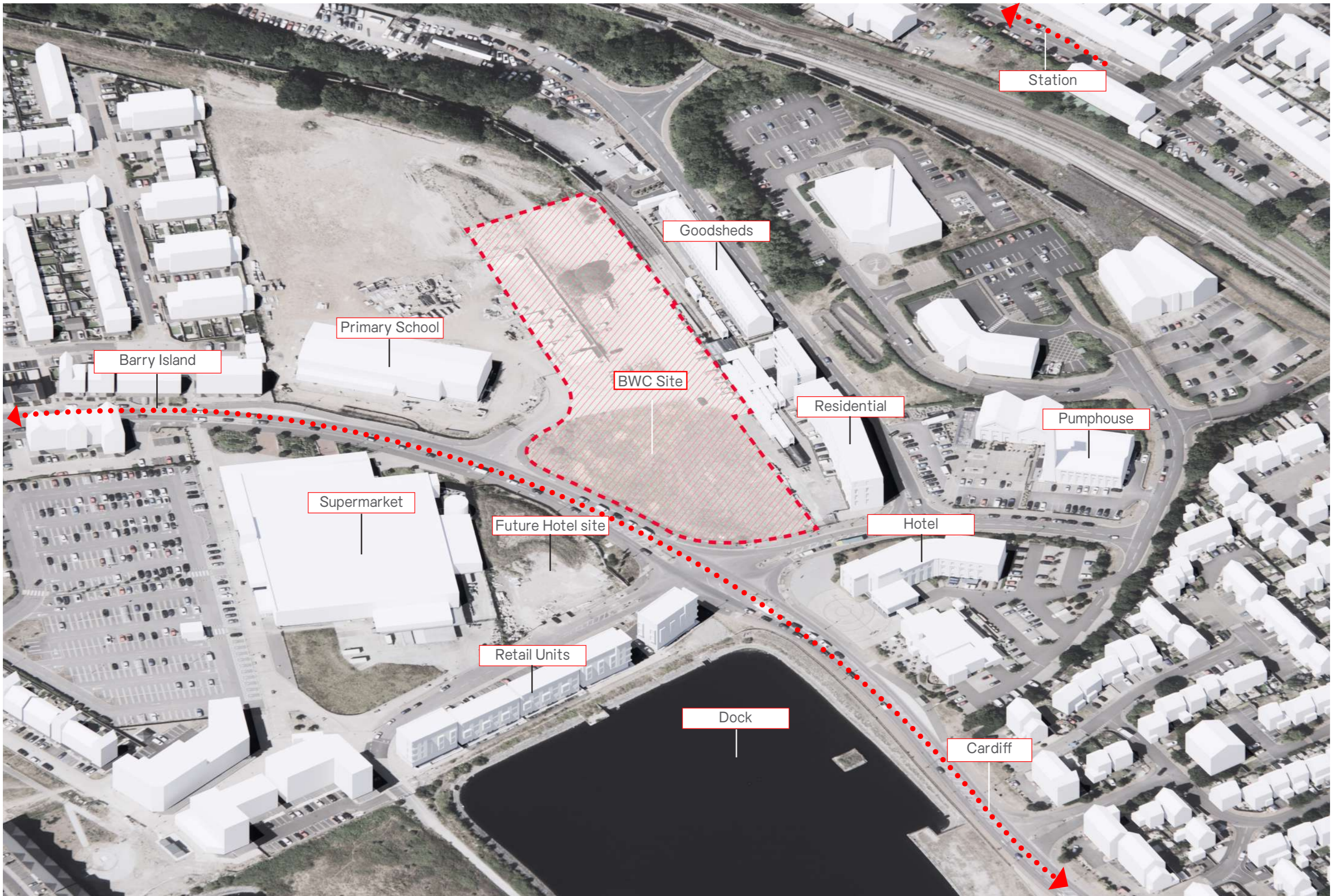
1970s Decline Begins



1990 Site Becomes Disused



2003 No remaining Buildings on Site



Site context

### 3.3 Immediate Site

The site is located off Ffordd Y Mileniwm, approximately 0.30 km south east of Barry town centre. The site is irregular in shape and is 1.078 hectares in area. There is an existing vehicle entrance via a gated road off Ffordd Y Mileniwm to the south of the site, which can be maintained. On the portion of land adjacent to the vehicle entrance to the site is a new primary school. Pedestrian route from the East, off Hood Road.

Surrounding land use is predominantly industrial and residential.

- North: Mixed use, heritage rail line and station, commercial, retail and leisure use with residential properties beyond.
- East: Barry Docks.
- South: Primary school, supermarket and residential properties.
- West: Railway Lines and residential properties beyond.

Several buildings adjacent to the site are significant for the following reasons:

- Tourist railway, Waterfront terminus is alongside the old Barry Railway Co's Hood Road goods shed.
- Pump House building to the North of the site. It is another important structure and has been redeveloped to provide cafe and restaurant space.
- A hotel is directly East and a large supermarket is South of the site, these provide opportunity for accommodation, food and employment to students.

A heritage report, looking at the historic significance of the site context in more detail has been provided as part of this application.

