Welcome

1

We are pleased to welcome you to this event today

Welcome to the public consultation for the University of Oxford's proposed new building on the Old Road Campus.

Today's Consultation

The purpose of this public consultation is to introduce the initial approach and design of the proposed Institute of Developmental and Regenerative Medicine (IDRM).

The University of Oxford will shortly be submitting a planning application to Oxford City Council to take forward development of a new Institute on the Old Road Campus providing 6,000 m^2 floor space with laboratory, office and shared facilities for more than 200 scientists. The application will also involve landscaping for the area surrounding the new Institute.

We invite you to view the boards on display which outline the proposals for the scheme. The exhibition includes the following:

- The site area and location;
- How IDRM relates to the wider campus, including recent building work and future development;
- Transport and access strategies;
- The proposed design, landscaping and sustainability proposals;
- The proposed programme of the project.

We are inviting you to review the proposals and talk with members of the University and the project team who are available to answer any queries you might have.

Your views

We welcome your feedback on the proposals. Please submit any comments to us either in hard copy or by email to: *public.consultation@admin.ox.ac.uk* by Friday 22nd February 2019. The feedback form and copies of the boards can be found online at: *www.ox.ac.uk/about/building-our-future/news/*

Thank you for attending.

Artist's impression from within the campus looking towards the main entrance

Scientific Mission

2

The University of Oxford, along with its philanthropic partners, the British Heart Foundation and a private philanthropist, is proposing a new Institute of Developmental and Regenerative Medicine (IDRM) to act as the UK Hub for regenerative medicine.

Enhancing research facilities

The IDRM will bring together more than 200 leading researchers both from within Oxford, and newly recruited from across the UK and around the World. The Institute will combine developmental and regenerative cardiology, neurology and immunology expertise to establish the critical mass required to deliver novel therapies for congenital and acquired heart, brain and immunological diseases.

This multidisciplinary institute will inspire collaborative working, and build on existing Oxford initiatives and partnerships with Institutes on Old Road Campus including:

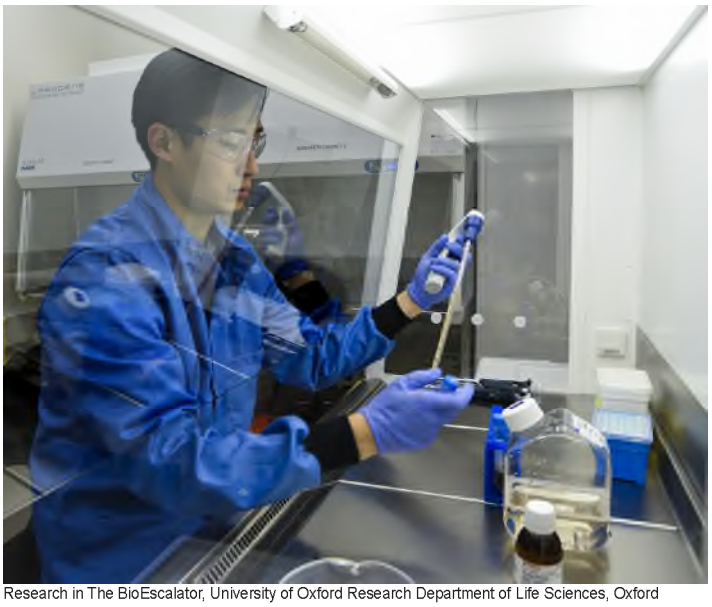
- Big Data Institute;
- Target Discovery Institute;
- Welcome Centre for Human Genetics.

Regenerative medicine has the potential to offer treatments for diseases and disorders by providing the body with the means to repair, replace, restore and regenerate damaged or diseased cells, tissues and organs.

The IDRM aims to understand at molecular and cellular resolution the development of the heart, the brain and the immune system and to use this knowledge to develop and deliver novel therapeutic strategies for organ repair following disease or injury.

By bringing together the study of multiple organ systems in a single building, we will establish common biological principles underlying diseases across different tissues, harness the potential of tissue resident stem cells as novel therapeutic targets and develop new approaches to repair organs.

