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# WIC HOUSE



## DESIGN AND ACCESS STATEMENT

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Architecture | Interiors | Master Planning | Landscape | Client Representation

Document

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1.0 Project Introduction

1.0 Project Business Case

Oxford Biomedica (OXB) is a company with broad and global market-leading capabilities in terms of development, manufacture and testing of viral vectors for clinical and commercial use (So called ATMP’s – advanced therapy medicinal products). As a platform/product developer, originating from Oxford University some 23 years ago, OXB has pioneered in vivo delivery of lentiviral vectors. We have several strategic partnerships, such as one with Novartis supporting the development of chimeric antigen receptor (CAR)–T-cell programmes, including Kymriah™ which is a commercially approved product based on our proprietary lentiviral vector technology.

OXB have been recently rapidly expanding our research, development and manufacturing capabilities and capacities and adding many more jobs at all levels from apprentices through to PhD’s. In the last 3 years we have grown from around 300 to over 700 staff, leased additional space for research and development activities, and partially fitted out and commenced manufacturing in the Oxbox facility which obtained MHRA approval in Q1 2020.

The WIC House project is linked into a broader Research and Development capacity expansion plan that will lead to increased high value process, research and development activities, together with the commitment to create many more highly skilled jobs. The R&D activities will support the work already carried out in Windrush Court adjacent.

OXB continues to develop technologies based on state-of-the-art platform, manufacturing and testing capabilities to further support our market leading position, ensuring the UK continues to lead in many areas of the development of advanced therapies. In addition to our core business, OXB is providing a number of critical services working in collaboration with AstraZeneca, Oxford University, the VMIC (Vaccine Manufacturing Innovation Centre) and the Oxford Vaccine Consortium on the COVID-19 Vaccine, the proposed facility will aid and expand OXB’s ability and capacity to further support this and similar rapid response projects.

The field of advanced therapies has moved to a period of rapid progression over last 5 years, resulting in a number of products with genuinely disease-transforming potential being commercialised. Many of these products rely on viral vector technology, in particular lentiviral vectors and AAV vectors, while the AstraZeneca Covid-19 vaccine relies on adenoviral vector produced by us. Viral vectors are used either as a means of genetically modifying target cells or tissues, or as direct treatments in vivo. This accelerated development, exemplified by several products approaching the market and most recently the FDA approval of Novartis’ Kymriah™ means that there is intense demand on viral vector development, manufacturing and analytical throughput and capacity in a GMP-compliant commercial setting that is fit for market supply. OXB has built platform technologies to address this need and is actively developing products as well as working with partner organisations to facilitate development and delivery of lentiviral vectors.

The company recently completed a £30m investment in GMP production, analytics and development, both in terms of facilities, equipment and people, resulting in the company expanding over the past 5 years from around 80 staff to currently >700 staff. This completed phase of expansion has demonstrably addressed the immediate needs for our key partners Novartis and Orchard Therapeutics, resulting in significant year on year revenue increases and has enabled the rapid introduction of the AZ Covid-19 vaccine manufacturing. OXB recognises that further expansion of research and development facilities and capabilities is necessary in order to supply the

continuously increasing demands from existing and future partners, as well as for OXB’s in-house products under development.

The intended investment will help OXB to realise another round of capacity expansion, by providing custom-made, state of the art, “Laboratory of the future” space for our research teams working on developing our viral vector platform technologies, our pipeline of cell and gene therapy products, and on further enhancements to our technologies and manufacturing processes.

1.1 Design Summary

OXB’s project brief is to replace the current office and lab facility known as ISIS House, with a new state of the art flexible R&D facility, to support their business case through expansion.

The WIC House proposal accommodates 250 researchers, in flexible R&D laboratories alongside supporting offices, meeting rooms, collaboration space and welfare.

Sustainability is a key driver for the design, with the facility designed to meet BREEAM Excellent. It includes a positive increase in biodiversity though a large brown roof, PV arrays and LZC heating and cooling technologies, alongside more passive measures such as a super efficient facade.

The buildings high quality appearance alongside Windrush Court ( OXB’s adjacent facility) will have a positive impact on the local context and alongside Windrush Court be the focus for OXB’s continued expansion.



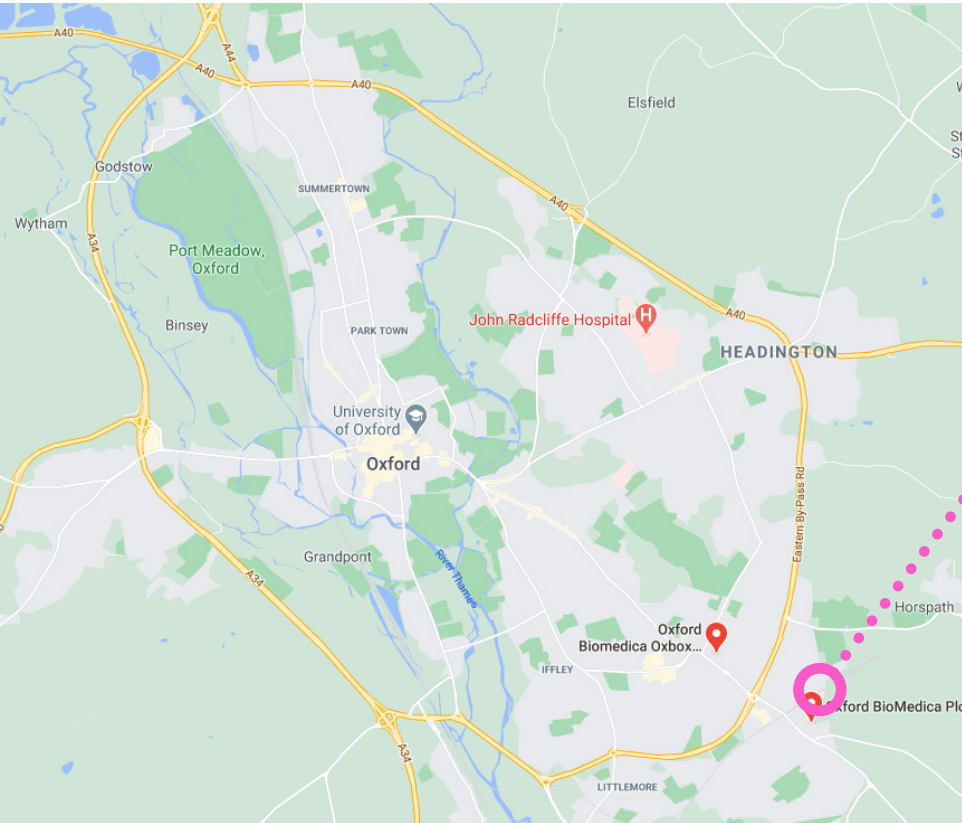
2.0 Project Location and Appraisal

2.1 Site Location

The existing building is located south east of the city centre, on Transport Way, off Watlington Road. The illustration opposite identifies the building, site extents and that of Windrush Court.



Site Location and adjacent Windrush Court



Regional Context Map



Site Location and adjacent properties



2.0 Project Location and Appraisal

2.2 Existing Photos

Opposite is a selection of photos from around the site.





2.0 Project Location and Appraisal

2.2 Existing Photos

Opposite is a selection of photos from within the site.