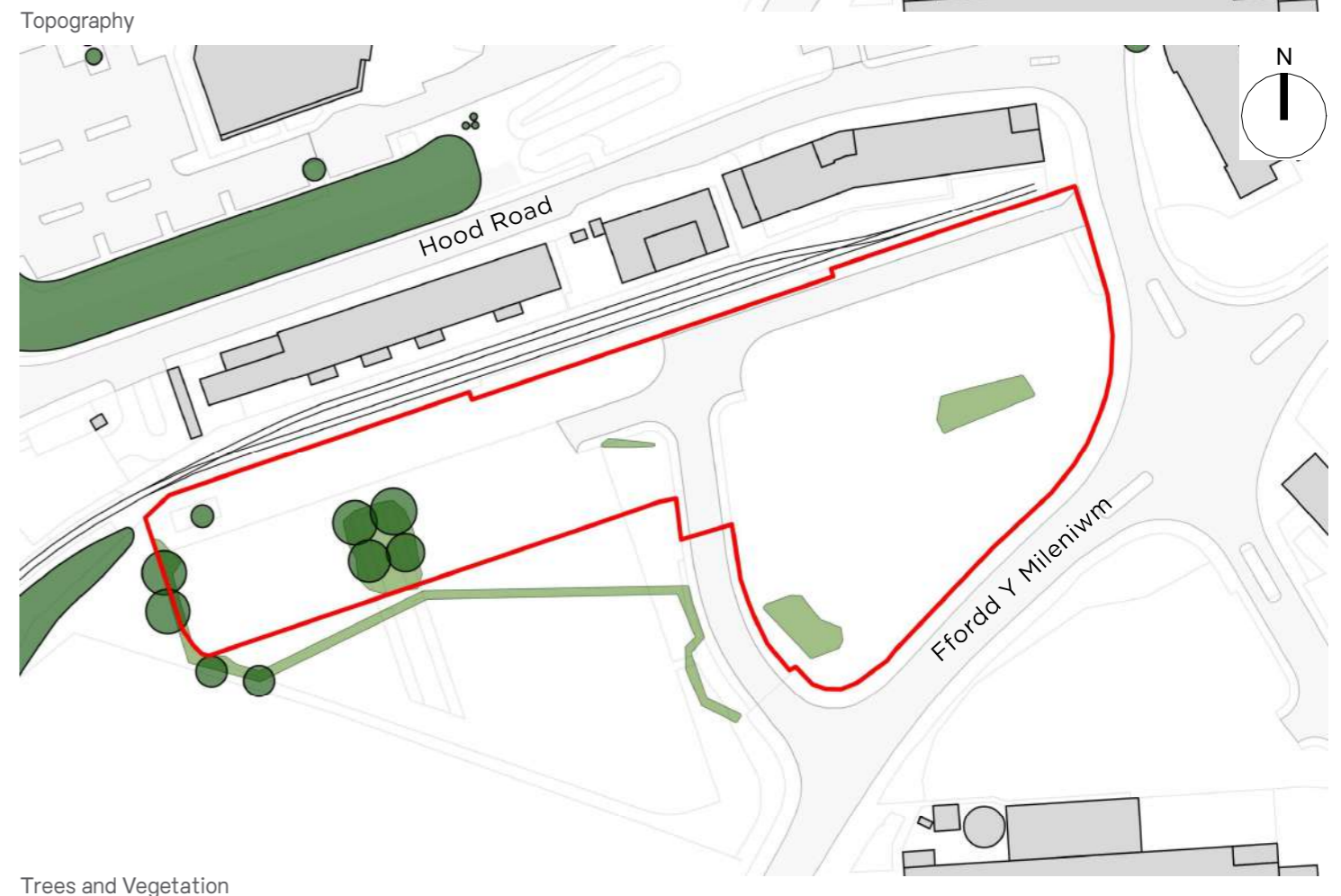
A preliminary ecological appraisal concluded that the site is of limited value to wildlife with no protected species observed. Overall, the proposed works will not have a lasting or significant impact on wildlife.

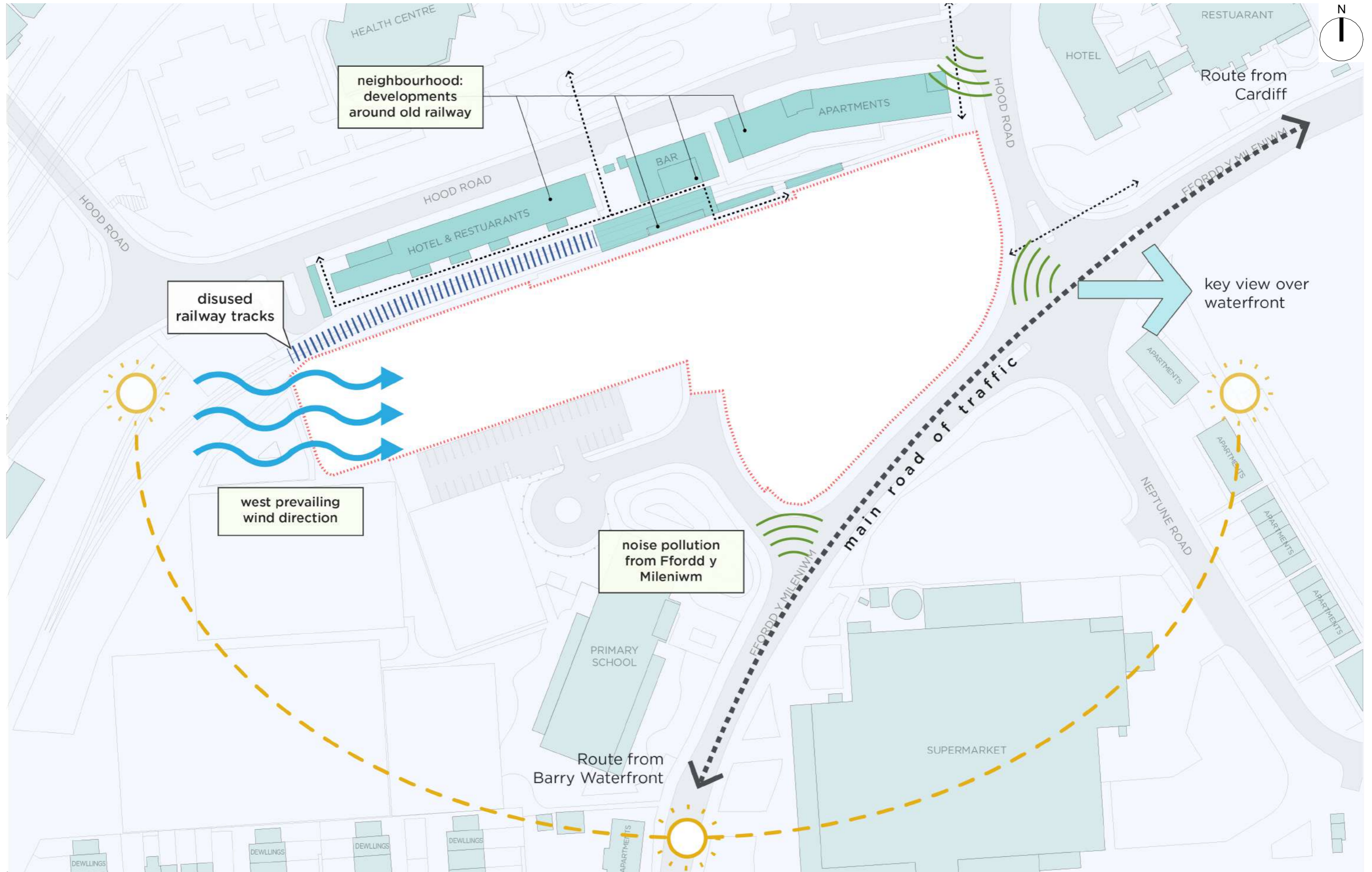
A flood consequence assessment concluded the site to be at low risk of flooding, but requiring consideration to overland flows.

A tree survey has been undertaken and there are no category A trees on site.

### 3.4 Topography

The site's topography is generally level in the west, centre and north east of the site. With the eastern scrubland at a higher elevation, approximately 1.5m compared to the rest of the site. Adjacent plots are at a similar level and similar topography.