Our advances will be translated through drug discovery and bioengineering to deliver treatments for degenerative diseases of development and aging including conditions such as congenital/ hereditary heart disease, stroke and primary immune deficiencies, thus improving patient treatment to public benefit.



Research in The BioEscalator, University of Oxford Research Department of Life Sciences, Oxford

British Heart Foundation

British Heart Foundation - Key donor

Collaboration in The Beecroft Building, University of Oxford Department of Physics, Oxford

Site and Infrastructure

3

ORC Masterplan

In 2013 Outline Planning Permission (application 12/02072/OUT) was granted for the Old Road Campus Framework Masterplan. This included consent for 4 new laboratory/ research buildings (Plot B1, Plot B2, Plot B3 & Plot B5) and a Central Services and Parking building (Plot B4):

Plot B1: Laboratory / Research Building. Not commenced.
Plot B2: Laboratory / Research Building. Not commenced.
Plot B3: IDRM and future Phase 2.
Plot B4: Building 696 Car Park and Distribution Centre. Complete
Plot B5: BDI. Complete
Outline Planning Permission (application 12/02072/OUT) is illustrated below.

The outline planning application description is as follows:
"Demolition of existing buildings on application site. Outline planning application (fixing details of access) for the erection of 48,000sqm of class D1 research floorspace and ancillary facilities on 2 to 5 storeys over 5 building plots as an extension to University of Oxford Old Road Campus. Provision of 459 car parking spaces, cycle parking, hard and soft landscaping and boundary treatment."

Since the application was granted, the BDI (Plot B5) and Bioescalator (Plot B4) have been completed. This application seeks to build 6,000 sqm Gross Internal Area, over three storeys, on the southern-most two thirds of Plot B3. The outline planning consent included a single building on Plot B3. The University wishes to build B3 in two phases, with the IDRM comprising Phase 1 on the lower two thirds of the Plot.

Aerial of site and surrounding context
Imagery © 2019 Google, Map data © 2019 Google

Old Road Campus Masterplan as consented under outline planning application 12/02072/OUT

Old Road Campus

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Old Road Campus current Masterplan proposal

ORC Masterplan

The Illustrative Masterplan above shows the location of the different building plots, existing and proposed areas of public realm and landscape infrastructure.

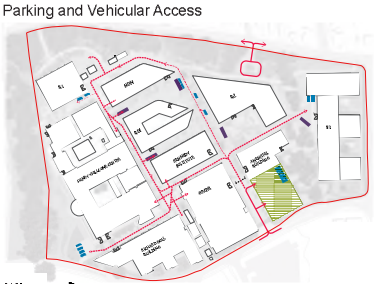
The overall objective for the site is to create an attractive and high quality landscape setting for new development, which is perceived as a place with its own identity and successful outdoor spaces. The streets and spaces should be legible to users with a clear sense of hierarchy; allowing people to easily navigate their way around the site.

1. Main Campus entrance
2. New arrival / orientation space
3. Campus Boulevard with central street trees and low level parking
4. Woodland Square with link to Old Road
5. Woodland edge with understory planting and meadow grassland
6. Old Road Taxi drop off area
7. Woodland planting entrance off Old Road
8. New Central Square
9. Green Square - entrance to B3
10. Lawn with existing trees and seating
11. Informal seating and meeting areas within existing trees
12. Courtyard spaces facing Churchill Drive
13. Streetscape with covered cycle stands and street trees
14. Facilities Building
15. Improved access through existing woodland
16. Square and delivery area for B1
17. Pedestrian and cycle access
18. B1 streetscape
19. Link street public realm
20. BDI courtyard space and art work
21. The Quad
22. The Welcome Lawn
23. Access from Roosevelt Drive
24. Preserve Boundary Brook wildlife corridor

Landscape Spaces

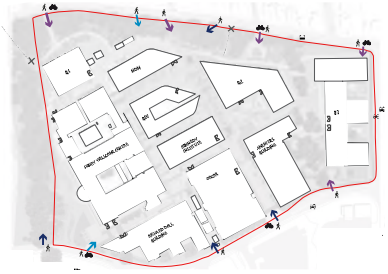
Woodland corridor
Woodland edge
Wellcome lawn
Nodes and squares
Streetscape
Green courtyards
Frontage

Parking and Vehicular Access



Proposed vehicle access
Internal vehicle circulation
Potential access control barrier
Disabled parking spaces
Allocated service bays
Car park

Pedestrian Access and Circulation



Existing entrance retained
Existing entrance improved
Proposed entrance

Site Strategy

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Landscape principles

The external spaces around the IDRM Building respond to the landscape principles established within the Old Road Campus Masterplan and comprise a series of distinct character areas connected by a unifying pallet of surface materials and street furniture.

