

Project PED

Design & Access Statement

Manchester University
NHS Foundation Trust

DAY

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This Design and Access Statement has been produced by **DAY Architectural** on behalf of **Manchester University NHSFT** for **Project PED** and should be submitted to Manchester City Council.

The design has been developed in conjunction with:

Manchester University NHSFT - Client
WSP - Civil and Structural Engineer
Hoare Lea - M&E Services Engineer Consultant
Hoare Lea - Acoustic Consultant
AA Projects - Cost Consultant
Mace - Project Manager
Bruntwood - Strategic Property Partner
Engie - Lifecycle Provider

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DAY

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00

Introduction &
Overview

Introduction

DAY Architectural has been appointed by MACE Group to design and assist with the delivery of the refurbishment works of the Paediatric Emergency, iMRI and MRR departments at Manchester Royal Infirmary Hospital.

The works entail;

Paediatric Emergency Department

Internal reconfiguration and extensive remodelling of the existing Paediatric Emergency department (PED) to provide more compliant, expanded clinical accommodation to meet capacity demands. This includes, a second ambulance canopy to the East facade of the Children's Hospital A&E Department.

iMRI

A new build courtyard infill adjacent to the existing iMRI radiology department and internal remodelling, of its surrounding areas, to provide new clinical accommodation, including a new intraoperative MRI suite (Operating Theatre and MRI) and connecting Bi-Plane room and all associated clinical support accommodation.

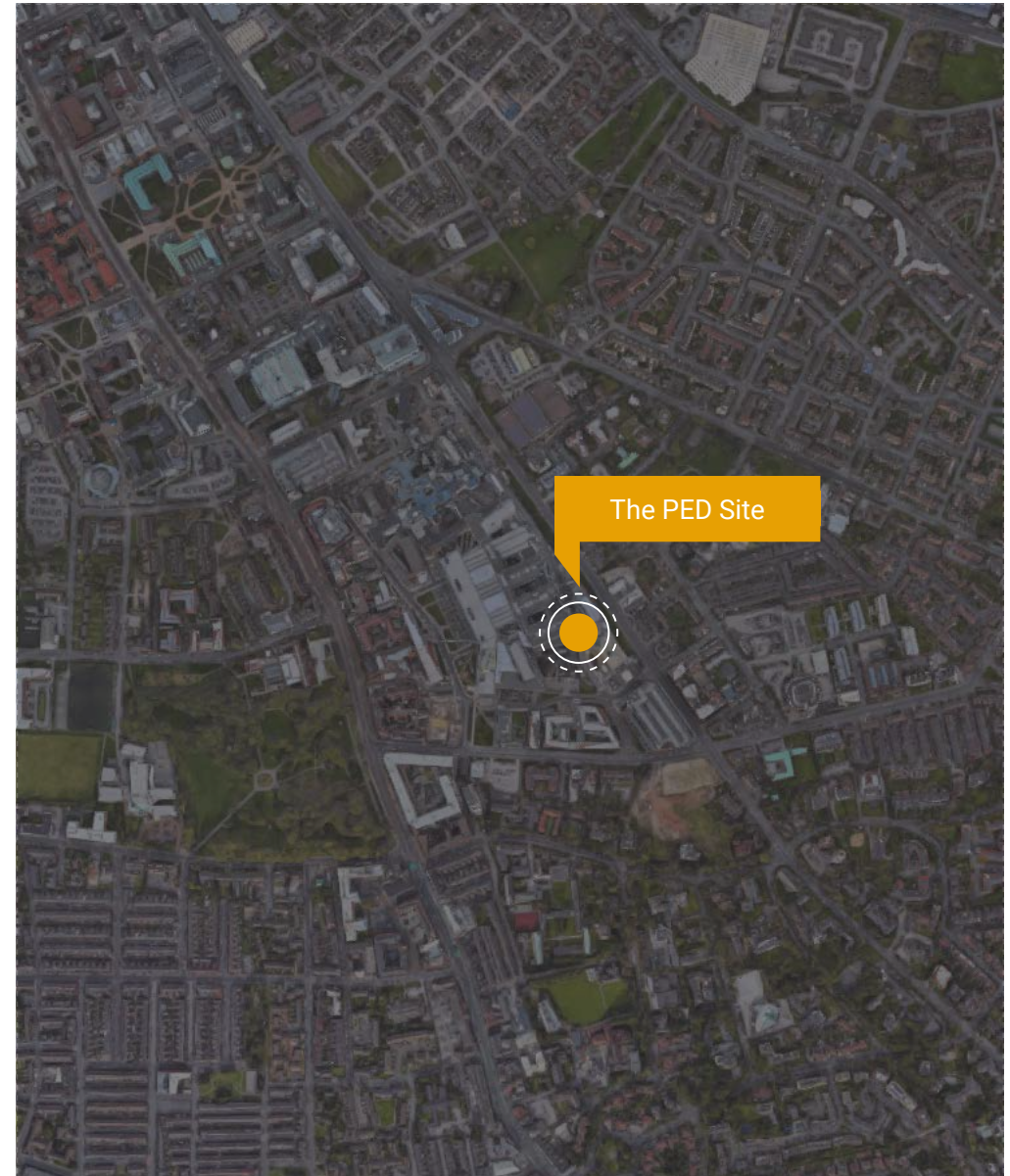
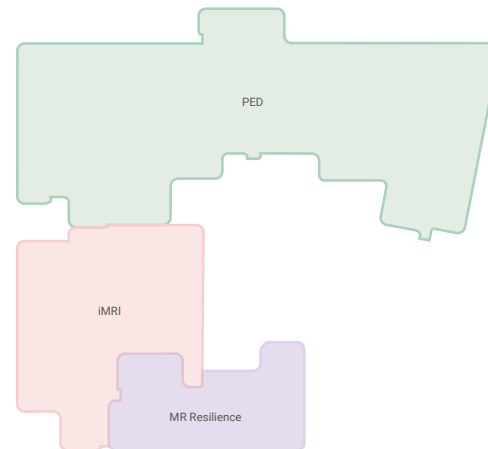
MR Resilience

The internal reconfiguration of the existing ground floor as part of the radiology department to accommodate an additional 3T MRI scanner.

Stakeholders

From Stage 2 onwards the design team has been in regular contact with the key clinical and non-clinical Stakeholder groups to help inform, review and further develop the design proposals to ensure it meets all the key requirements.

These sessions included relevant Design Team members, MFT staff across various departments and external stakeholders where necessary. To date, stakeholder engagement and feedback has been positive and the project continues to benefit from a high level of collaboration.



01

Planning Statement

This Planning Application is prepared by DAY Architectural on behalf of Manchester University Hospitals for the following project:

The proposed development includes the expansion of the existing Paediatric Emergency Department at Royal Manchester Children's Hospital into a neighbouring ward, a courtyard infill to create a new interoperative Theatre suite and all associated plant to support the scheme.

Due to ever increasing demands on the RMCH ED Department, it is essential to expand the capacity of the unit to support the children of Greater Manchester. In order to facilitate this and also retain the existing service, a phased approach is required.

This phase approach will require temporary alterations to the existing façade and the inclusion of an alternative Ambulance Entrance and canopy as well as some new ductwork runs down the outside of the building that we intend to clad with a housing.

As the development is an expansion of the existing ED Department a lot of the existing site wide services are still applicable to the proposals.