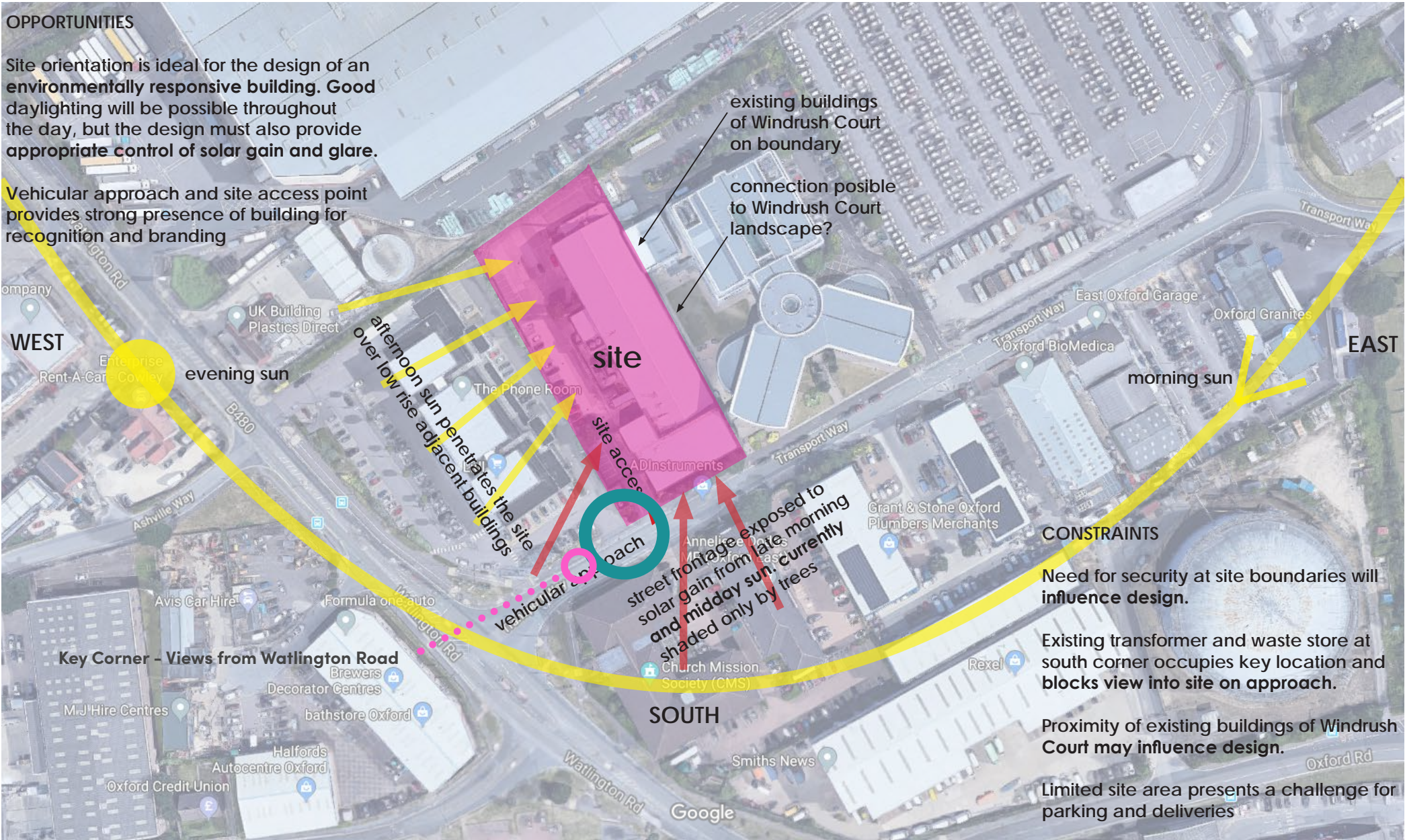




2.0 Project Location and Appraisal

2.3 Opportunities and Constraints – Overview

The diagram opposite illustrates our high level design analysis of the opportunities and constraints.



Existing Trees and planter – will need to be removed to allow constriction



Boundary with Windrush Court



2.0 Project Location and Appraisal

2.4 Vehicles and Pedestrians – Overview

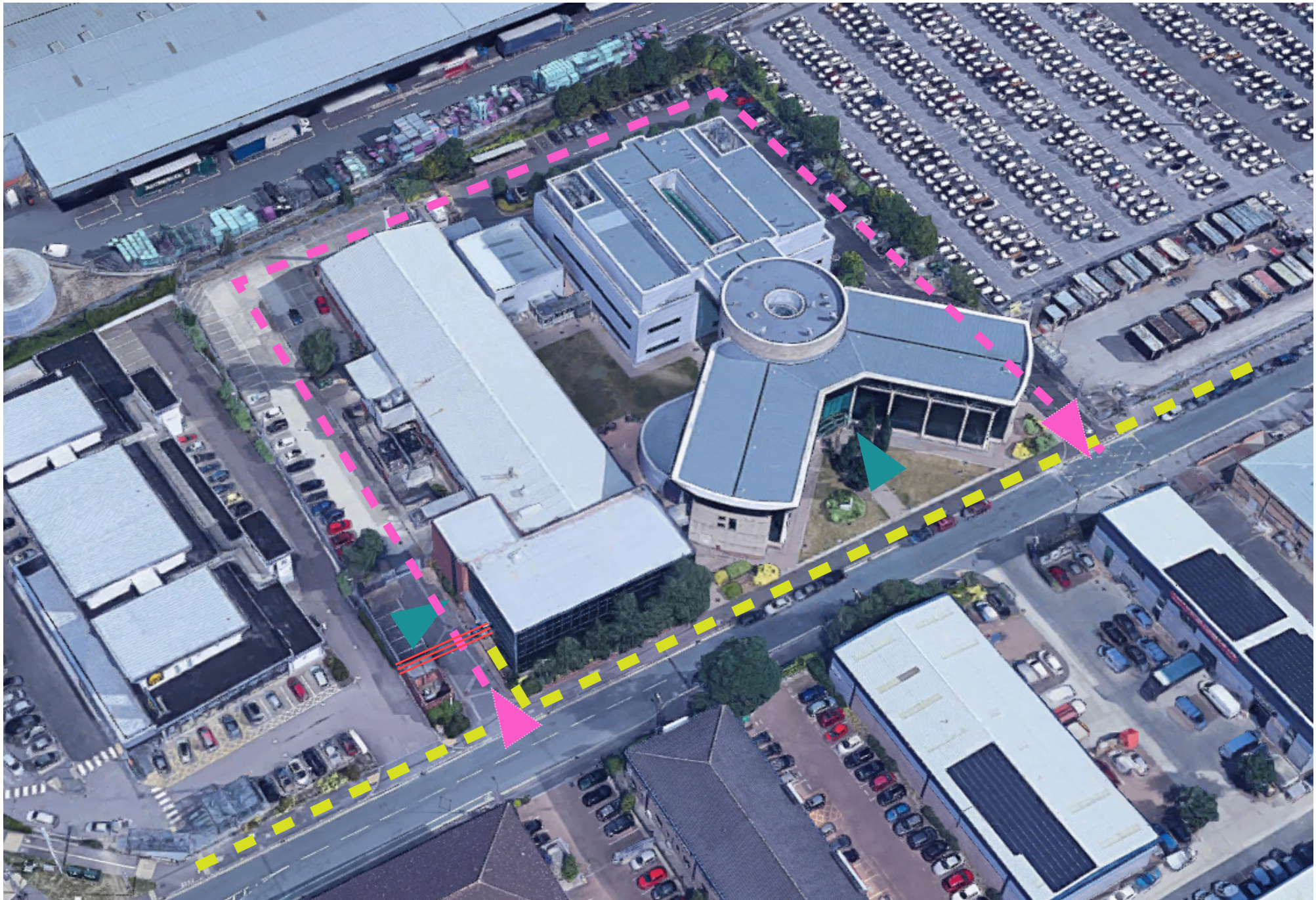
The diagram overleaf summarises the existing vehicle and pedestrian routes.

2.5 Other Surveys and Reports

The following surveys have been carried out as part of the design developed and included as part of the planning submission:

- Transport Assessment
- Travel Plan
- BREEAM Report
- Energy Statement
- Air Quality Assessment
- Ecological Appraisal
- Construction Traffic Management Plan
- Delivery and Service Management Plan
- Sustainable Surface Water Drainage Strategy
- Ground Contamination Report

Findings from these reports, where appropriate have been included within the detailed proposals.