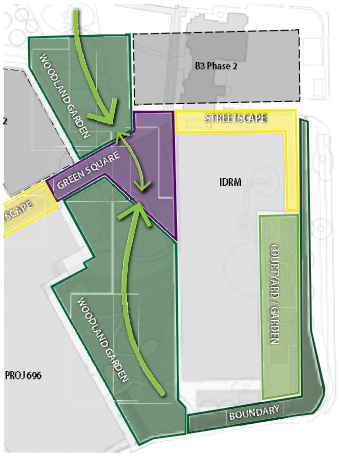
The green square, illustrated in the diagram below, acts as an important transition space between the woodland garden to the north and south and forms the main entrance plaza to the IDRM Building (phases 1 and 2).

The streetscape to the west of the square forms a key pedestrian and vehicular link to the campus. A series of courtyard gardens located to the east of the IDRM building, provide a series of flexible 'breakout' spaces for staff and students set within an attractive garden setting.

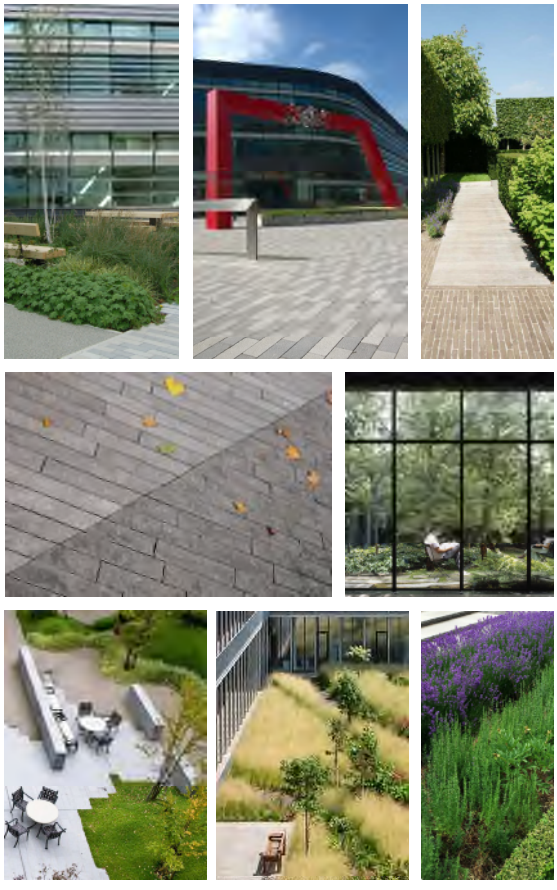
The woodland garden to the west of the IDRM building runs in a north-south direction, connecting Old Road with Roosevelt Drive. The woodland garden includes existing mature trees, a network of informal pedestrian paths and seating pods, recently implemented as part of the Bioescalator building works.

The site boundary along Churchill Drive and Roosevelt Drive provides an important frontage to the campus. It includes tree and hedge planting, designed to compliment the existing street character, and also to mitigate views from adjoining residential properties and provide an attractive frontage.

The streetscape to the north of the IDRM building is of a smaller scale and forms an important but infrequently used service corridor to the IDRM building.