Initial Site Analysis

### 3.5 Flood Risk

The Welsh Government Technical Advice Note 15 (TAN15) and Natural Resources Wales (NRW) Flood Map for Planning show that areas of the site are in Zone B and within Flood Zones 2 and 3 respectively (tidal and surface water). These are defined as follows:





- Zone B: areas known to have been flooded in the past evidenced by sedimentary deposits
- Flood Zone 2 (tidal and surface water) : areas with 0.1% to 0.5% (1 in 1000 to 1 in 200) chance of flooding from the sea in a given year, including the effects of climate change, or areas with 0.1% to 1% (1 in 1000 to 1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change.
- Flood Zone 3: areas with more than 0.5% (1 in 200) chance of flooding from the sea in a given year, including the effects of climate change, or areas with more than 1% (1 in 100) chance of flooding from surface water and/or small watercourses in a given year, including the effects of climate change

Baseline tidal modelling has been undertaken to check the extent of flooding during the 1 in 200 and 1 in 1000 year tidal flood events, taking into account 75 years of climate change which is appropriate for the lifetime of the development. The baseline modelling demonstrates that for the 0.1% event including 75 years of climate change, the site is predicted to be flood free. Refer to the Flood Consequences Assessment, LPT-JBA-XX-XX-RP-Z-0001 (P02).

Flood Maps suggest that the low lying areas of the site provide flood storage in extreme events for surface water runoff generated on the site itself, in addition to overland flood flow paths from upland areas north of the site. The stormwater drainage strategy serving the site will treat and attenuate runoff generated by the impermeable areas of the proposed development and meet the requirements set out in the Statutory Standards for Sustainable Drainage Systems (SuDS). This will reduce flooding associated with surface water generated on the site itself.

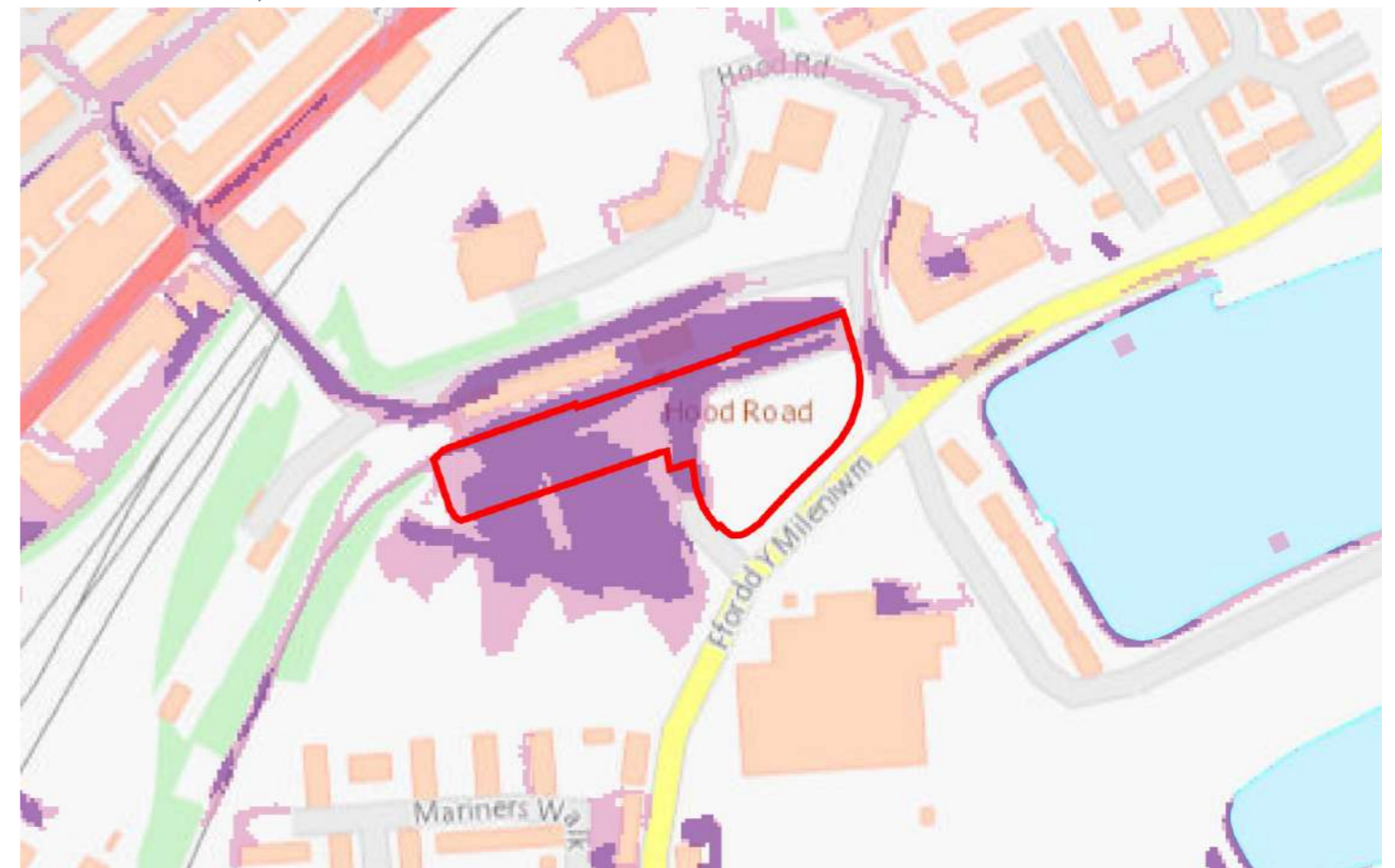
Detailed modelling has been undertaken to assess the surface water flood risk, refer to Appendix C of the Drainage Statement. The proposed finished levels will be at or below the existing levels, to ensure that the volume of storage available below the anticipated flood level is retained in the developed site. The existing levels will be retained along the boundaries of the site to ensure that the existing flood flow paths will be retained. The modelling demonstrates that the proposed development does not cause detriment to adjacent sites compared to the baseline. During extreme events, the proposed car park will be flooded by surface water; however, pedestrian routes around the building will not be impacted, ensuring safe access and egress during these events.

For further details refer to the Drainage Statement which also forms part of this application.

Key	
Rivers and Sea	Surface Water and Small Watercourses
 Flood Zone 3	 Flood Zone 3
 Flood Zone 2	 Flood Zone 2

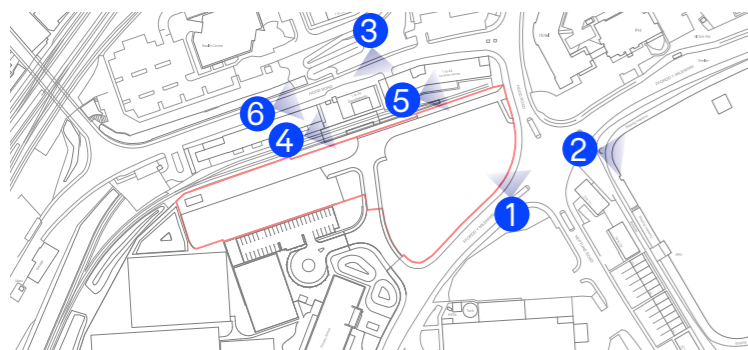


River and Sea Flood Map



Surface Water Flood Map

### 3.6 Context Photographs



### 3.7 Constraints & Opportunities

There are a number of site constraints which need to be taken into account in planning the design and layout of the proposals. These are:

- A existing historic water culvert and its associated easement zone
- Existing public utilities and associated easement zones. Some are required to be diverted.
- Existing private sewer (to be diverted).
- Services associated with the site and requiring removal.
- Existing trees. Low importance, can be removed especially when combined with a good landscape strategy.