Vehicle and Pedestrian Routes



3.0 Detailed Architectural Proposals

3.1 Concept Design Narrative

The client brief is to design a new bioscience R&D facility, circa 6000sqm with write up space (office), collaboration space and welfare for 250 researchers.

Critical to the design is the ability for the facility to be let to multiple R&D tenants if required in the future.

3.1.2 Concept Design

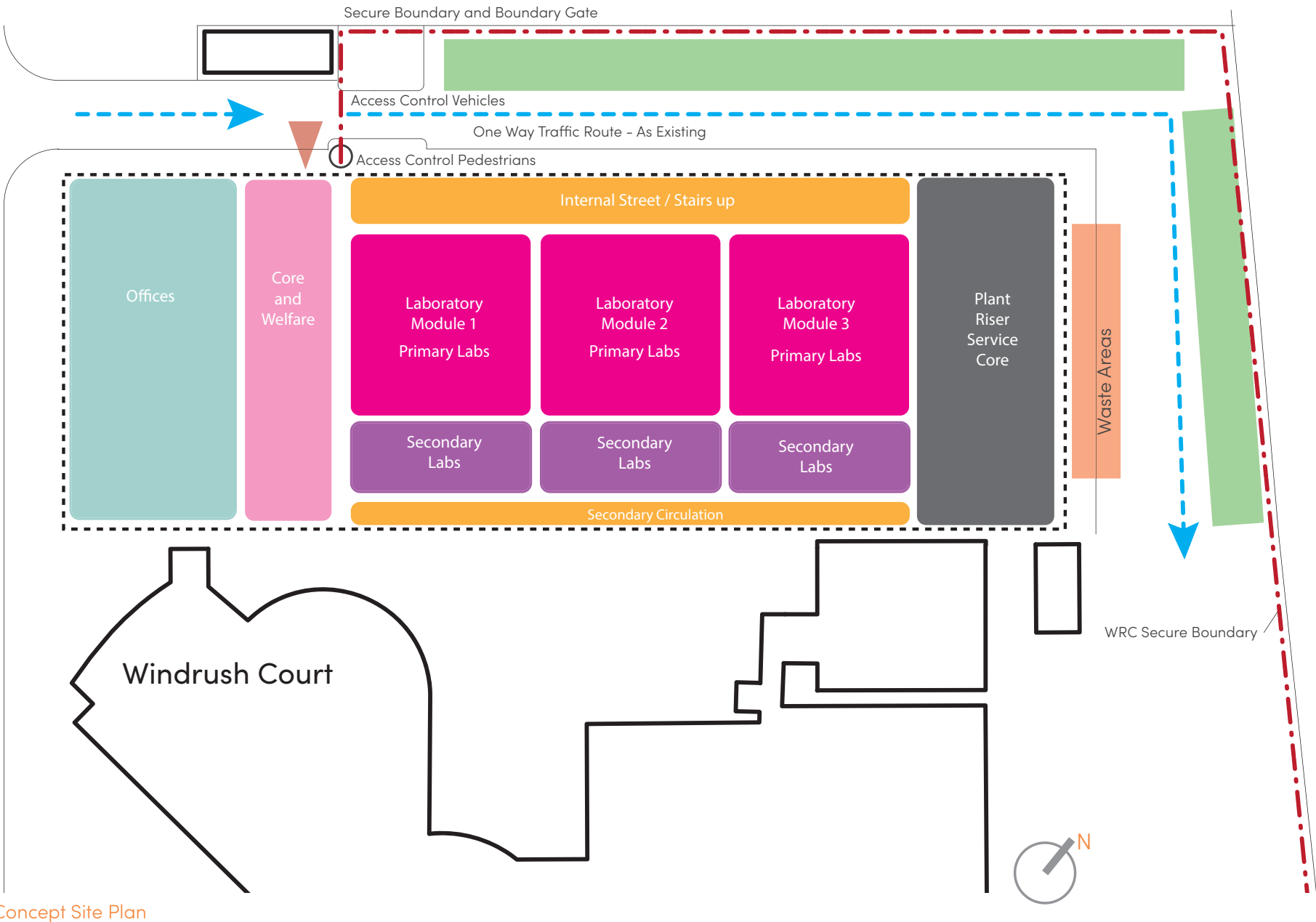
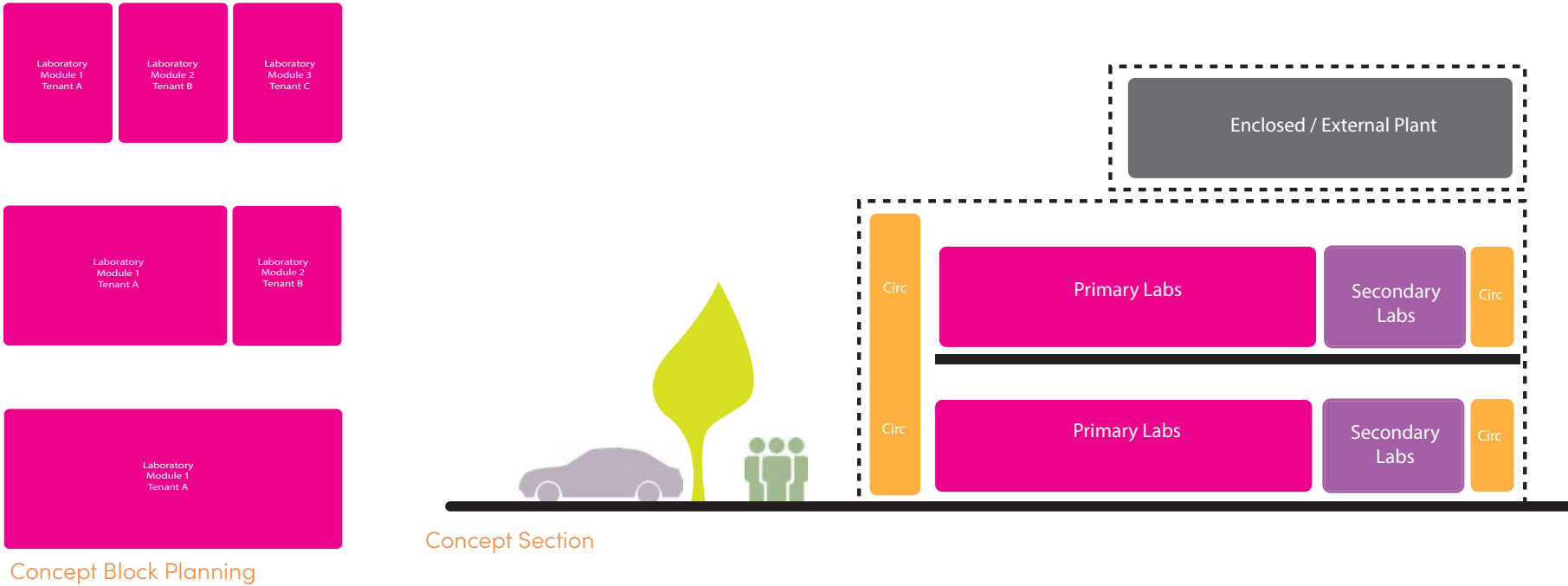
Based on the planning blocks, we have developed a concept arrangement for the building, based on the following design responses:

- Planned as three lab modules and an office block
- Existing vehicle access maintained
- Common circulation and support areas
- Common Welfare areas
- Front of house / back of house circulation
- Enclosed and roof top plant over the lab block
- Mix of Write up / dry lab / office and Primary, Secondary and specialist containment spaces
- Waste / Gases access to the northeast elevation

3.1.3 Massing

The concept will be arranged as a three storey building, with a three office block adjacent Transport Way and a two storey laboratory block with a enclosed plantroom on top. See diagram opposite.