Landscape Spaces



1. Green Square / plaza space
2. Visitor cycle parking
3. Disabled parking bays (2No)
4. Seating edge
5. Pedestrian footpath and MEWP access
6. Woodland Garden
7. Pedestrian Footpath (Resin bound surface)
8. Secured cycle parking
9. Courtyard garden spaces
10. Boundary hedge / woodland
11. Grass verge
12. Service corridor
13. Ancillary services
14. Gateway feature

Landscape Design

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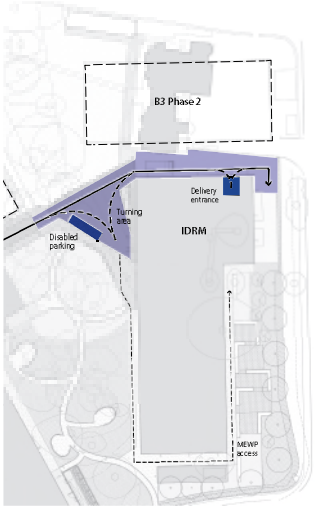
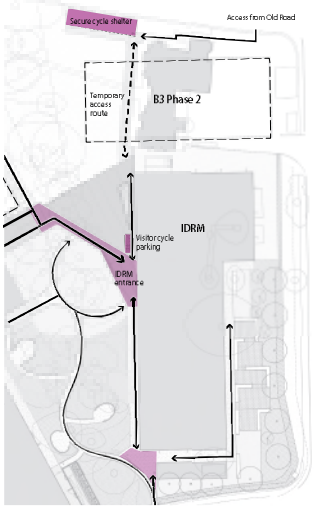
Vehicle movement



- Vehicular access from the west only.
- No through route to Churchill Drive.
- All car parking accommodated within Project 696.
- Deliveries to be processed and re-distributed via Project 696 where possible.
- Approximately 3 deliveries per day will access the IDRM directly.
- A Goods-in area will be located in the north of the building.
- Green Square has been designed to accommodate the turning of larger vehicles.
- Disabled parking (2 spaces) will be located close to the main entrance in Green Square.

Pedestrian & cycle movement



The primary access for pedestrians and cyclists will be from the west, via East Street and Central Avenue.

Secondary access is provided via connecting footpaths from Roosevelt Drive to the south and Old Road to the north.

Informal routes through the woodland garden provide pedestrian links to the green square and building entrance, and a connection through Project 696.

Tree retention & removal

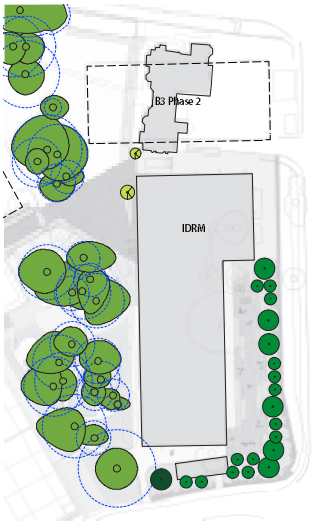
The retention of existing trees is a key driver for the project and has been at the forefront of design thinking from the outset.

The building footprint and site layout has been designed to avoid impact on existing root protection areas with the majority of existing trees to be retained.

Where trees are proposed to be removed, it is in accordance with the site wide masterplan, and only where removal is absolutely necessary for the feasibility of the design.

12 trees and 2 tree groups are proposed for removal.

Tree mitigation



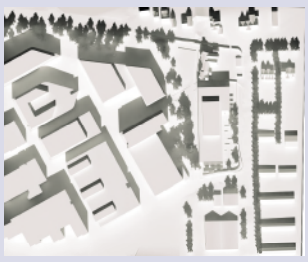
New tree planting will compensate for the loss of existing trees. Approximately 20 new trees are proposed.

The main areas of replacement planting are located along the boundary of Churchill Drive and Roosevelt Drive. Tree planting is also proposed within the main entrance plaza.

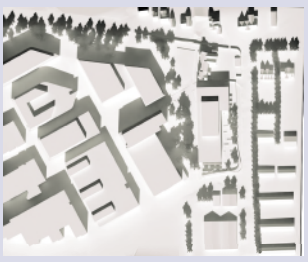
Shading analysis

Shading analysis was undertaken to assess the impact of the proposed buildings on the external environment and neighbouring properties. The analysis has informed the position and orientation of the building, and external seating and social spaces.