Transport

The transport strategy is an expansion of the existing condition by the use of the existing Greater Manchester Public Transport networks and the utilisation of the existing Grafton Street and Hathersage Road Car Parks.

Waste

All waste from the unit will feed into the hospitals existing site wide waste strategy.

Infrastructure

A range of new plant equipment is required to create an adequate Clinical Environment for patients and staff alike. The new plant will be spread across a number of different locations on the hospital roof.

Landscaping

Minimal temporary works externally required to create a new temporary Ambulance drop off bay.

Canopy

A proposed new canopy is required to shelter the ambulance bay in accordance with the guidelines during the temporary Phase 1 works.

02

Site Context
& Analysis

02 Site Context & Analysis

Healthcare Context

Our site sits towards the eastern border of the Manchester Royal Infirmary Campus and is at the centre of a Children's Healthcare hub, which includes the Ronald McDonald House.

The refurbishment of other areas within the Royal Manchester Children's hospital is allowing movement between departments. This includes the movement of Ward 75 into another building and the expansion of Clinical Decisions Unit into this now residual Ward 75 space, allowing the paediatric emergency department to expand.

Similarly, the existing paediatric radiology admin and ultrasound departments are relocating, and an internal courtyard is to be utilised, ultimately allowing the implementation of a new 3T iMRI scanner and department.

The Trust is expecting higher demand of the Emergency department by 2028, where the demand is already over capacity. The current annual demand is 48,000 attendances, with a capacity of 25,000 attendances.

The department currently suffers from overcrowding and dated facilities, leading to a reduction in quality of care, poor patient and staff experience, and therefore an inability to achieve performance targets.

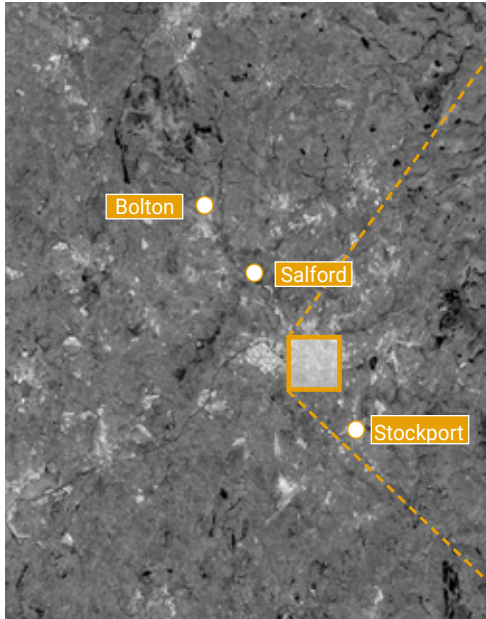
This expansion and improvement of facilities is vital to provide a safe and punctual treatment service.



02

Site Context & Analysis

Macro to Micro Scale



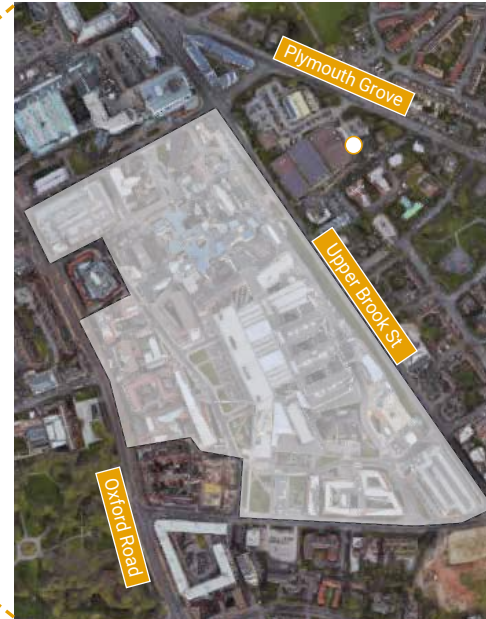
Macro Context

Royal Manchester Children's Hospital is a large university teaching hospital on the outskirts of Manchester City Centre. Operated by Manchester University NHS Foundation Trust, the hospital is now one of the biggest in the country providing a service for tens of thousands of children in the North West of England and beyond.



Meso Context

The Hospital campus sits two miles outside Manchester City Centre and is easily accessible via car or public transport. Major transport links such as Manchester Piccadilly Train & Metrolink stations are a ten minute drive, as is the M60 motorway, connecting the site with the rest of the borough and country.



Micro Context

The Campus is flanked on both East and West by roads linking Manchester City Centre with the surrounding area and the M60. Both Upper Brook St and Oxford road have numerous bus routes running throughout the day, seven days a week.



Proposed Site

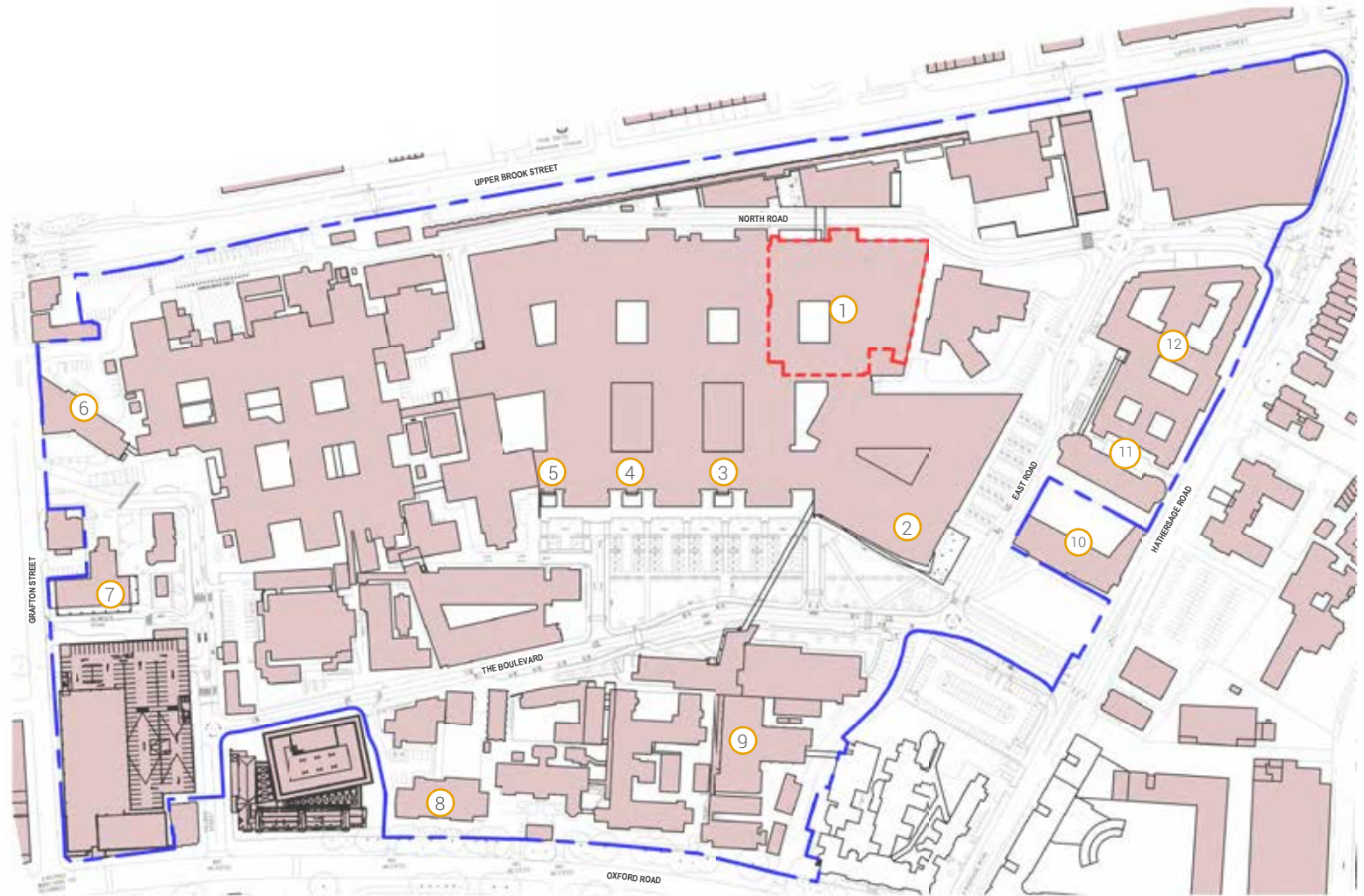
The above aerial photograph of the site has been overlaid with the site line boundary. This image shows our site's proximity to the blue light access road, North Road, and the main entrance to the Children's Hospital, along East Road.