- Noise pollution from Ffordd Y Mileniwm. Impacts ventilation strategy.

Opportunities:

- Existing vehicle access to site can be utilised.
- Active frontage to Ffordd Y Mileniwm and Hood Road.
- Views over waterfront and dock.

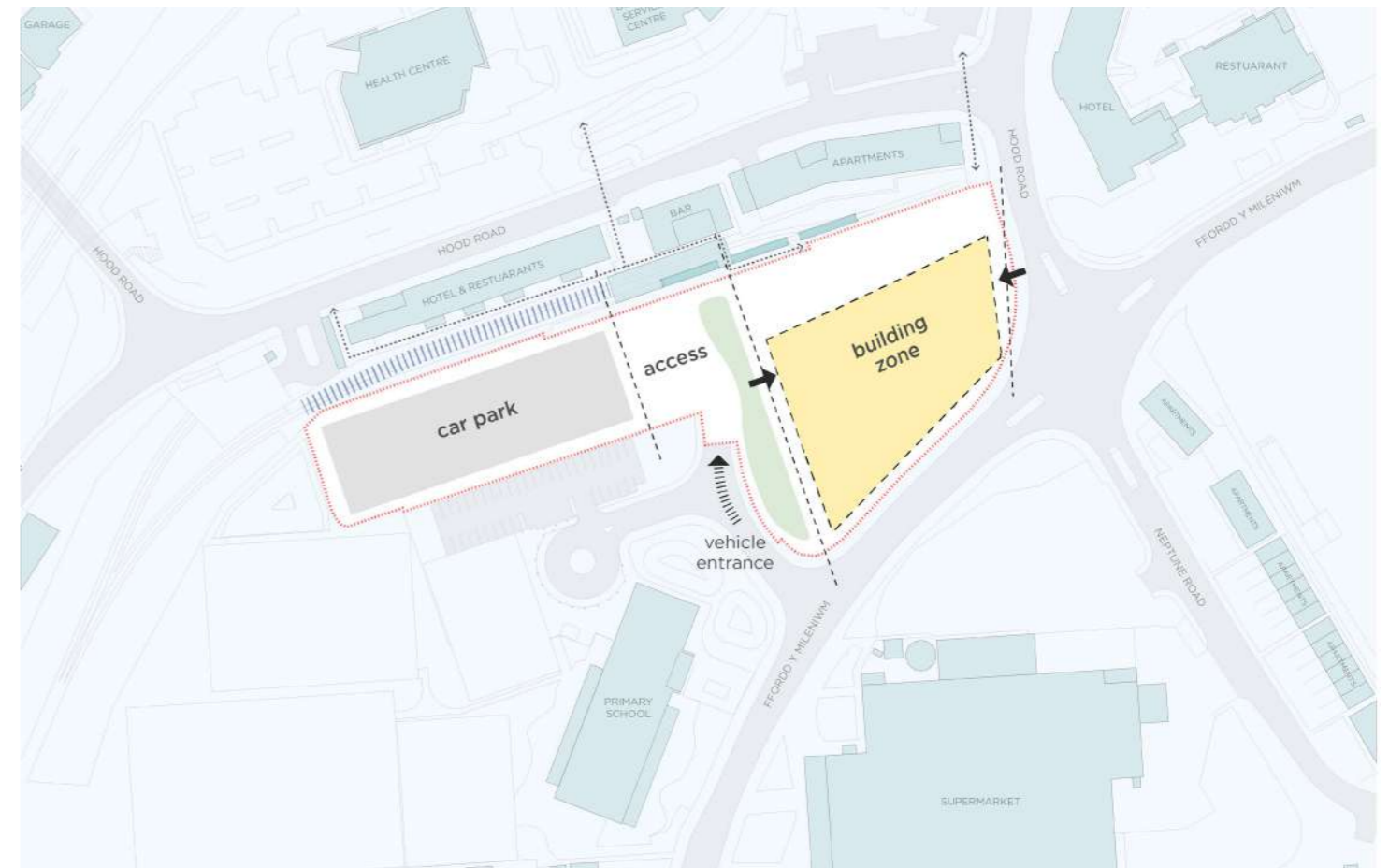
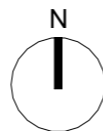
The position of the building on the site is strongly governed by the site parameters, and the need to have street presence on Ffordd Y Mileniwm and the road junction; especially for departments open to commercial customers.



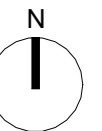
Site Constraints

Key

- services assumed to be associated with site and can be removed (TBC)
- existing private sewer (possibility to divert if needed, TBC)
- existing trees
- culvert
- 3m easement zone (6 for culvert)