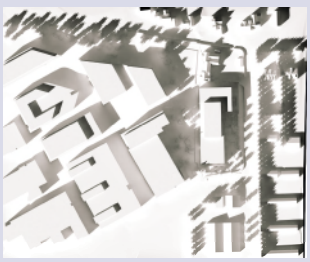
The proposed entrance plaza and courtyard garden spaces provide some opportunity to capture sunlight. These external spaces are likely to be utilised by the researchers during lunch breaks.



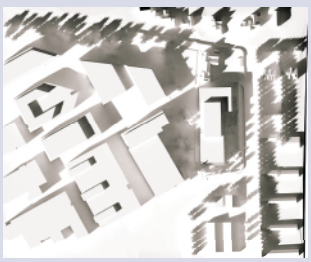
3rd of March at 12 noon



3rd of September at 12 noon



3rd of March at 3pm



3rd of September at 3pm

Building Overview

Original sketch proposal showing an aerial view of IDRM from the south-west

Brief Overview

The building will be designed to house up to 220 scientists plus support staff. The scientists will be split across three research departments: Cardiology, Neurology and Immunology.

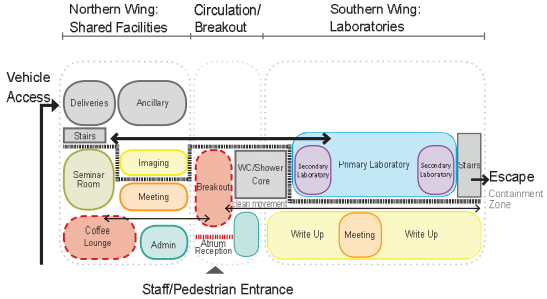
The building will include laboratory and write-up space for each of the departments, as well as shared facilities, meeting and seminar rooms and a variety of collaboration spaces.

Accommodation

The three storey building will be organised into two wings either side of a circulation core. Breakout spaces will be provided within the atrium to encourage collaborative working between scientists. The southern wing will contain research laboratories and write-up space spread over three storeys, with one department per floor.

The northern wing will contain facilities shared by the three departments. At ground floor these include: reception, coffee lounge, meeting room, 60 person seminar room, administration offices, comms room, service store, goods in/logistics area, and laboratory support facilities.

Additional shared laboratory space will be located in the first floor of the northern wing with plant space on the floor above. Additional plant space is also included at roof level.



Axonometric illustrating building layout

UNIVERSITY OF OXFORD

Design Proposal

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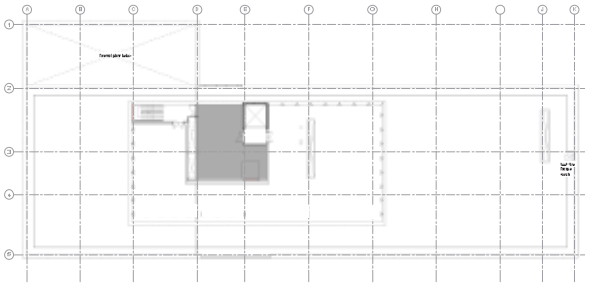
First Floor Plan