02 Site Context & Analysis

Site Context

- ▬ Scope of wider Project Works
- ▬ Manchester Royal Infirmary Boundary

- ① The Site
- ② Royal Manchester Children's Hospital
- ③ Saint Mary's Hospital
- ④ Royal Eye Hospital
- ⑤ Manchester Royal Infirmary
- ⑥ Wellcome Trust
- ⑦ Nowgen Centre
- ⑧ Postgraduate Building
- ⑨ Clinical & Scientific Laboratories Complex
- ⑩ Ronald McDonald House
- ⑪ Rawnsley Building
- ⑫ Edale House



02 Site Context & Analysis

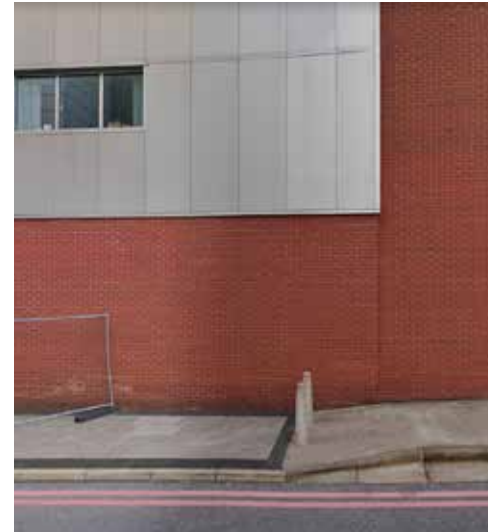
Campus Materiality

All six images are of building materiality in the immediate site vicinity. These images demonstrate the range of materials used and the lack of palette consistency on the campus.

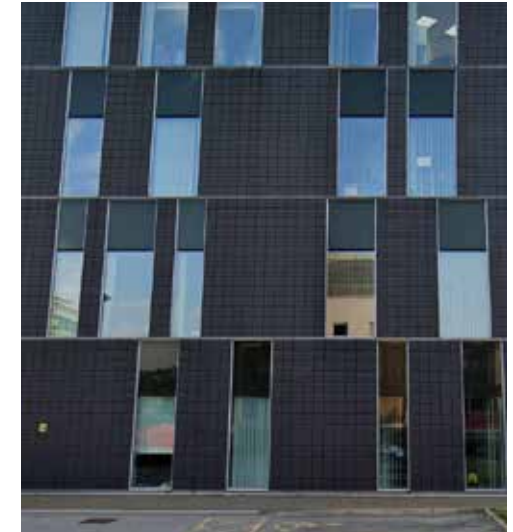
Our external interventions aim to be consistent with the existing building and will be using the materials shown in the first image.