R&D buildings are heavily serviced due to the environmental requirements of the laboratories. Therefore the storey heights are greater than other less serviced facilities such as offices. WIC House will therefore be higher adjacent Transport Way than the existing building it replaces, but will be no higher than Windrush Court Rotunda adjacent.





3.0 Detailed Architectural Proposals

3.2 Detailed Design Narrative

The concept design is very evident in the detailed design, each floor plate is divided into three individual laboratory blocks and an office. The office space is separated from the labs by a shared welfare block.

The facility is circa 14m high, with a three storey office block and two storey lab block with enclosed plant room on top.

The existing office and laboratory block is to be demolished to make way for the new development.

3.3 Landscape and External Works

The proposed facility occupies the footprint of the existing building, the existing vehicle route and entrance onto Transport Way remain as existing, as does the sub station.

The current parking provision is unchanged, electric vehicle charging points are provided both for visitors and staff. A secure gate linking to the site perimeter fencing creates a secure site, with visitor parking ( including accessible parking space) on the public side of the fence adjacent the main entrance.

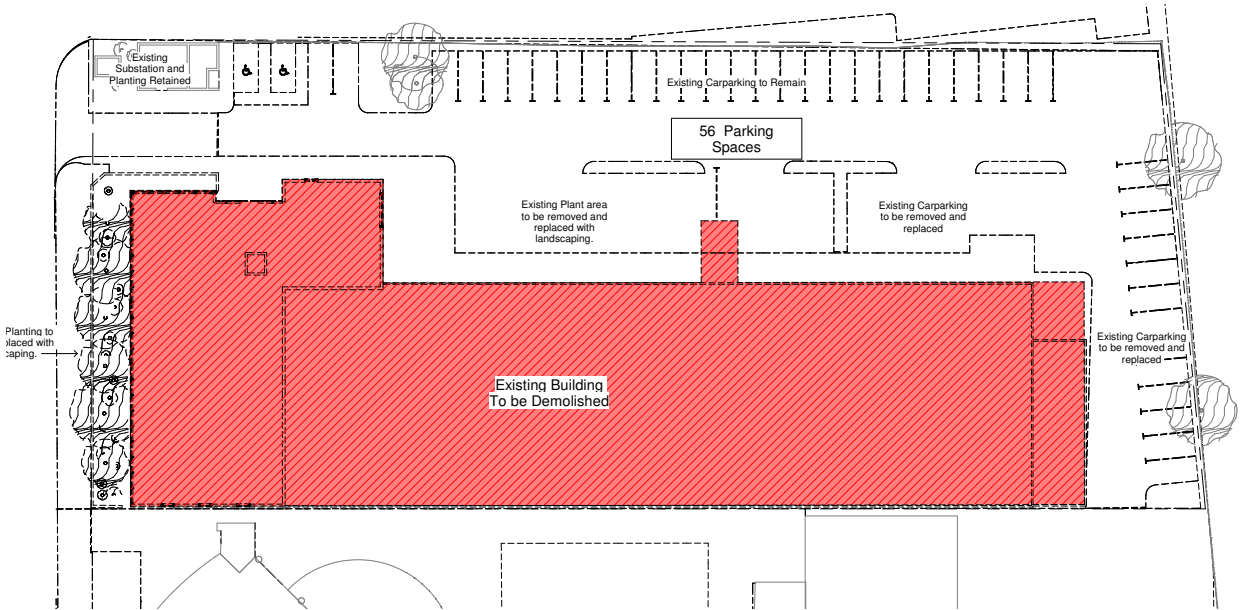
A number of new specimen trees are provided, with the majority of the biodiversity being provided by a building integrated brown roof solution.

The existing line of trees and brick planter adjacent Transport Way are to be removed to allow for construction. New trees in a similar location will replace the those lose and the footpath surface is extended to the face of the building.

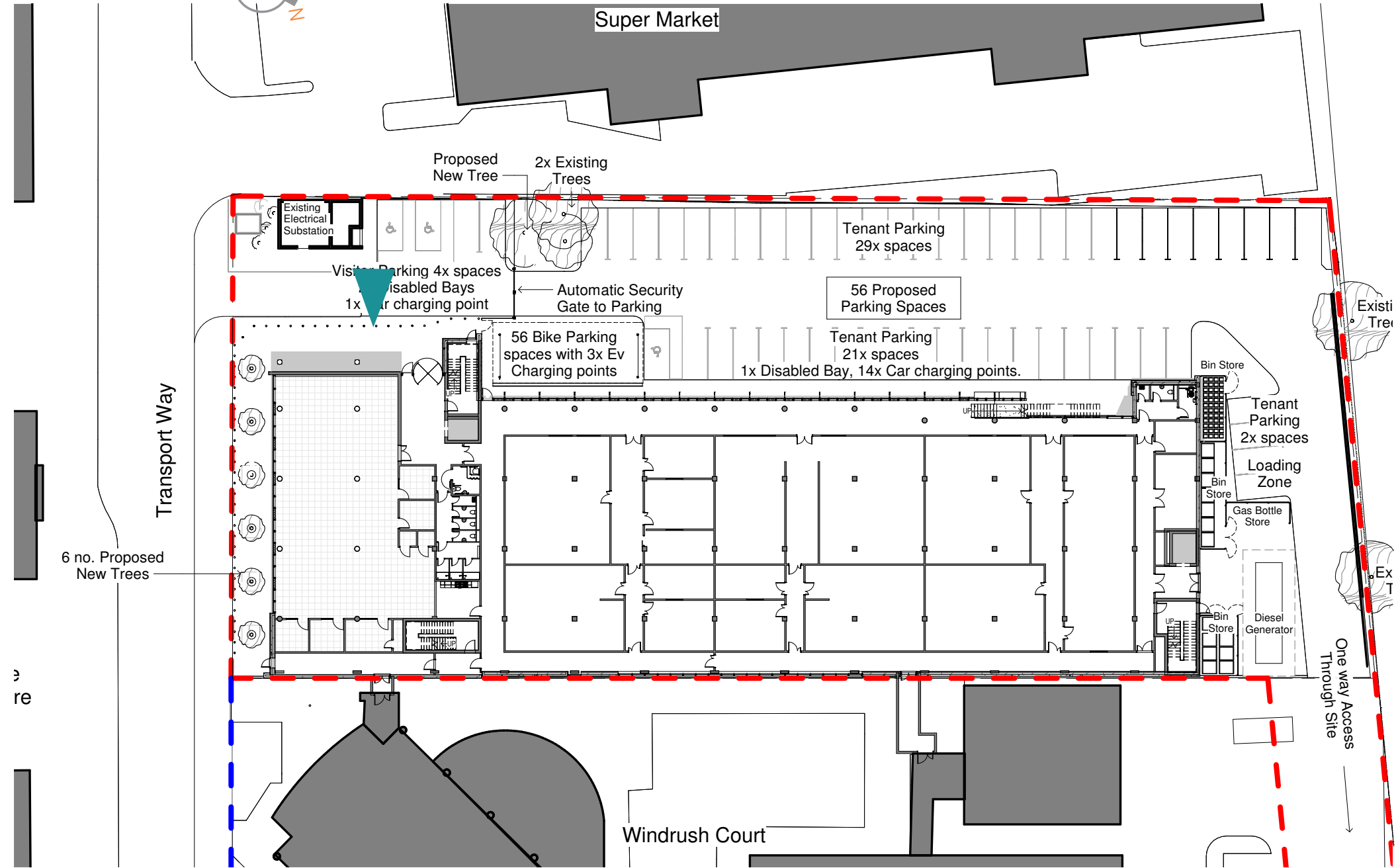
3.4 Security and Access

The site has a secured perimeter linking to the Windrush Court perimeter. There is a secure pass entry vehicle gate similar to the existing.