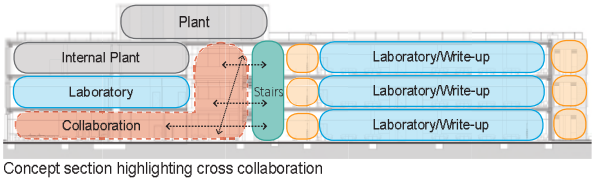
Third Floor Plan

Ground Floor Plan

0 5 10M

Scale bar

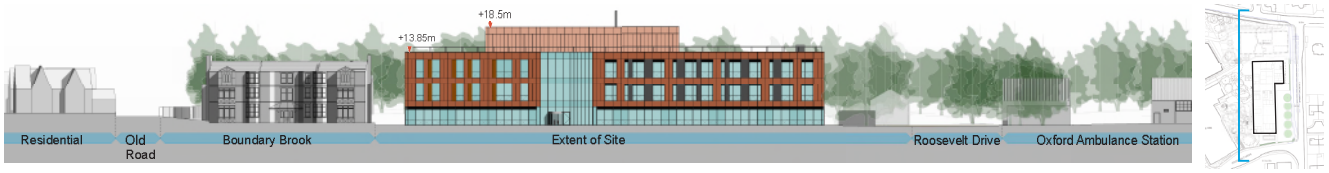
Second Floor Plan



Concept section highlighting cross collaboration

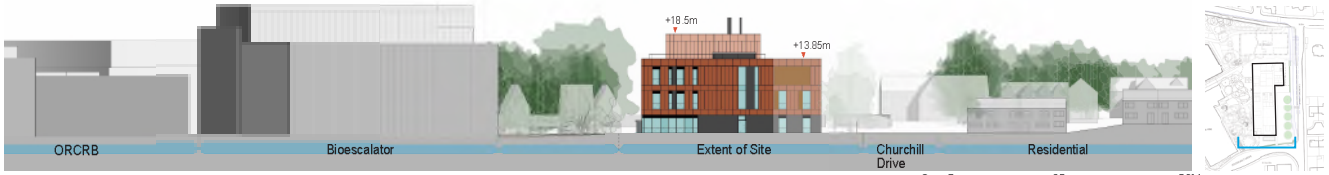
The diagrams on this page, show our current proposals for the layout and appearance of the IDRM. The elevations below show the comparative height of our proposed building, relative to existing building on and near Old Road Campus.

- Laboratory
- Write -up
- Office
- Collaboration Space
- Core/Ancillary
- Seminar/Meeting



West Elevation looking east towards Churchill Drive

East Elevation along Churchill Drive looking into the Campus



South Elevation along Roosevelt Drive looking north into the Campus

0 5 25 50M

Scale bar

Elevations and Materials

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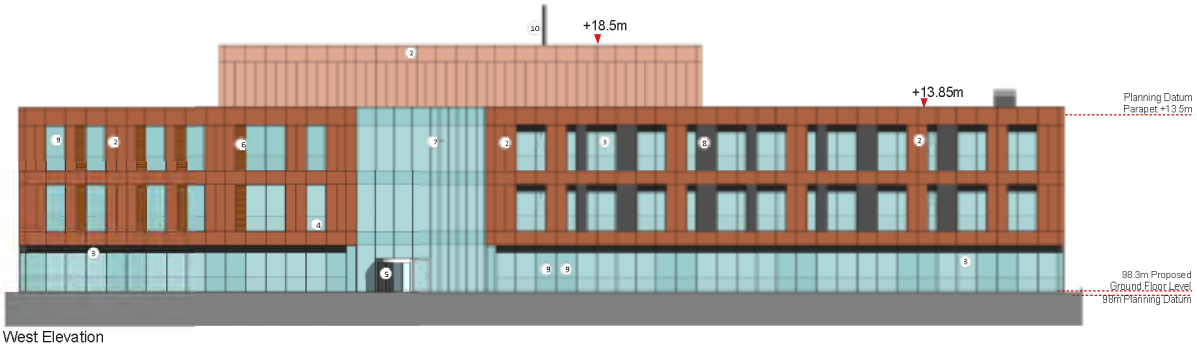
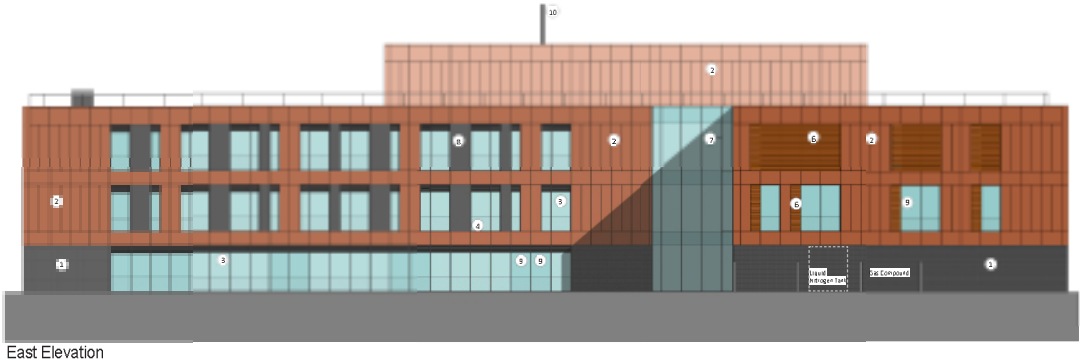