Site - East Elevation



Sodexo Building



Children's Hospital East Road



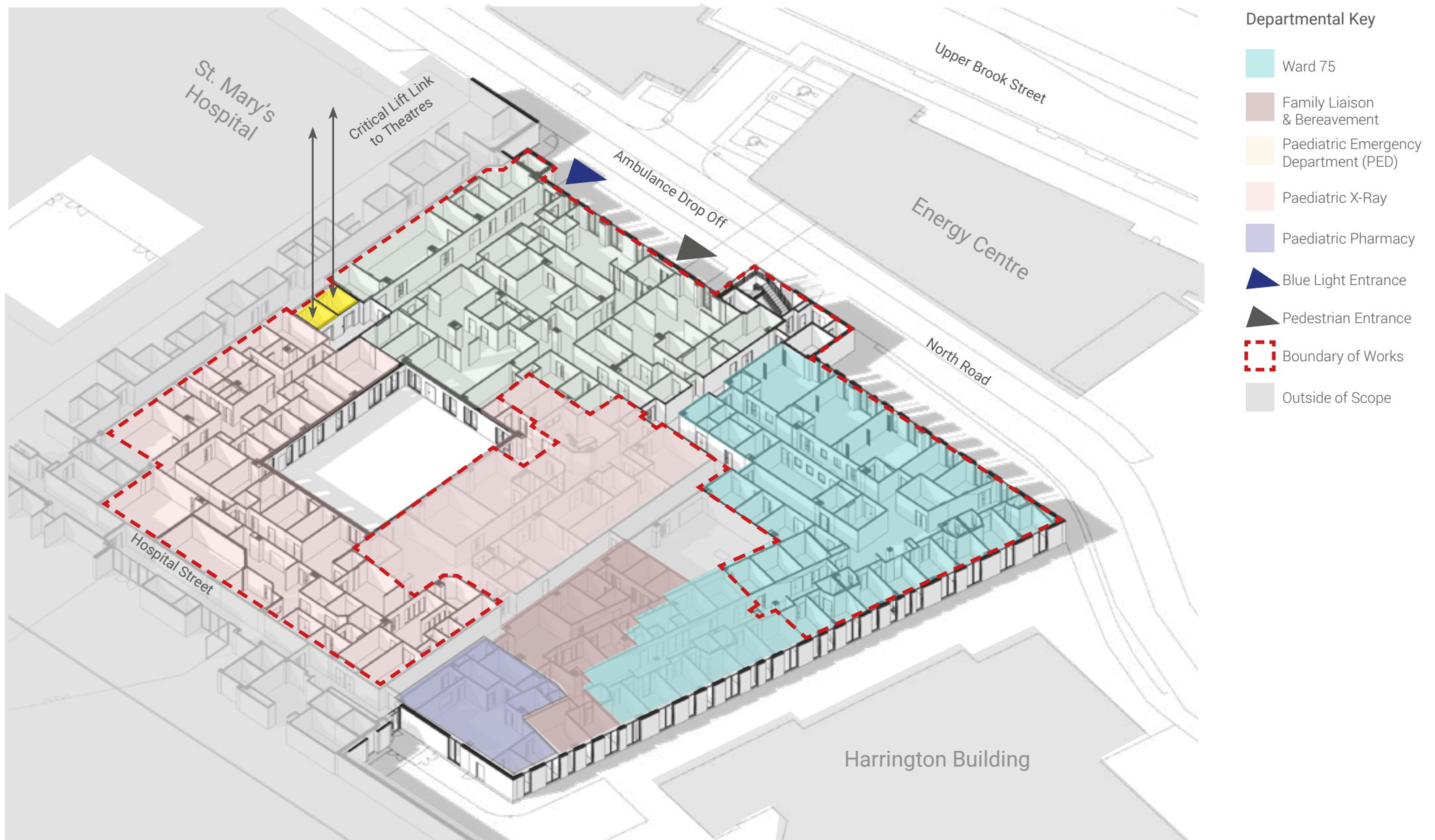
Ronald McDonald House



Children's Hospital Main Entrance



Richard Ramsden Centre



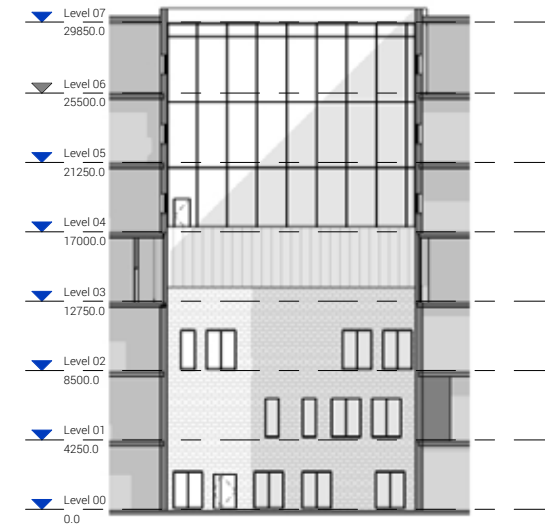
02

Site Context & Analysis

Existing Courtyard Elevations



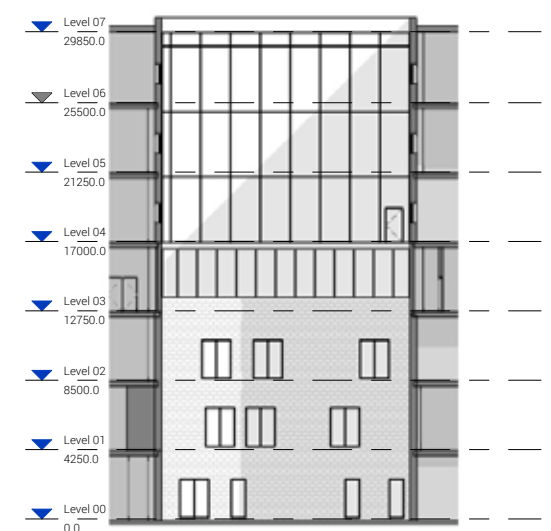
Courtyard Elevation A - Existing
1 : 200



Courtyard Elevation B - Existing
1 : 200



Courtyard Elevation C - Existing
1 : 200



Courtyard Elevation D - Existing
1 : 200

02 Site Context & Analysis

Existing East Elevation

The scheme involves a relatively small amount of external intervention. As explained we will using the lower level roof for the AHU unit and we will be adding an ambulance canopy to the Ground Floor.

Both elements are essential for the success of the scheme and should have very little aesthetic impact on the existing building and campus.



03

Design
Approach

Scale

The total ground floor layout works comprises of a Gross Internal area of 3364m². This is an increase of 344m², as the internal courtyard is being infilled at ground floor.

All proposed areas will be serviced by AHUs and chillers, within a new plant structure at level 01 and 02 within the internal courtyard, and on adjacent accessible roofs at level 04. The plant will be enclosed with Europanel G5 architectural flat profile cladding panel, Roofspan roof over.

The proposed courtyard plant room scale is designed to blend in and not detract from the surrounding hospital buildings.

Layout

Ultimately, the existing Emergency department entrance will be retained. The works will be separated into 2 Phases, Phase 1 being the strip out of Ward 75 and completion of half of the ED with temporary accommodation for a waiting area. Once complete, the ED team will utilise this space and free up the existing ED department allowing Phase 2 works to begin.

During Phase 1 works the road directly outside the temporary accommodation (North Road) will be regraded into a new Ambulance bay, to provide spaces for the ambulance vehicles. A new canopy will also be constructed to provide sheltered access to the ward. Here we will also provide a temporary entrance and waiting area for walk in access. Once the full refurbishment works are complete, the original walk in and ambulance entrances will be back in use.

Design

The proposed plant room design sits comfortably within the existing courtyard, is easy to access from the main hospital streets, and is minimal in its impact on the surrounding buildings. Any neighbouring windows that look onto the enclosure still have access to natural light.

As the new plant room is within an existing courtyard and within the existing hospital footprint, it will not be in view from road level.

Travel

Throughout the course of construction there will be minimal impact on the pedestrian access. Whilst in its temporary location, the entrance remains on the same elevation along North Road and will be both well lit and signed.

Access to the department via car would mean the patient(s) parked in a nearby car park, as existing. A small area of nearby car parking bays (approx. 12 bays) will be utilised by the site compound. This will be easily accessible for all delivery vehicles and provides a direct pedestrian route for operatives.

No public transport or cycle routes are affected by the proposed works. Therefore, we do not foresee any major change in traffic as a result of the proposed scheme.

03 Design Approach

Courtyard In-fill

These two images highlight the changes to Ground Floor Plan as a result of the courtyard in-fill. Not only does this design decision increase the overall area of the department but it increases the efficiency of the plan and its adjacencies.