Pedestrian access is via the main entrance on the public side of the secure perimeter.



Proposed Demolition Plan



Proposed Site Plan



3.0 Detailed Architectural Proposals

3.5 Response to Habitat Survey Report

Further to the Habitat Survey Report, the team has incorporated a circa 250sqm brown roof. This provides the level of biodiversity increase as recommended and is part of the approach to the BREEAM ecology credits.

3.6 Cycle, Car Parking and Waste Area

The proposed scheme provides 56 cycle spaces, with 3 electric bike charging points.

There are 56 car parking spaces, as existing. A visitor charging point will be provided with a further 14 in the staff parking areas.

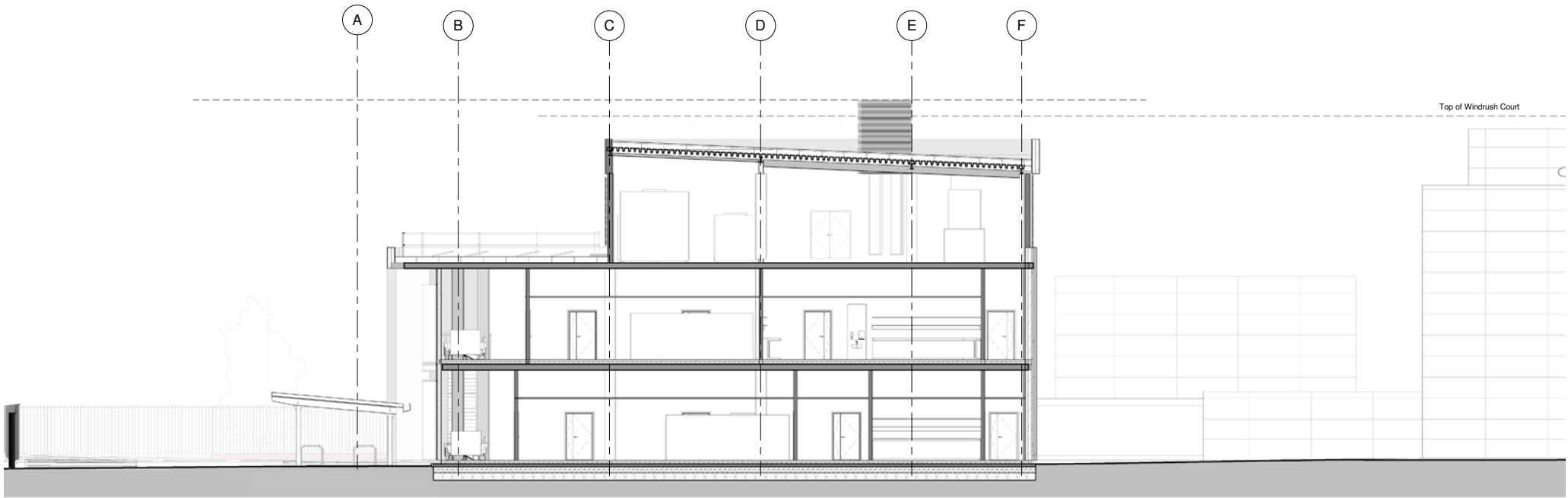
The waste areas will be provided adjacent the northwest elevation. Waste storage will be provided for segregated waste including, recyclables, clinical and non recyclables. These will be collected by specialist contractors.

3.7 Internal Circulation

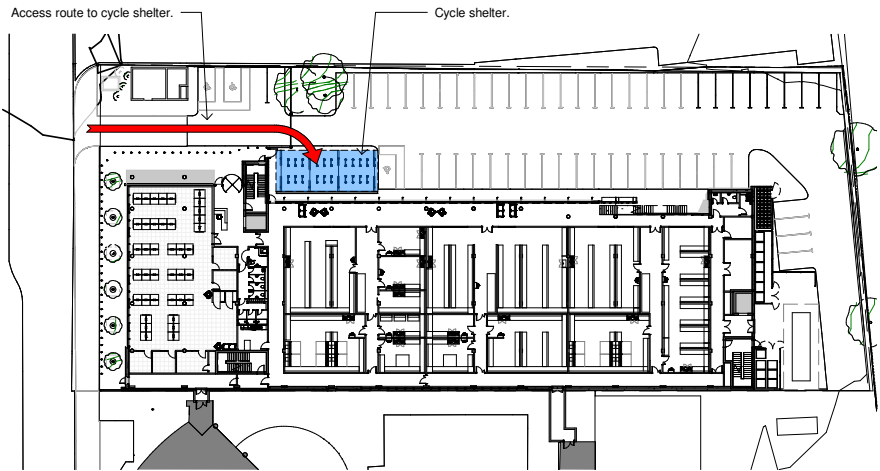
The main entrance for the proposal is located on the southwest façade, set back from the public footpath. Adjacent the main entrance and reception the primary core provides vertical circulation to all levels, and provides access to the office, welfare areas and lab block. The layout facilitates multiple tenant access if required in the future.

North of the main core, the primary laboratory circulation provides both access to the lab spaces but also serves as an informal breakout and collaboration space to support the function of the R&D spaces.

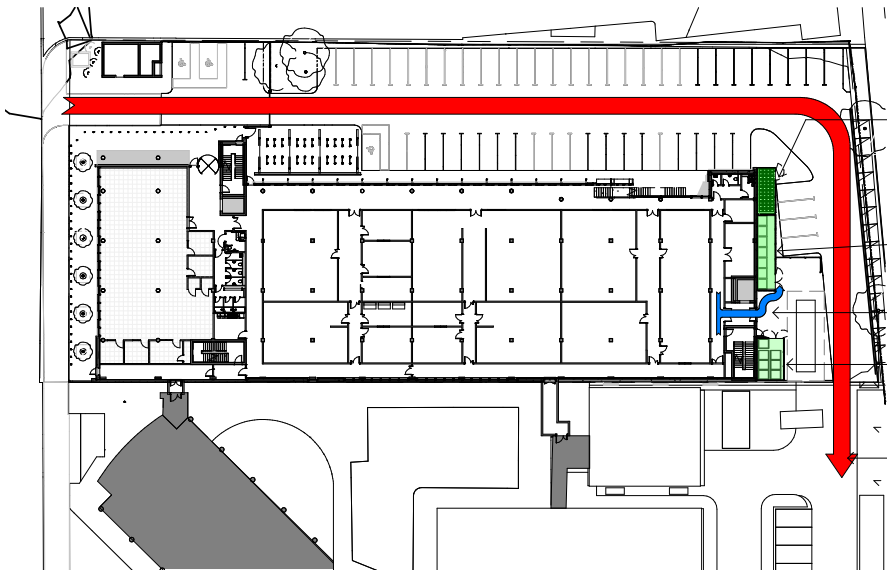
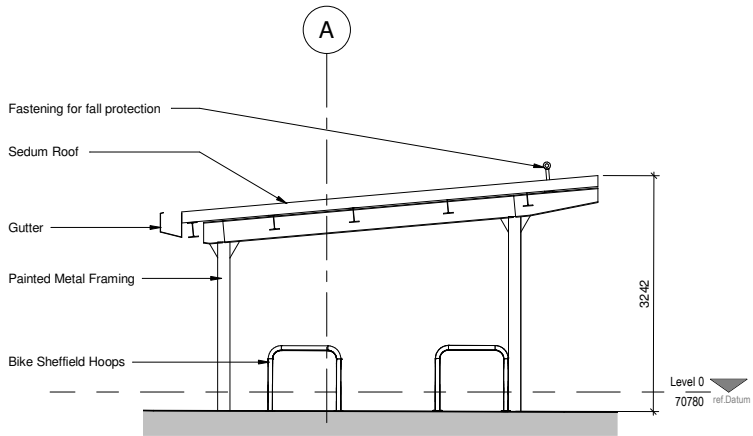
At the northwest end of the proposal, there is a service core providing back of house vertical circulation to the laboratory and plant levels. A back of house science corridor provides access for materials and allows a separation from the general and science circulation.