Building Zone





## 4.0 DESIGN STATEMENT

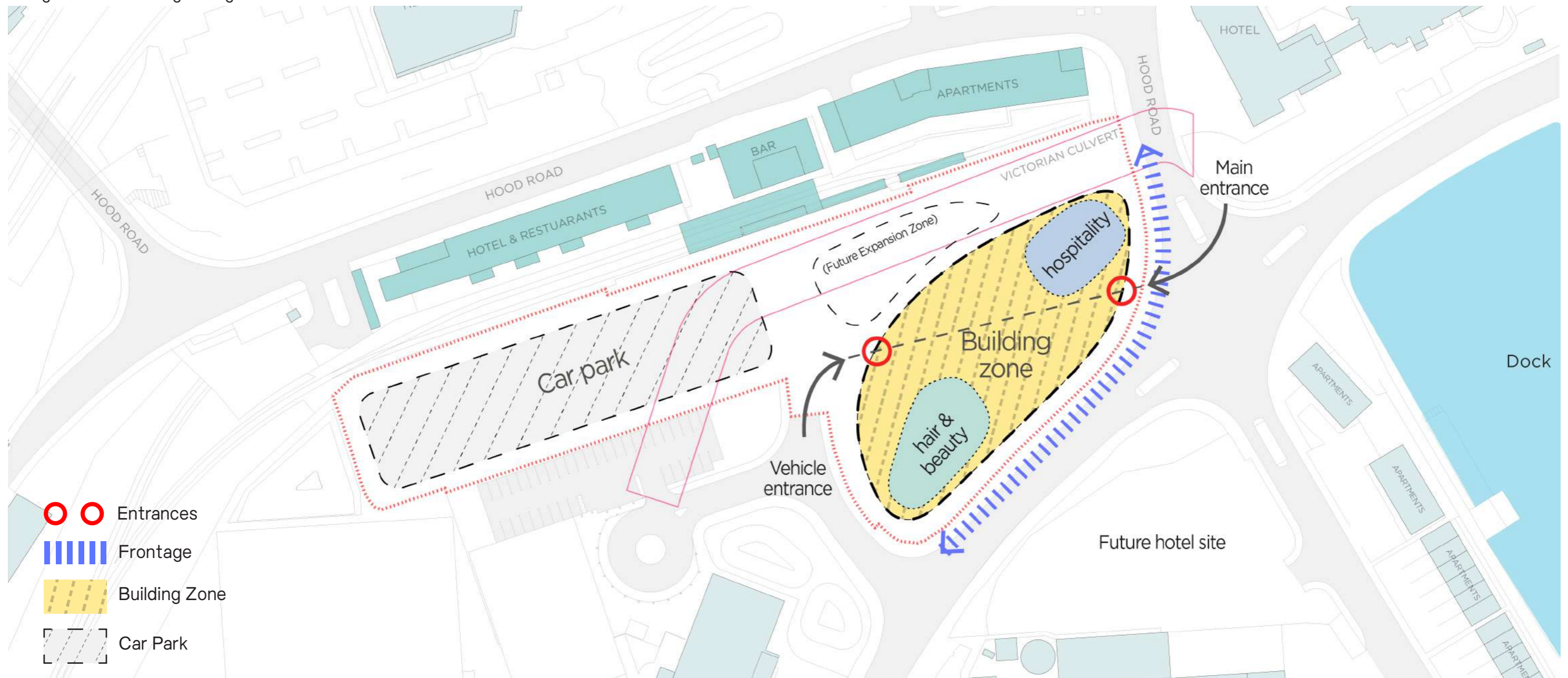
### 4.1 Design Principles and Concept

Some of the key requirements set for the campus are for the building to be contemporary and well designed, achieve a strong sense of place and be of urban scale, sensitively fit into the IQ Masterplan vision and within the adjoining developments, with a strong frontage and vibrant street scene onto Ffordd Y Mileniwm and Hood Road, with imaginatively designed spaces around the building.

The Innovation Quarter Summary Paper includes an indicative masterplan which suggests proposals for the site. It indicates built form to be located at the junction of Hood Road and Ffordd y Mileniwm with car parking located to the rear. This strategy corresponded well with the challenges and opportunities presented by the nature of the site, as described in section 3 of this statement and has been adopted for the development. The diagram below summarises key constraints, opportunities and our initial thoughts about building zoning.

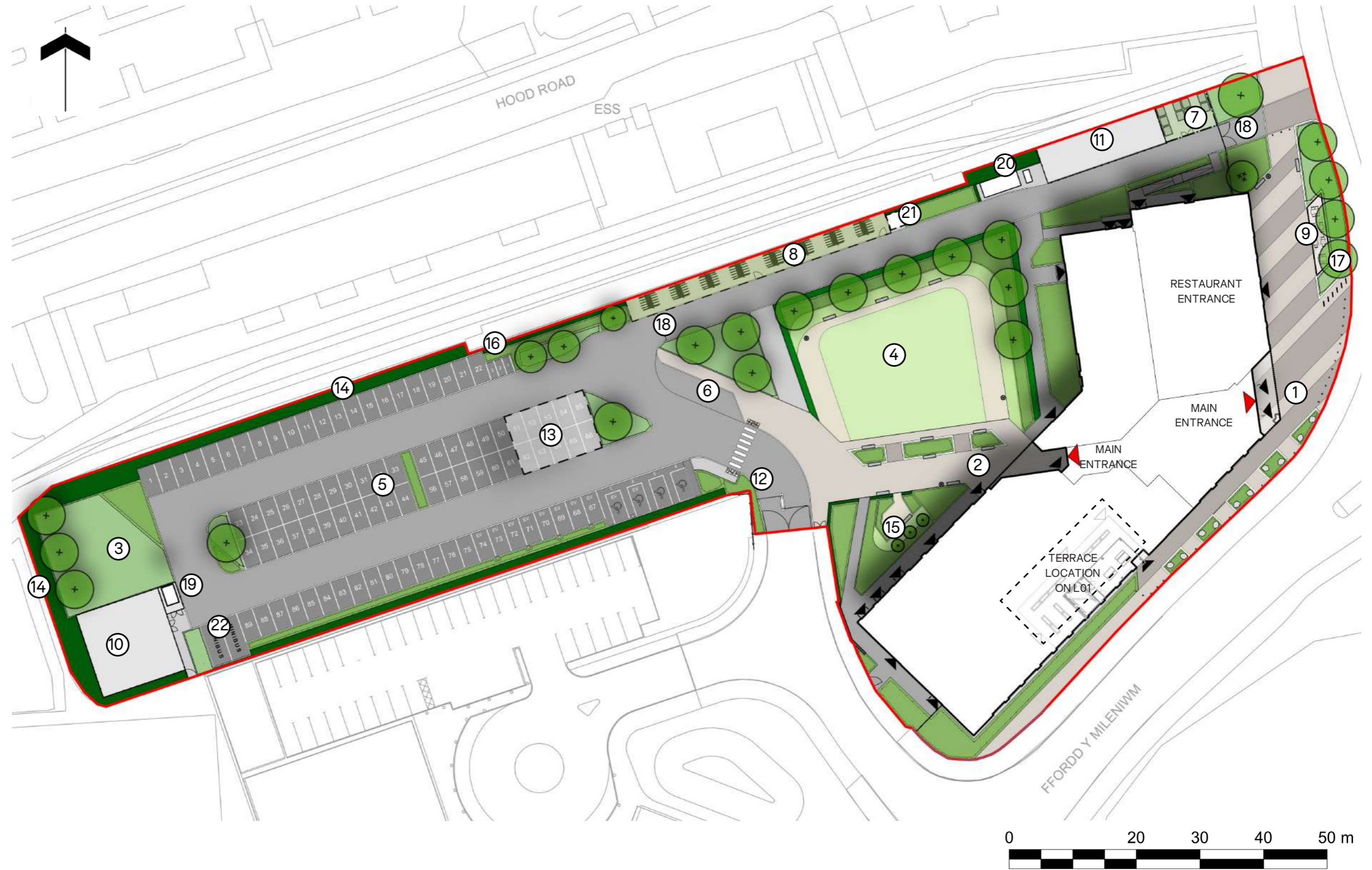
The site is subject to a complex network of below ground services and an old sea culvert. The siting of the building has been carefully considered to avoid these services. Where it has not been possible to avoid services, diversions have been proposed. Restrictions from the services and their associated easements have also dictated where Sustainable Urban Drainage features, trees and structures are placed.

The site also sits in a surface water and sea flood zone. As a result, the site levels strategy must ensure ground levels remain as close to existing as possible. This has driven the layout of the proposals to ensure access to the building can be achieved where needed.