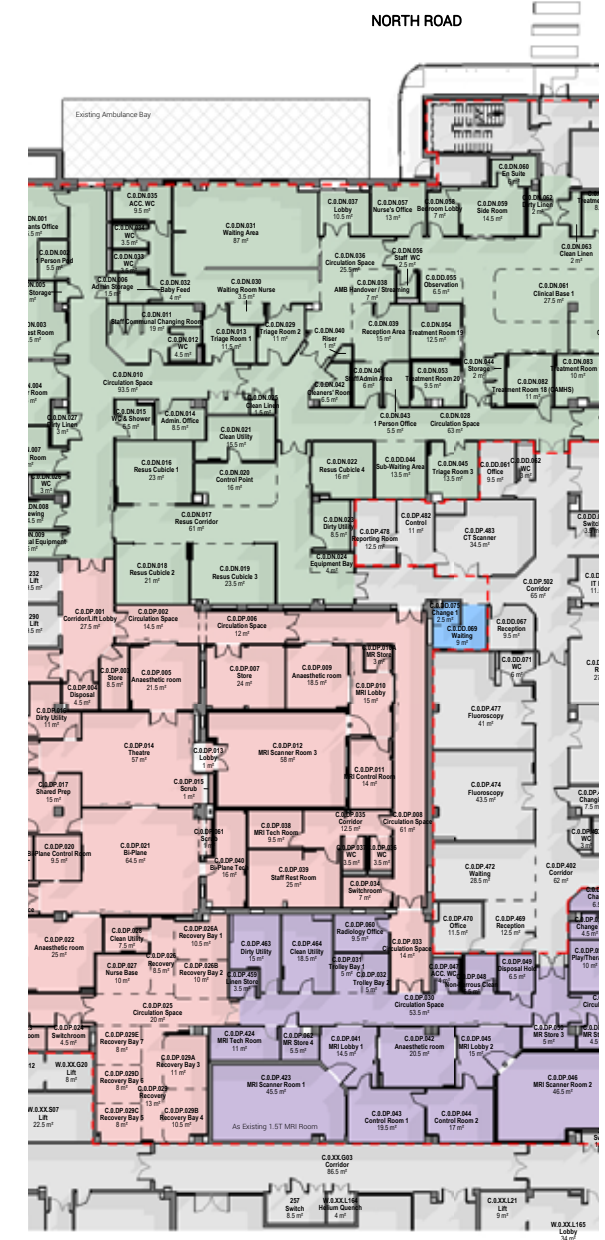
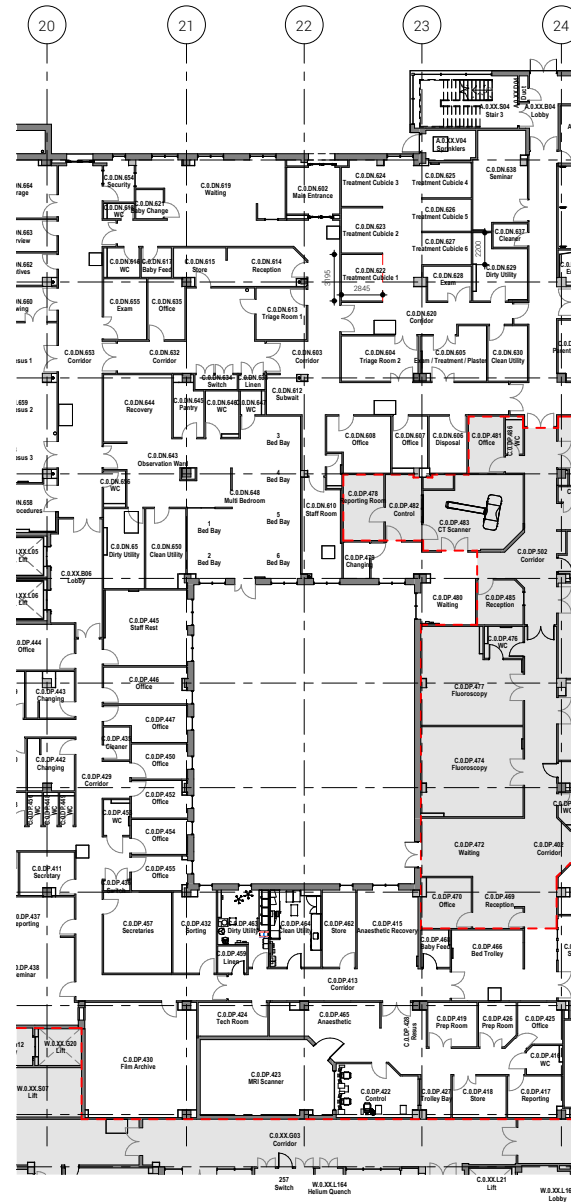
On the floors above, the new plant room areas are as follows;

Plant Room level 01
(within courtyard enclosure) – 172.5m²

Plant Room level 02
(within courtyard enclosure) – 165.5m²

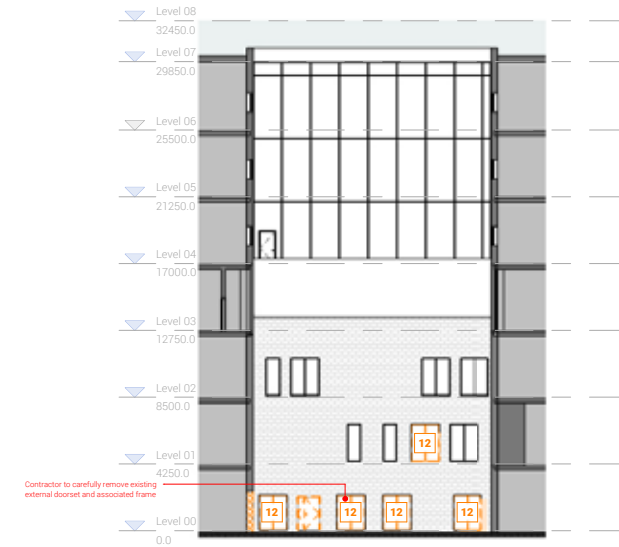
Plant Room level 03
(on two existing roofs with new roof over) – 126m²

Chiller units on roof over level 03 plant room – 77m²



03

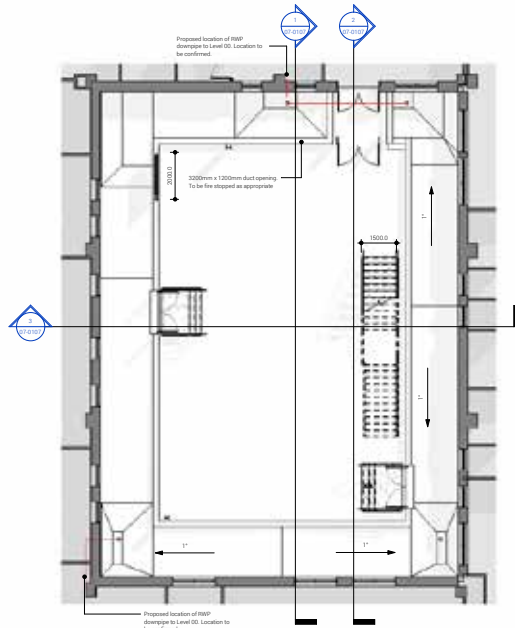
Design Approach Courtyard Demolition Elevations