GA Building Section

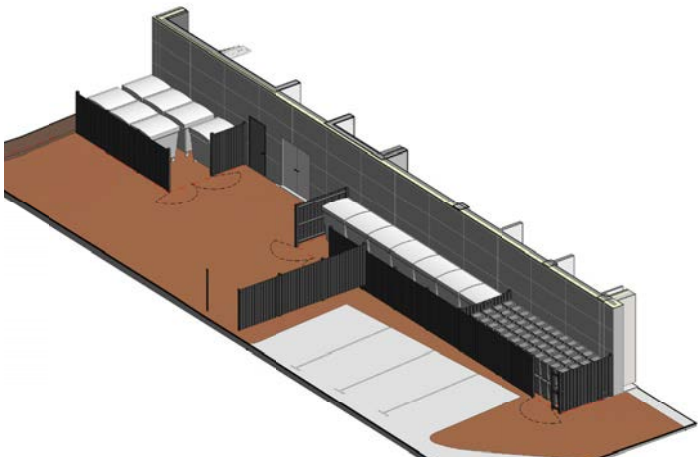


Cycle Facilities



Waste Facilities

- Provision for 15m<sup>2</sup> (13m<sup>2</sup> minimum) Timber Close Boarded Bin Store , with washdown hose and drainage facilities.
- Provision for 23m<sup>2</sup> Timber Close Boarded Bin Store , with washdown hose and drainage facilities to accommodate 7 no. waste bins.
- Building access to bin store via rear goods-in lobby.
- Provision for 19m<sup>2</sup> Timber Close Boarded Bin Store , with washdown hose and drainage facilities to accommodate 7 no. clinical waste bins.
- One Way Lorry access route to bin store provided via Car park and exit through Windrush Court.





3.0 Detailed Architectural Proposals

3.8 External Appearance

3.8.1 Massing

With respect to massing, the proposed three storey office and Lab block is a similar mass and height to the adjacent Windrush Court.

It is anticipated that any fume extract flues will project from the plant room roof slightly in excess of Windrush Court due to the design needing to meet the British Standards.

3.8.2 Existing Materials Context

The area around WIC House is generally industrial, with varying colours of brick and metal panelling.

Closer to WIC, the adjacent Lidl is a mix of metal panels and fascias and glazing. Windrush Court represents a step up in quality from the neighbouring buildings, with a palette of glass, metal panel and dressed limestone. It adopts a horizontal emphasis to the roof line adjacent the Transport Way elevations.



Lidl – mix of metal panels/Fascias/glazing

Generally mix of brick colours



Variety of industrial styled buildings / cladding

Windrush Court represents a step up in quality from the neighbouring buildings, with a palette of glass, metal panel and dressed limestone. It adopts a horizontal emphasis to the roof line adjacent the Transport Way elevations.



3.0 Detailed Architectural Proposals

3.8.3 Proposed Elevations

Our approach has been to create a high quality R&D facility, this alongside Windrush Court will create a statement for Oxford Biomedica.

In terms of appearance, our aim is to create a building that has its own character and visual approach but links back to Windrush Court in terms of massing.

3.8.3.1 Concept

The concept approach has been to create a visual emphasis on the southwest corner. The positioning of the neighbouring LIDL property opens up these two elevations, so they are visible from the junction of Transport Way and Watlington Road, see photo opposite.

The internal layout, with the office and breakout circulation adjacent these façades provides an opportunity to create active frontages, with large proportion of glazing, again to the key southeast and southwest elevations.

The west facade is largely plant and cores with a simple approach to the facade solution.

Due to the proximity of the boundary, the south facade requires significant fire resistance, and therefore limits the opportunities for transparency. However two horizontal bands of windows help stimulate the elevation and provide views into the Windrush Court landscaped space.

Windrush Court uses a horizontal device to emphasise the roof line, the concept for WIC House utilises the same device to emphasis the roof line.

3.8.3.2 Materials Palette

Our materials palette is as follows and illustrative precedent images are opposite.

- Vertically emphasised curtain wall glazing system with a mix of emphasised vertical PPC fins and GRP concrete infill panels
- PPC metal secret fixed metal panel wall and feature fascias
- Feature areas of Terracotta Glazed Baguettes
- Integrated Facade Louvre systems
- Feature manifestation to the windows
- Pre Cast Concrete panels



Generally mix of brick colours and southwest corner evident



Terracotta Glazed Baguettes



Curtain walling and GRP panels



Feature manifestation to windows



PPC Vertical Cladding Fins and Curtain Walling



PPC Metal Panels



Feature Metal panel fascias



3.0 Detailed Architectural Proposals

3.8.3.3 Proposed Design Visuals

Design visuals that illustrate the design are opposite.



Design Visual - Looking towards South West Elevation



Design Visual - Looking towards South East Elevation from Transport Way



Design Visual - Looking towards North East Elevation



Design Visual - Looking towards South East Elevation along Transport Way



Design Visual - Photo Montage - View from Watlington Road



Design Visual - Looking towards South West Elevation adjacent entrance



3.0 Detailed Architectural Proposals

3.9 Accessibility

3.9.1 General Philosophy

Access generally will be level from the street and throughout, vertical circulation is achieved by the provision of a Part M ( Building Regulations ) compliant passenger lift.

3.9.2 Parking

Disabled parking is provided adjacent the main entrance. Access from the parking bays is designed to meet the requirements of Part M, approach to buildings. Further accessible bays are provided in the staff car park.

3.9.3 Internal Access

Visitors and Staff will enter the building via a revolving door. Encumbered or disabled users who find this difficult are provided with a pass door adjacent operated by a push pad on each side.

Vertical circulation for all building users is by means of access stairs, adjacent the main entrance. Encumbered users will also have access to the adjacent passenger lift.

Staff will not be required to book into reception but will circulate around the building. Visitors will be need to book in at reception, the desk will meet Part M.

Each level has WC/shower provision for disabled users in the form of unisex cubicles adjacent the main toilet block. These will meet the requirements of Part M. A further accessible WC is provided at the east end of the building to comply with Part M travel distances.

All spaces are accessible by way of compliance with Part M of the building regulations. Provision is made within each space for height adjustable benching for wheel chair users