West Elevation



East Elevation

1. Black Brick Veneer
2. Corten Rainscreen Cladding
3. Anodised Aluminium Window
4. Curtain Walling with 50% Fritting
5. Circle Slide Drum Door
6. Metal Louvre
7. Coloured Glass Vertical Brise Soleil
8. Back Painted Glass Feature Panel
9. Glass Spandrel Panel
10. Extract Flues

Elevation Treatment

The three storey building has been designed with the upper floors conceived as a floating box above a base of glazing and black brick. External materials have been selected to complement the setting of the building and its varied surroundings.

Northern wing

The northern wing houses the shared facilities including breakout areas, seminar and meeting rooms. It has the important role of addressing the entrance plaza and approach to the building from the west, which is achieved by large areas of glazing to the ground floor.

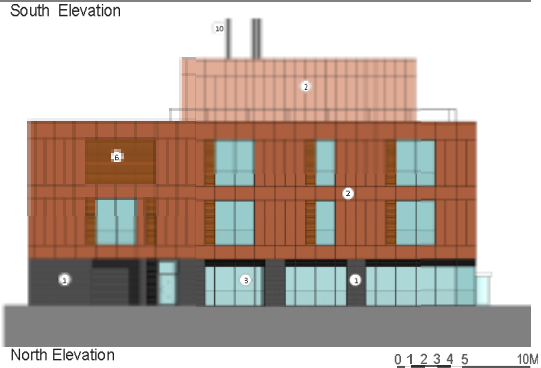
Glazed atrium

The triple height glazed atrium creates an attractive entrance to the building. This will allow daylight to flood into the collaboration and circulation areas, and enable views out to the woodland and plaza immediately outside. Fritting, which creates an opaque coating, will be provided to reduce thermal gain.

Laboratories / write up

The southern wing will be clad in corten with feature panels of back painted glass between the windows. Full height windows are uniformly distributed to reflect the open plan space within, and maximise views to the woodland gardens.

South Elevation



North Elevation

Elevations and Materials

10

Artist's impression from Green Square looking towards the main entrance

Artist's impression from Churchill Drive looking South

Artist's impression from Churchill Drive looking North

Materials

Corten Weathering Steel

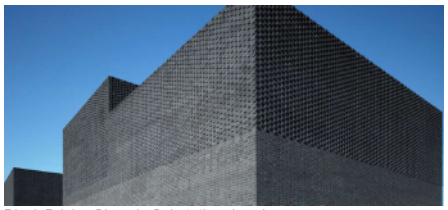
Corten weathering steel is a type of steel which develops a protective layer of rust when exposed to moisture and oxygen under normal atmospheric conditions. The naturally occurring rust that develops on Corten gives it anti-corrosive properties, which helps lengthen the lifespan of the steel and minimises maintenance cost.

The weathering process is natural and unpredictable; as such each panel will rust differently, giving a sense of variety and texture which cannot be matched in manufactured processes. The colour and natural surface of the material will complement both the red brick residential areas and adjacent woodland.

Black Brick

The black brick cladding provides a robust base at ground level. The use of black brick reflects the red brick material of the surrounding context in a contemporary way. Further to this, the black brick complements the distinctive reddish-brown colour of the corten cladding.

Corten - Chester House, London



Black Brick - Olympic Substation, London
Image credit: Ibstock

Chester House, London - Weathering
Image credit: Kingspan

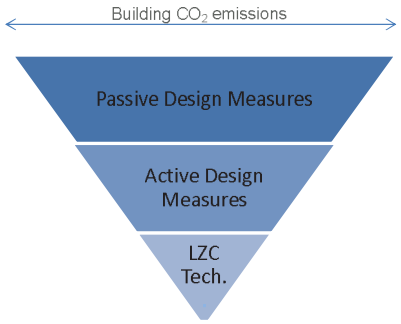
Chester House, London - Weathered (12 months)
Image credit: Kingspan

12 Months Weathering Process

Environmental Sustainability 11

Energy Strategy

The IDRM building will exceed the energy efficiency requirements set in the Building Regulations through the use of passive design measures such as active design measures and renewable energy technologies. Additionally, the design has followed the Passivhaus methodology with the aim of improving the building's energy performance in operation.