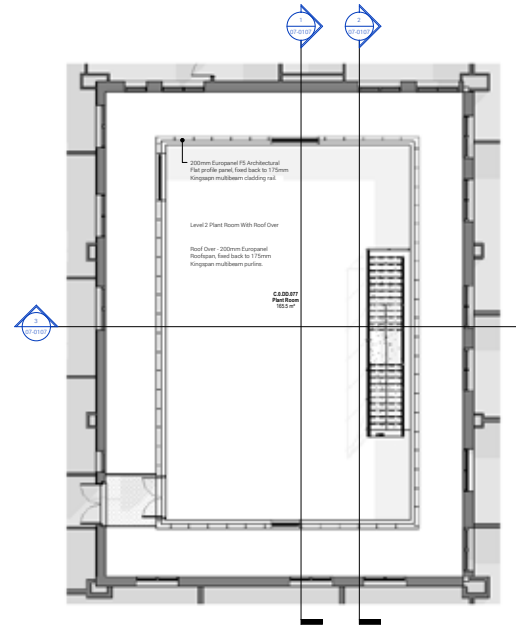
03

Design Approach

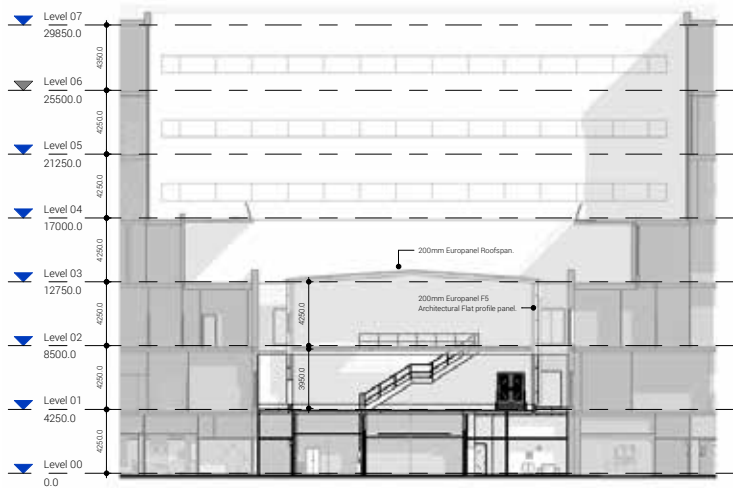
Proposed Courtyard In-fill



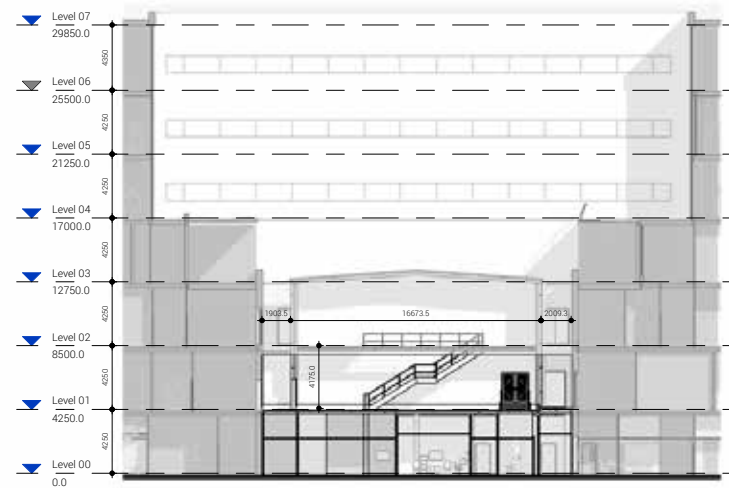
Level 01 Proposed Plant Room



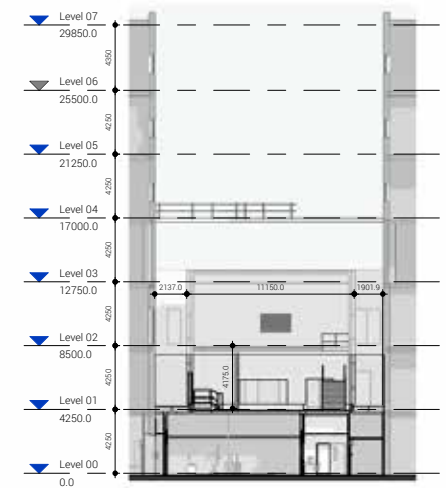
Level 02 - Proposed GA Plan



Plant Room Section 1



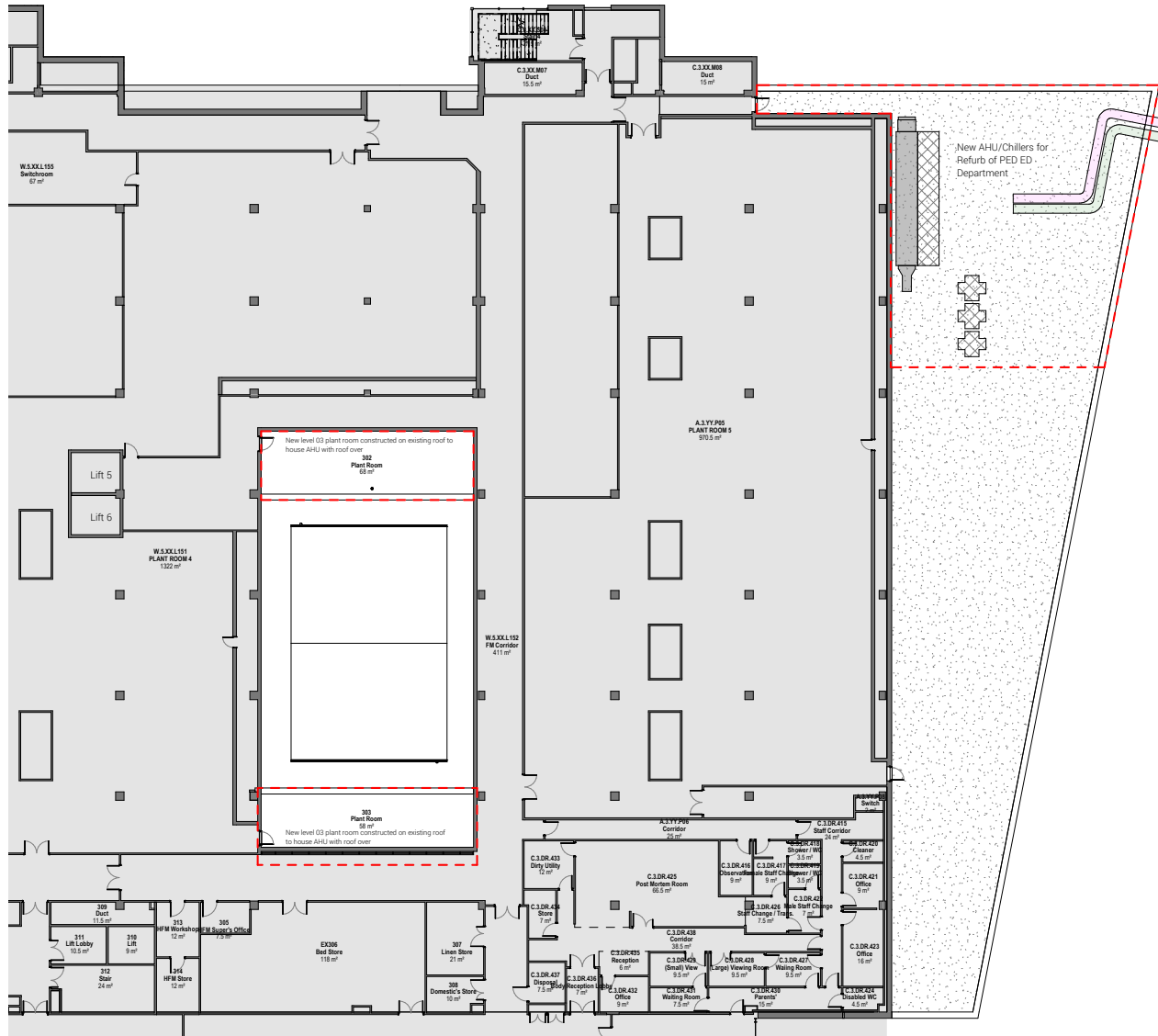
Plant Room Section 2



Plant Room Section 3

03

Design Approach Rooftop AHU



KEY

- Dashed line indicates Area of Works
- Hatch indicates area outside of scope

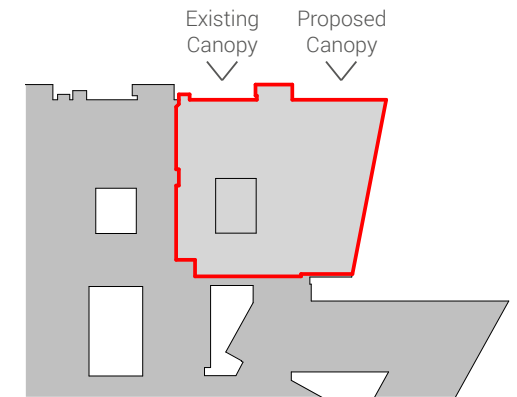
The rooftop AHU unit will sit towards the South East corner of the lower level roof. To ensure the AHU unit has minimal impact on the existing building's aesthetic, it will be located up against the higher level massing and the ducts will run down the South elevation as shown, not down the more prominent East Elevation.