3.9.4 External Access

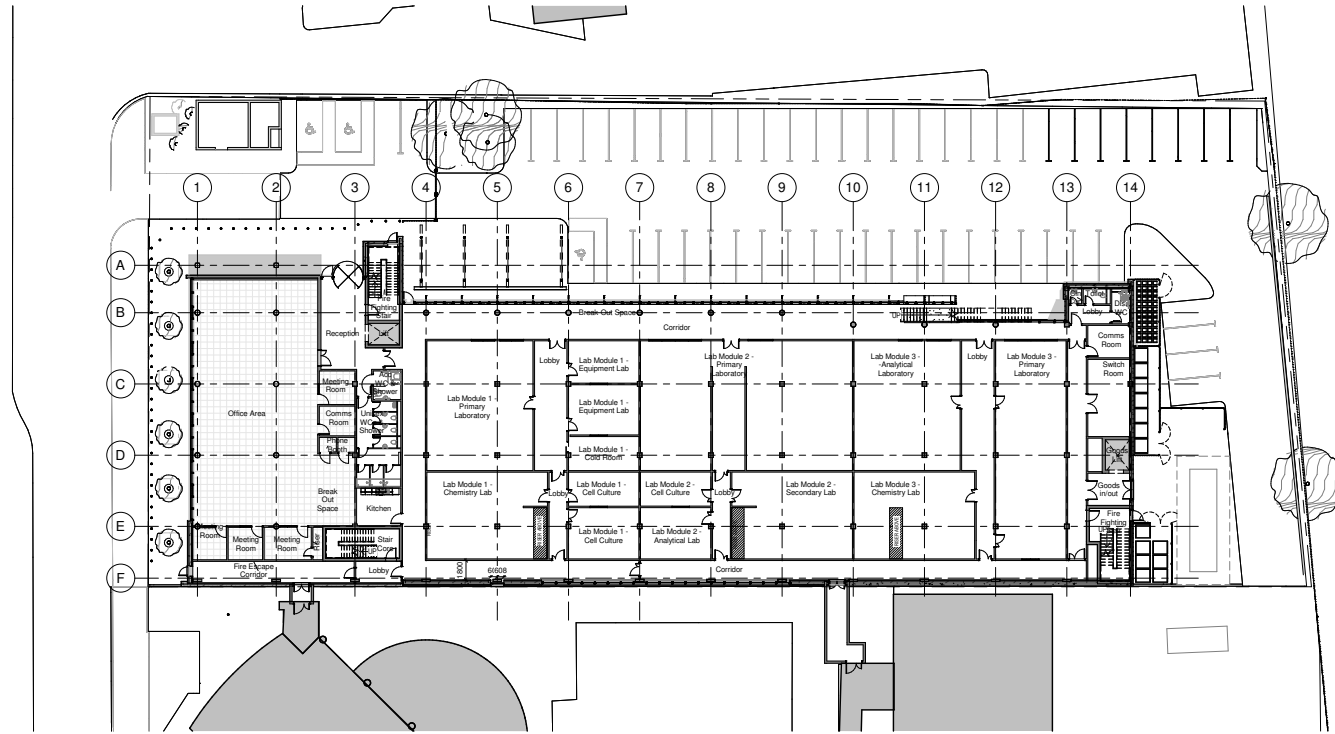
The landscaping scheme will be compliant with the building regulations and in particular to Part M, approach to a main entrance.

3.10 Cleaning and Maintenance

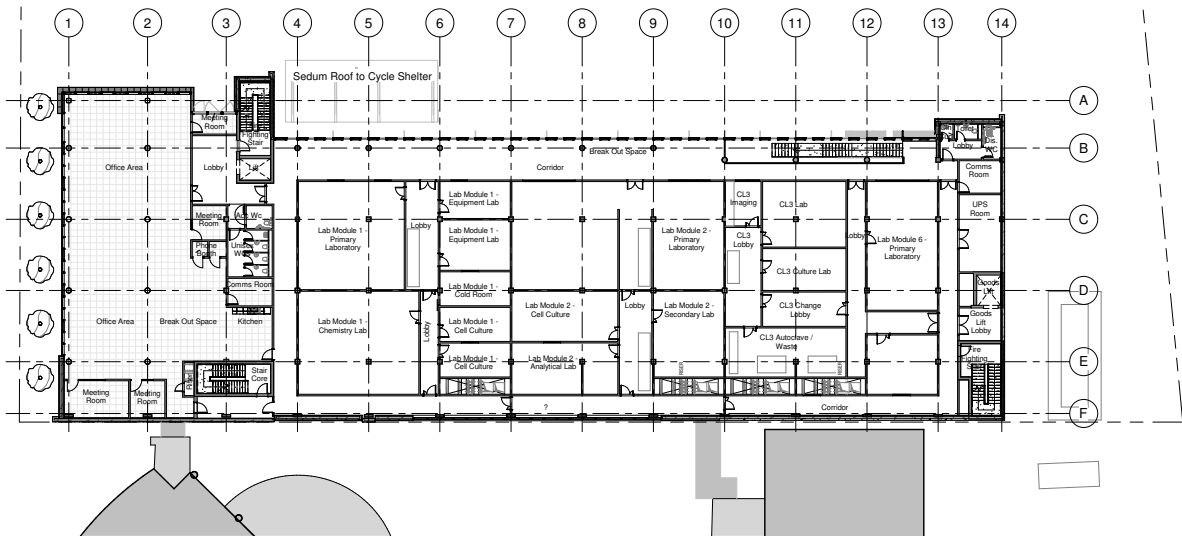
It is anticipated that the windows will be cleaned via either a pole mounted cleaning head from the ground or from a powered access platform or ‘cherry picker’. Provision has been made with hard standing to the perimeter of the building.

The external plant roofs above the labs are accessed from the second floor via doors from the cores. Edge protection is provided by a counter weighted balustrade.

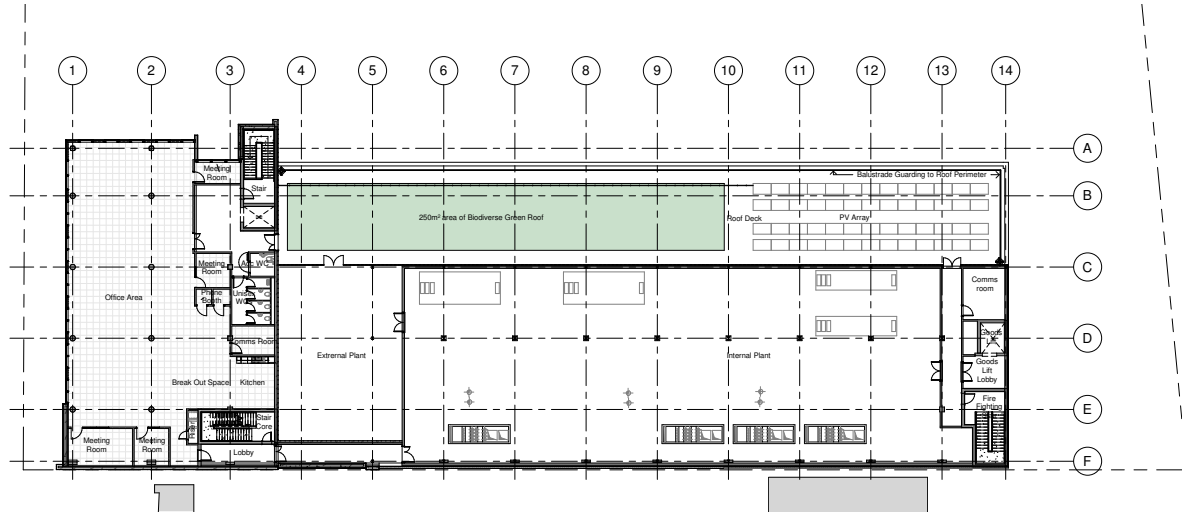
The office roof is accessed from the escape core on the second floor. The stair flight continues to the roof, where a large opening hatch provides access to the roof. Edge protection is provided by a counter weighted balustrade.



Proposed Ground Floor



Proposed First Floor



Proposed Second Floor / Plantroom Level



4.0 Ground Conditions

4.1 Existing Site Usage

On-site The site was formerly occupied by a coach depot. It is expected that this would have included maintenance operations, and may possibly have included tanks and pumps to allow for vehicle refuelling. On this there may be a legacy of contamination associated with the coach depot, with potential contaminants of concern including hydrocarbons (petroleum and poly-aromatic), solvents and metals. It is considered likely that any gross contamination present would have been remediated when the site was redeveloped to its current layout in the 1980s.

Off-site Land adjacent to the southwest was historically operated as a vehicle repair garage and fuel station and land adjacent to the northeast was historically a vehicle import depot. Both operations are considered to be broadly similar in nature to the historical coach depot present on site and as such a similar range of potential contaminants might be associated with such uses. Both sites have been redeveloped into a supermarket and a pharmaceutical office / laboratory respectively and it is considered likely that any gross contamination would have been remediated at the time of redevelopment.