## 4.2 Site Masterplan

- ① Front Entrance Plaza
- ② Rear Entrance Plaza
- ③ Rain Garden/Habitat Area
- ④ Social Lawn
- ⑤ Car Park  
93 Spaces (including 10no. EVCPs)
- ⑥ Pick Up/Drop Off Bay
- ⑦ Bin Store  
With Green Roof
- ⑧ Cycle Parking (double stacked)  
160 Spaces, 10 standard spaces
- ⑨ Social & Outdoor Dining Space
- ⑩ Sprinkler Tank System
- ⑪ Air Source Heat Pump
- ⑫ Rising Arm Barrier  
With additional Gated Access
- ⑬ PV Canopy
- ⑭ Boundary Hedge Planting
- ⑮ Edible Garden
- ⑯ Motorcycle Parking
- ⑰ Feature Trees & Rain Garden
- ⑱ Refuse & Emergency Access Route  
One Way from Hood Road
- ⑲ Generator
- ⑳ Battery
- ㉑ Storage Shed
- ㉒ Mini-bus parking



### 4.3 Main Entrances and Active Frontages

The proposed building prioritises its relationship to Ffordd Y Mileniwm and Hood Road generally. It is set back from Hood Road and the entrance area further recessed to create a distinctive approach across a landscaped entrance plaza for the main pedestrian entrance. The western entrance is also accented via a recess in the elevation and will act as the main car park and cyclist entrance. The central atrium creates a link between the two entrances and the two different external areas—the public facing entrance plaza on Hood Road and the more quiet, landscaped college courtyard facing the car park.

Both Hood Road and Ffordd Y Mileniwm elevations provide active frontages hosting the hair and beauty, hospitality departments as well as the lively atrium which will showcase activities within the building over the three floors.



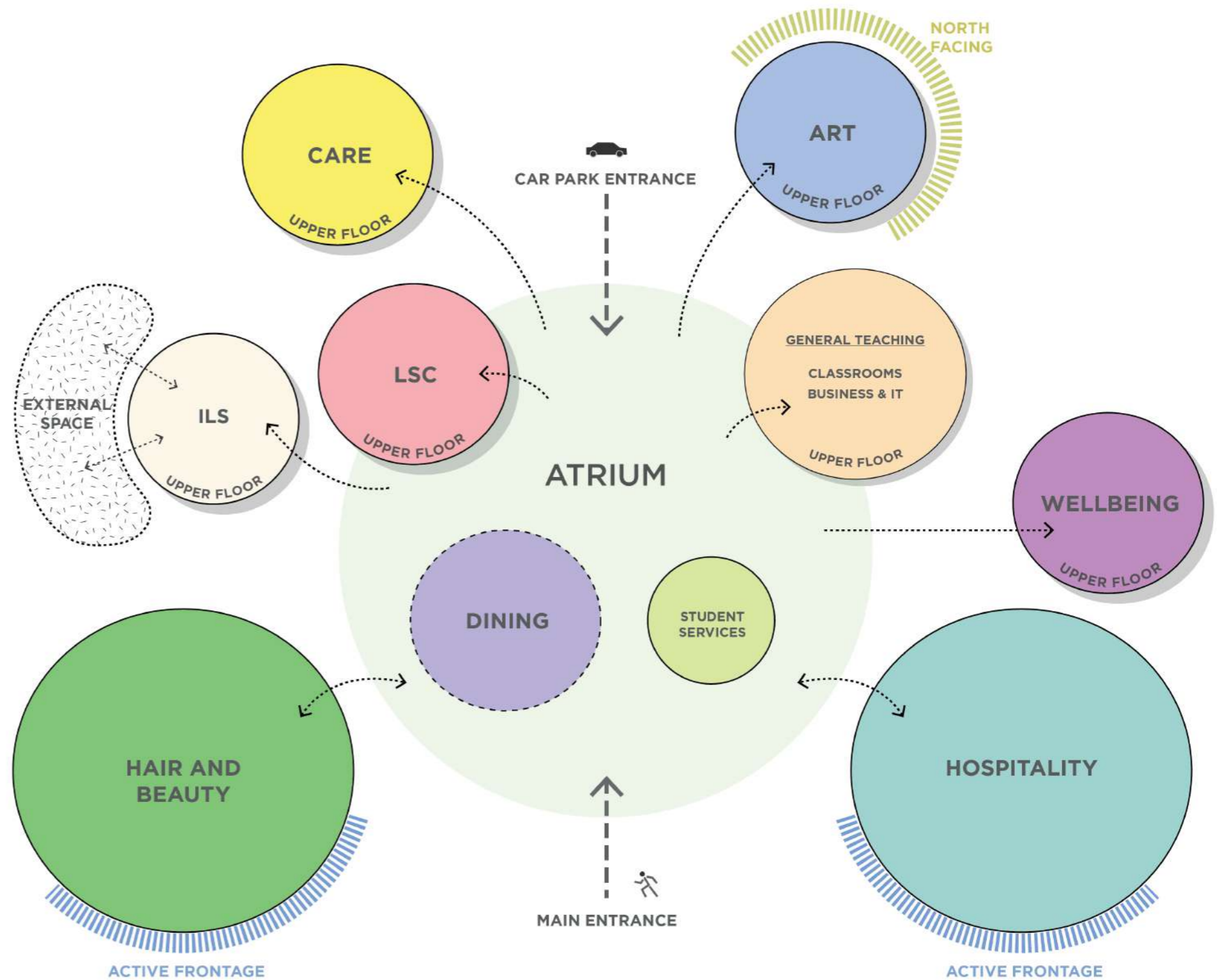
Early sketch of Ffordd Y Mileniwm elevation and Hood Rd Entrance

#### 4.4 Scale and Massing

To meet the key aspirations outlined in section 4.1 and respond to the site constraints, it was established that the proposed building mass should be at least three storeys high and prioritise its relationship with Ffordd Y Mileniwm and Hood Road.

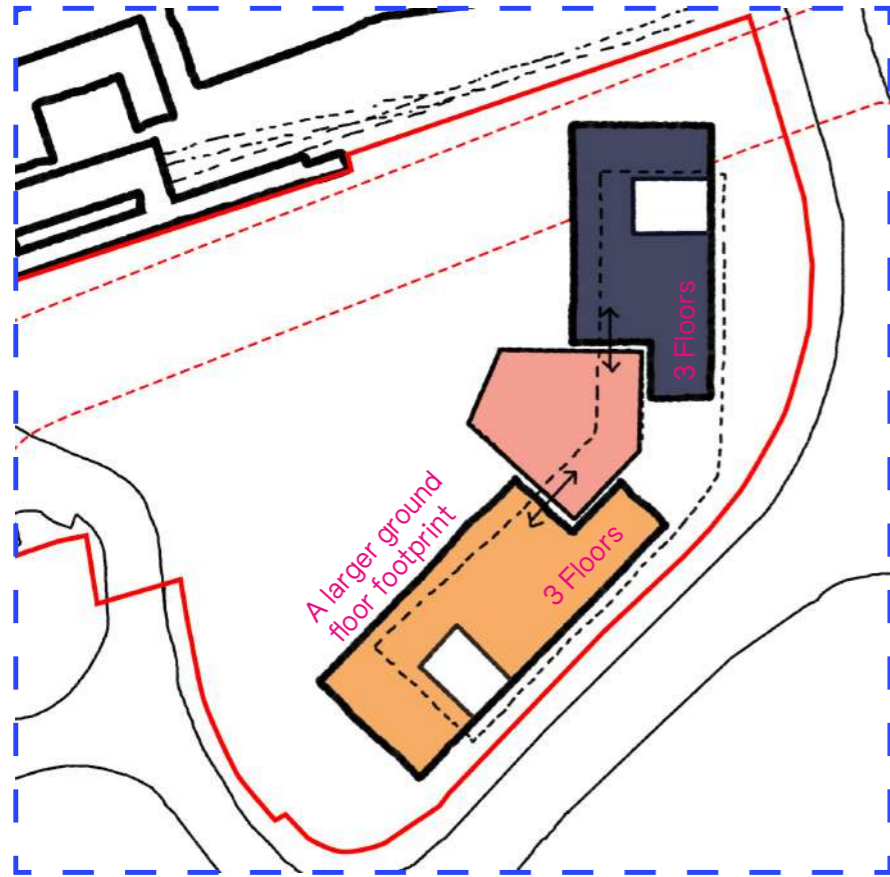
A significant portion of the accommodation at the Barry Waterfront Campus had to be located on the ground floor due to public facing functions and adjacency requirements (see adjacency diagram on the right). This dictated the size of the floorplate while site constraints, planning and wider Innovation Quarter aspirations influenced the shape. Subsequent floors were then extruded up and the massing of the building made more dynamic via a stepped back three story main entrance and a cut out on Ffordd Y Mileniwm for an exciting Independent Learning and Skills department terrace.