Passivhaus energy strategy diagram

Passivhaus

Passivhaus is a design methodology that focuses on achieving comfort for the occupants whilst simultaneously minimising the energy demand of the building. It is a voluntary standard, established in Germany in 1988, originally applied to residential buildings and now being deployed more extensively.

Passivhaus delivers buildings with lower and more predictable energy usage alongside greater occupant comfort when compared to current Building Regulations requirements. In order to achieve a low energy building the design team has utilised these models to assess the energy implications of different design decisions.

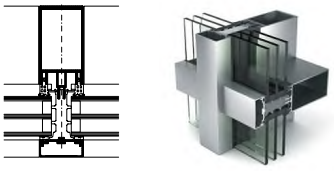
Passive & Active Design Measures

Daylighting

The façade design incorporates an adequate amount of glazing to maximise the useful daylight provision in the general office and laboratory areas. This will reduce the energy consumption for lighting as well as improving the comfort and wellbeing of the occupants.

Air tightness & fabric performance

The design incorporates high performance glazing and insulation in all areas. This will eliminate drafts and minimise heat loss through the building fabric.



An example of triple glazing curtain walling systems, under consideration to maximise U-values. Image credit: Wicona

Ventilation

Ventilation loads typically represent a significant proportion of the energy consumption in laboratory buildings. To minimise this, the design incorporates ventilation equipment linked to air quality sensors to provide the ventilation (only when required). Additionally, high-efficiency mechanical ventilation units with heat recovery will be used to minimise wasteful energy.

Lighting

High-efficiency lighting fittings and automatic controls will be used throughout to minimise the lighting energy consumption.

Low and Zero Carbon (LZC) Technologies

Solar photovoltaic (PV) panels have been identified as the most appropriate LZC technology for the scheme. A PV array is proposed to be installed on the available flat roof area to reduce the grid electricity consumption.

Solar photovoltaic panels

Sustainable Urban Drainage System (SuDs)

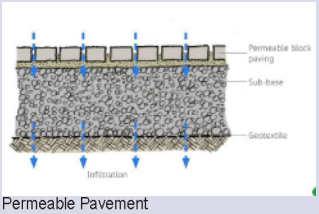
External areas will include a mixture of hard and soft landscaping incorporating permeable surfaces to mitigate run-off of water from surfaces following a sustainable urban drainage approach (SuDS).

The site is served by a new drainage network that has been constructed to serve the entire Old Road Campus. Boundary Brook to the west of the Campus has historically experienced floodwater erosion. The campus and IDRM drainage strategy has therefore sought to slow and control the flow into the brook to ensure no further damage caused.

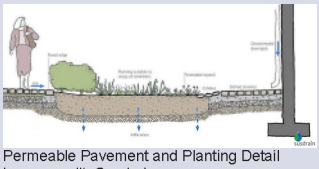
The drainage strategy for the campus has also been developed to ensure that the nearby Lye Valley Site of Special Scientific Interest (SSSI) is brought no additional risk by drainage from the development.

Permeable paving will be specified where possible, to minimise the requirement for underground tank attenuation and to help drainage conditions as close as possible to those prior to development.

To promote biodiversity the design team is also investigating the potential to incorporate SuDS into a wider wildlife-focused landscaping scheme. By implementing key themes from the University Biodiversity Strategy, the design seeks to support species by maintaining existing and creating viable new habitats.



Permeable Pavement
Image credit: Susdrain



Permeable Pavement and Planting Detail
Image credit: Susdrain

Next Steps

12

2019

February

-Public Consultation held on the 8th and 9th of February 2019

March

-Tender (based on Design and Build contract)

April

-Submission of planning application

July

-Planning decision

September/October

-Construction works to start on site

2020

January - July

-Construction of the building's main structure - the "shell and core"

July - December

-Fit out of building interior

2021

January

-Programmed Practical Completion

March

-Proposed occupation