03 Design Approach

Canopy Consistency

The canopy design has been based on the existing North Street ambulance canopy. Its proportion, location and structural strategy will echo that of the existing and therefore fit in cohesively to the East Elevation.

The canopy protrudes 4m from the building's face. This will ensure that the reversing ambulances are covered and that the canopy is not built too close to the raised pavement and railings.



Existing Canopy (Close by)

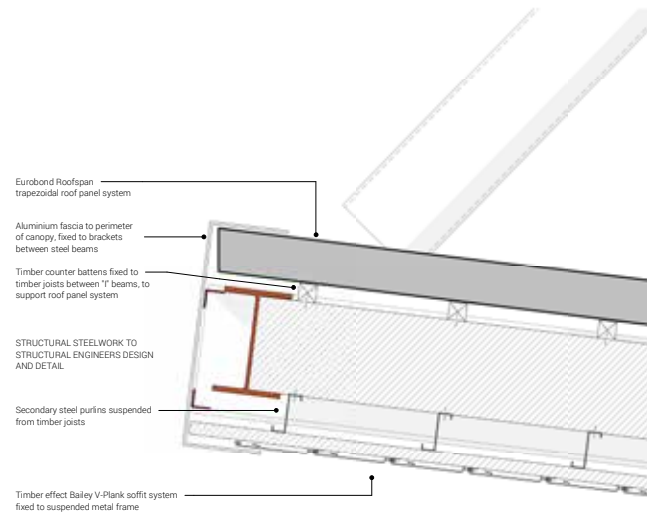
DAY Architectural



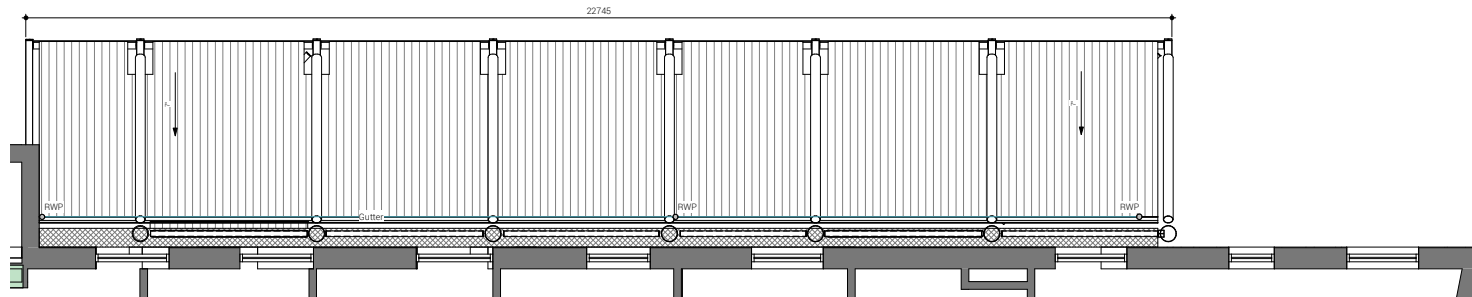
Proposed New Canopy

03

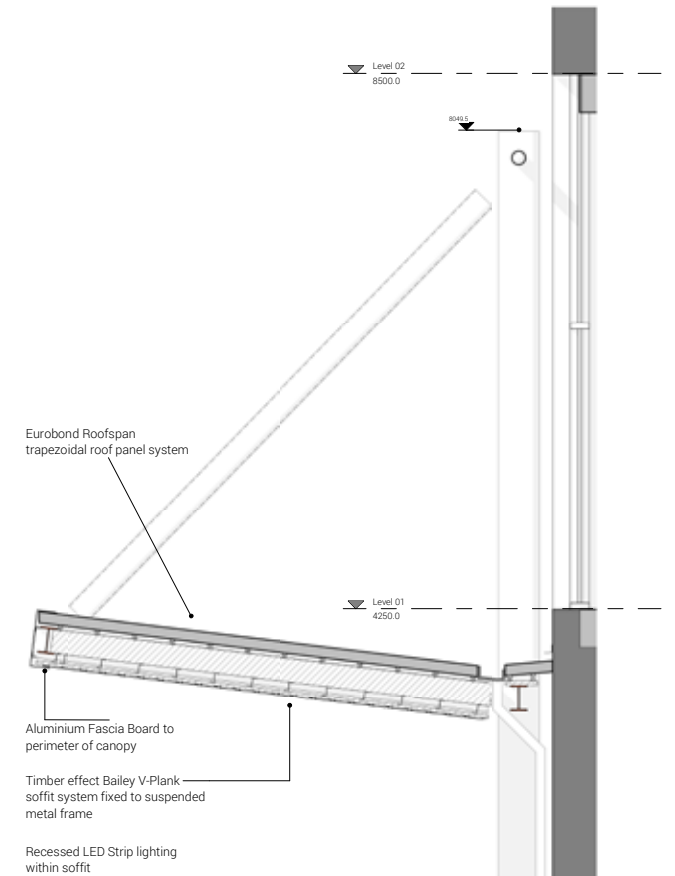
Design Approach Proposed Canopy



Section through end of Canopy
1:5



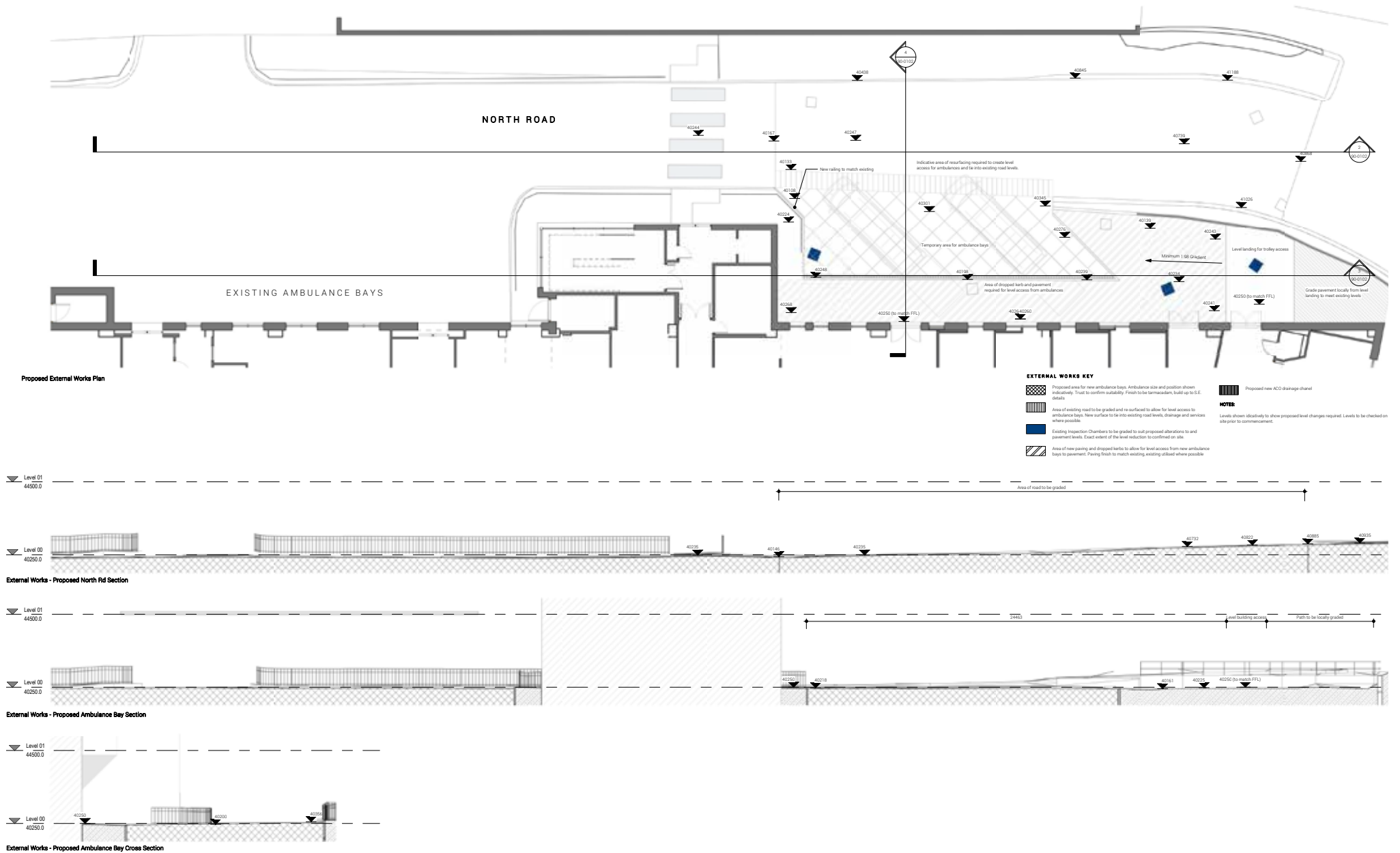
New Canopy Plan
1:50



Canopy Section
1:20

03 Design Approach

External Works



03

Design Approach

Internal Design Approach & Precedents



The current interior design is chaotic and lacks subtlety. It's colours and graphics are fun but overwhelming and confusing - see image above.

Our approach aims to use more neutral tones and a consistent material palette. Accent colours and subtle wayfinding graphics will ensure the occupants feel relaxed and informed when navigating the departments.