The site is considered to have a generally Very Low potential for contamination to be present and when assessed in the context of the sensitivity of the proposed development and sensitivity of the environmental setting the estimated risks for most receptors is Very Low to Low. Based on the nature of the current and historical land use and the proposed development it is considered that the requirement for remediation of soil and/or controlled waters is unlikely.

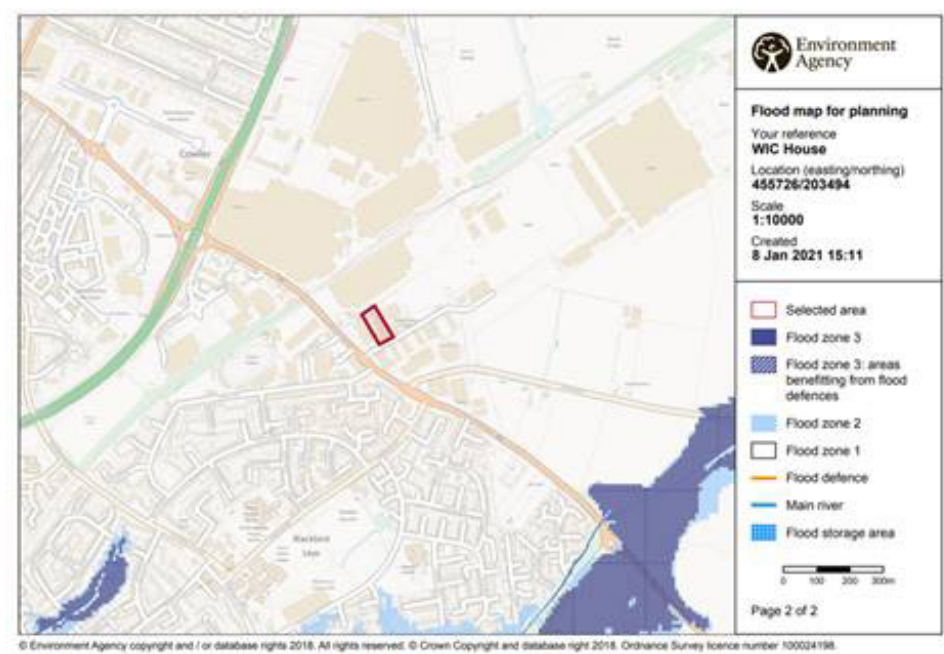
4.2 The Geology

The 1:50,000 scale geological map of the area: Sheet 237, Thame, Solid and Drift, published by the British Geological Survey (BGS, 1994) indicates the site is underlain by bedrock of the Beckley Sand Member of the Corallian Formation. This unit is expected to comprise a silty sandstone with subordinate limestone beds. No Superficial Deposits are mapped close to the site boundary. Made Ground is mapped by the BGS to the north of the site associated with the railway and sidings.

5.0 Flood and Drainage

5.1 Flood Risk

A site-specific Flood Risk Assessment (FRA) is not required as Environment Agency (EA) standing advice, updated October 2015, states that an FRA is only required when the development area is greater than 1 ha or will change the use to a more vulnerable category for a proposed development within Flood Zone 1. This site is less than 1ha in area, and the site use following redevelopment will remain as before. The site is located entirely within Flood Zone 1 and therefore has a low probability of flooding from nearby watercourses. The nearest watercourse is Northfield Brook, a tributary to the River Thames, located 850m to the south-east of the site., shows the site on the EA flood mapping service



Flood Mapping - WIC Site

The Long Term Flood Risk Map for England (gov.uk) shows the site to be at negligible to no risk of flooding from rivers, the sea or reservoirs. However, the mapping tool does show the site to be at medium to high risk of surface water flooding across part of its extent corresponding to the car parking areas. The flood risk map is based on mathematical modelling, considering surfaces, topology and existing land uses. This modelling suggests the site has some surface water flooding, which is shown to originate from the existing development only (see extract below). The proposed design for the site does not produce any surface flooding in the 1 in 100 year (+ 40% climate change allowance). Consequently, there should be no source for this flooding post-development.



Detail Flood Mapping with WIC Site Identified

5.2 Surface Water Drainage

A summary of the surface water drainage and sustainable urban drainage system (SuDS) is as follows:

Existing drainage:

- Site area approaching 100% impermeable area, including a car park surfaced with concrete surface course drained by gullies to a piped drainage system.
- Discharges at unrestricted (brownfield) run-off rates via a petrol interceptor to the Thames Water SW sewer in Transport Way.
- The Site sits within Flood Zone 1, so is at low probability of flooding from fluvial sources, but is shown as medium to high risk of surface water flooding from on-site causes on Environment Agency modelled flood risk data.

SW Drainage Proposals:

- We have demonstrated that discharge at greenfield run-off rates is not suitable for this development due to the impractical volume of attenuation storage this would require.
- Discharge will be via a complex flow control (with two orifice plates) providing a 48 – 70% betterment over existing flows up to and including the 1 in 100 year (+ 40% climate change allowance) rainfall event.
- Attenuation storage will be provided by the use of porous paving to the car parking bays with a minimum porous sub-base thickness of 500mm. Across the 700m2 of parking provision this provides 105m3 of attenuation storage.
- The porous paving systems will be connected to the existing private surface water network, which will be retained where possible, by filter drains.
- Rainwater pipes will discharge to the porous sub-base by the use of rainwater diffuser units where possible, else by piped connection the on-site drainage network.
- The remaining concrete surfacing will predominantly drain by cross fall onto the porous paving parking bays.
- Treatment of contaminants expected from car parking will be provided by



5.0 Flood and Drainage

- the porous paving system in accordance with CIRIA C753. The existing petrol interceptor will be retained as a secondary treatment system.
- As the drainage proposals designed are modelled not to flood up to the 1 in 100 year (+40%CC) rainfall event the risk on-site of surface water flooding will be reduced.

5.3 Foul Drainage

Foul water discharges to the Thames Water FW sewer in Transport Way, and on-site alterations to the private network are intended to meet new site proposals.

5.4 Specialist Laboratory Drainage

Specialist laboratory drainage will be designed as a separate system to the Thames Water FW network. The system will be designed to store the discharge for collection by a specialist contractor.

6.0 BREEAM

6.1 Summary Overview

Oxford City Council adopted their new Local Plan in June 2020. This contains Policy RE1 – Sustainable Design and Construction which states “Planning permission will only be granted for non-residential development proposals that meet BREEAM excellent standard”.

BREEAM assesses the performance of an individual non-domestic buildings against criteria grouped into the following eight categories: Management; Health and Wellbeing; Energy; Water; Materials; Waste; Land Use and Ecology; and Pollution.

6.2 Key Design Issues

Over and above a typical approach to coordinating our design decisions around achieving BREEAM Excellent, there are two particular areas we have focused a great design of attention, namely Ecology and Energy.

Ecology

The existing site has very little value in terms of biodiversity, with very little opportunity at ground level, the team have developed the design to incorporate a significant brown roof installation.

Energy

Science buildings are inherently large energy consumers, and therefore even more relevant in terms of sustainability. The teams coordinated approach has been to create an efficient fabric in terms of insulation and air tightness, the incorporation of low energy approaches to laboratory ventilation, LZC heating and cooling solutions and significant building mounted PV.

6.3 BREEAM Assessment

A series of BREEAM workshops were held on 16th November, 27th November and 18th December 2020 regarding the above BREEAM position. The primary focus of these workshops was to address those credits which were in the control of the design team such as the site and building design as well as building services in order to demonstrate that sustainability had been embedded within the scheme where possible, as well as advising on content and format of reports to be used as evidence.

A BREEAM Pre-assessment using the BREEAM New Construction 2018 methodology will accompany the planning application and this demonstrates a potential strategy of how BREEAM Excellent could be achieved for WIC House, and outlines the evidence which this is based upon and what future commitments are required in order to target this level.



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