Following the parametric, orientation/form and adjacencies testing (see option summary on the following page) the preferred option was developed in further detail. This was done in close collaboration with the college, as well as the design team. Testing both in context and while looking at key internal routes and adjacencies allowed development of an efficient design with the potential for good street presence as required by both the college and the VoG 'place' directorate.

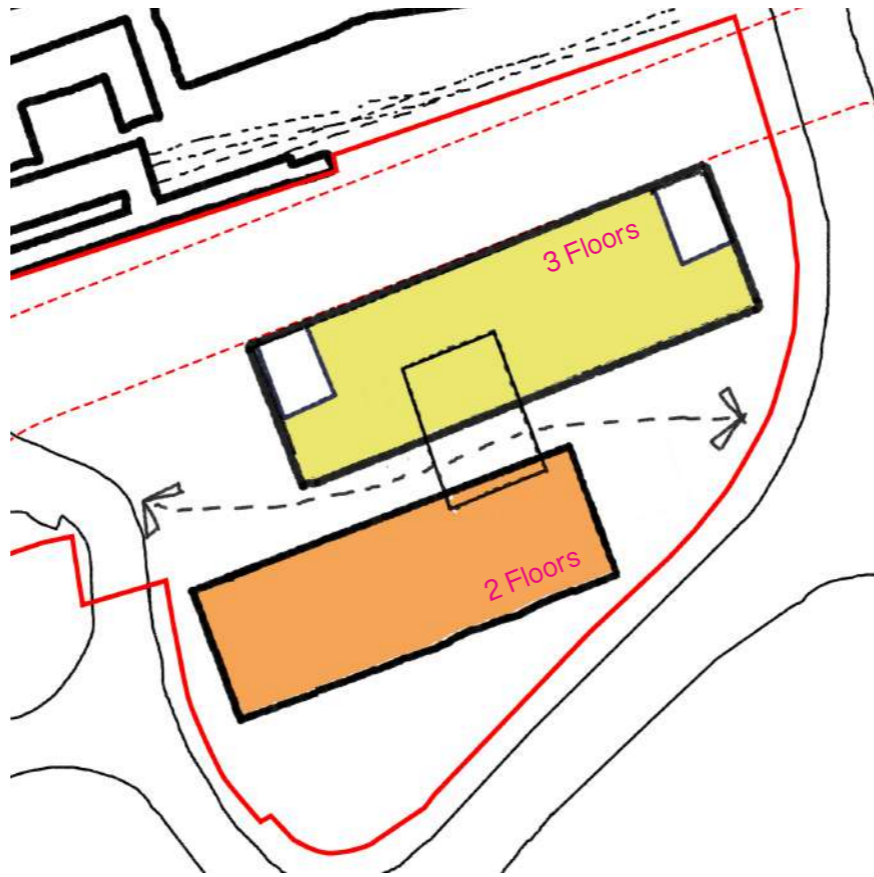


Adjacency diagram developed with the college

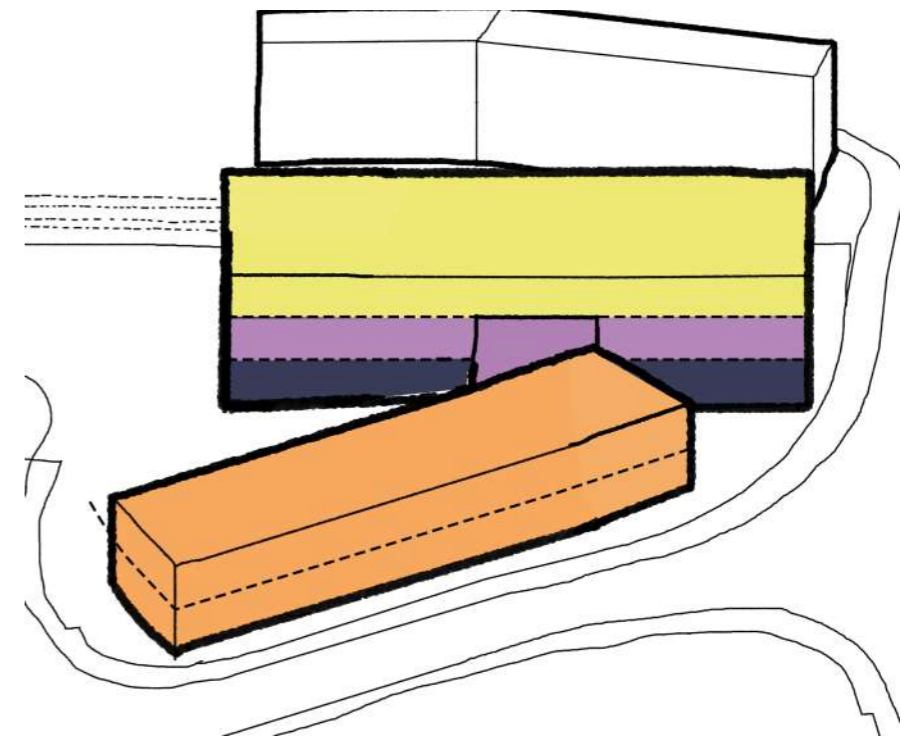
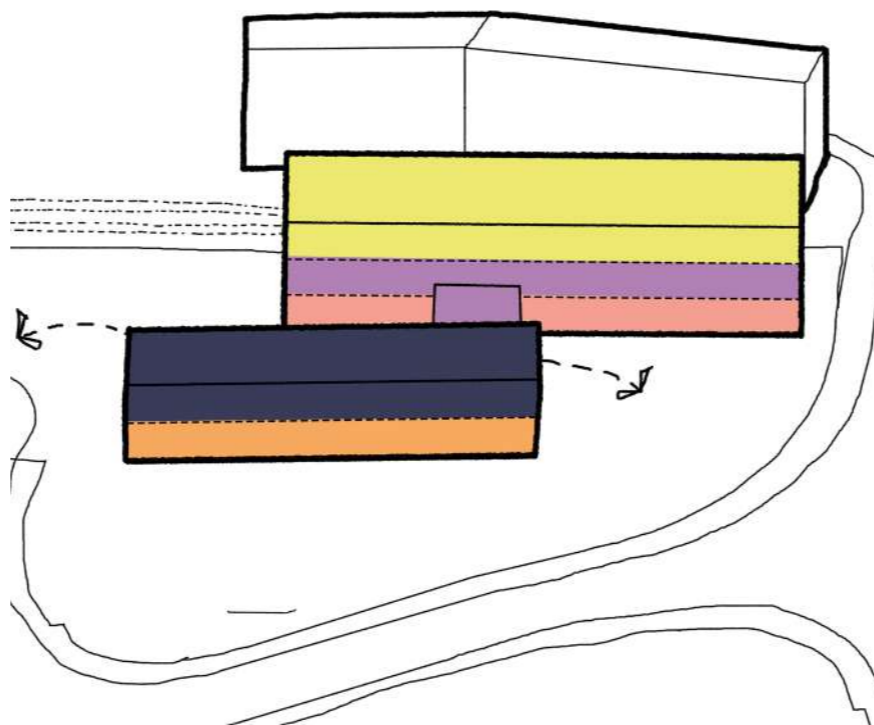
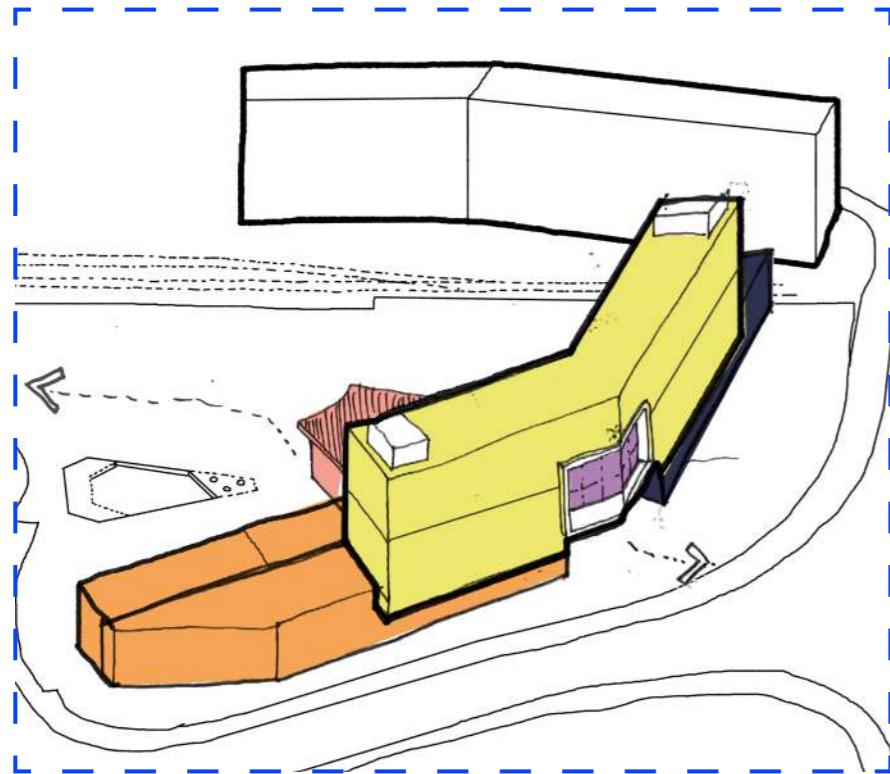
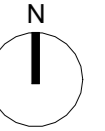
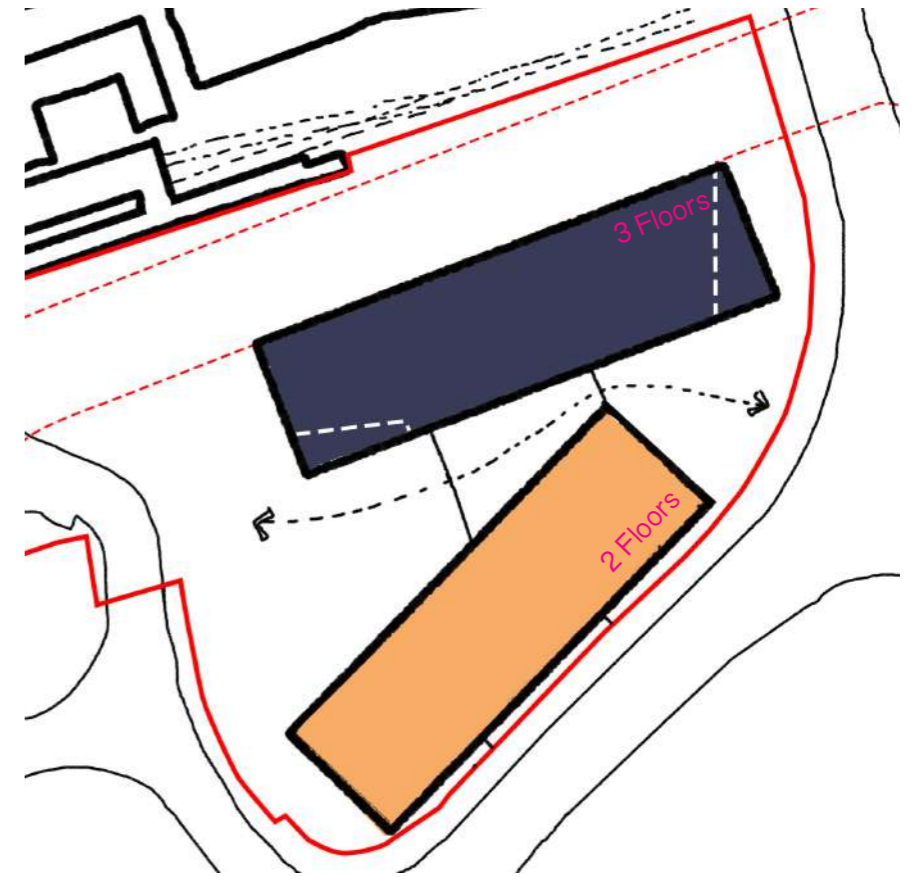
Option 1-Preferred Option



Option 2



Option 3





Position and massing on site

## 4.5 Landscape Design and Principles

The landscape design creates diverse and rich spaces for the staff and students of the college. The site layout maximises opportunities for social interaction and learning through the provision of external dining and extra curricular spaces. Together these balance educational needs with a connection to nature and the surrounding environment.

Biophilic principles have been another key design driver, considered planting has been integrated throughout the masterplan. Sustainable principles in relation to sustainable drainage features and habitat creation where possible.

The landscape design responds to its unique urban dockside location.