04

Access
& Strategies

04

Access & Strategies

Proposed Access Routes

Access Policy

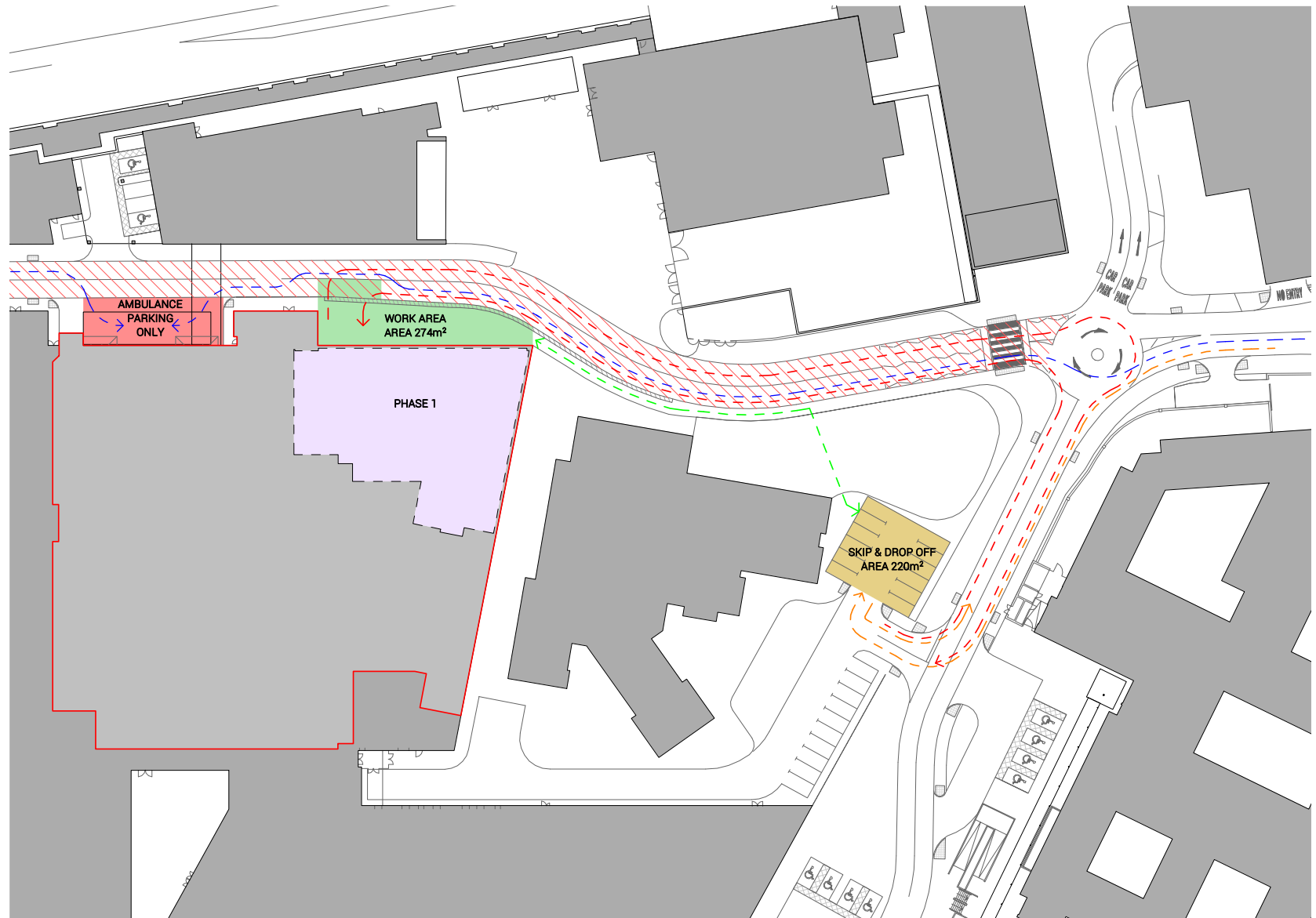
It is County Council policy that all development is of inclusive design and would not create environmental barriers to employment, services, education or public transport. Therefore, ground floor design would be informed by Approved Document M (2015), BS8300 and accredited service specific guidance.

Access to the Site

The approach to the site has adequate surface widths and the gradient of the approach is in accordance with the Approved Document to Part M (2015).

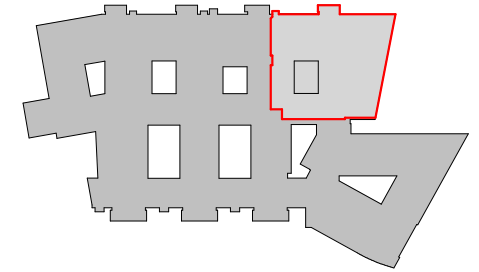
LOGISTICS KEY

- Blue Light Route For Emergency Vehicles.
- Operatives Pedestrian Route.
- Vehicular Access For Contractors & Deliveries.
- Plant Movements (Minimalised).
- Current A&E Entrance for Ambulance Vehicles.
- Delivery Vehicles Not Permitted On These Routes. Highway To Be Kept Clear At All Times.
- Newly Proposed Ambulance Drop Off.
- Site Setup Location.
- Extent of Phase 1



Access & Strategies

Schedule of Accommodation

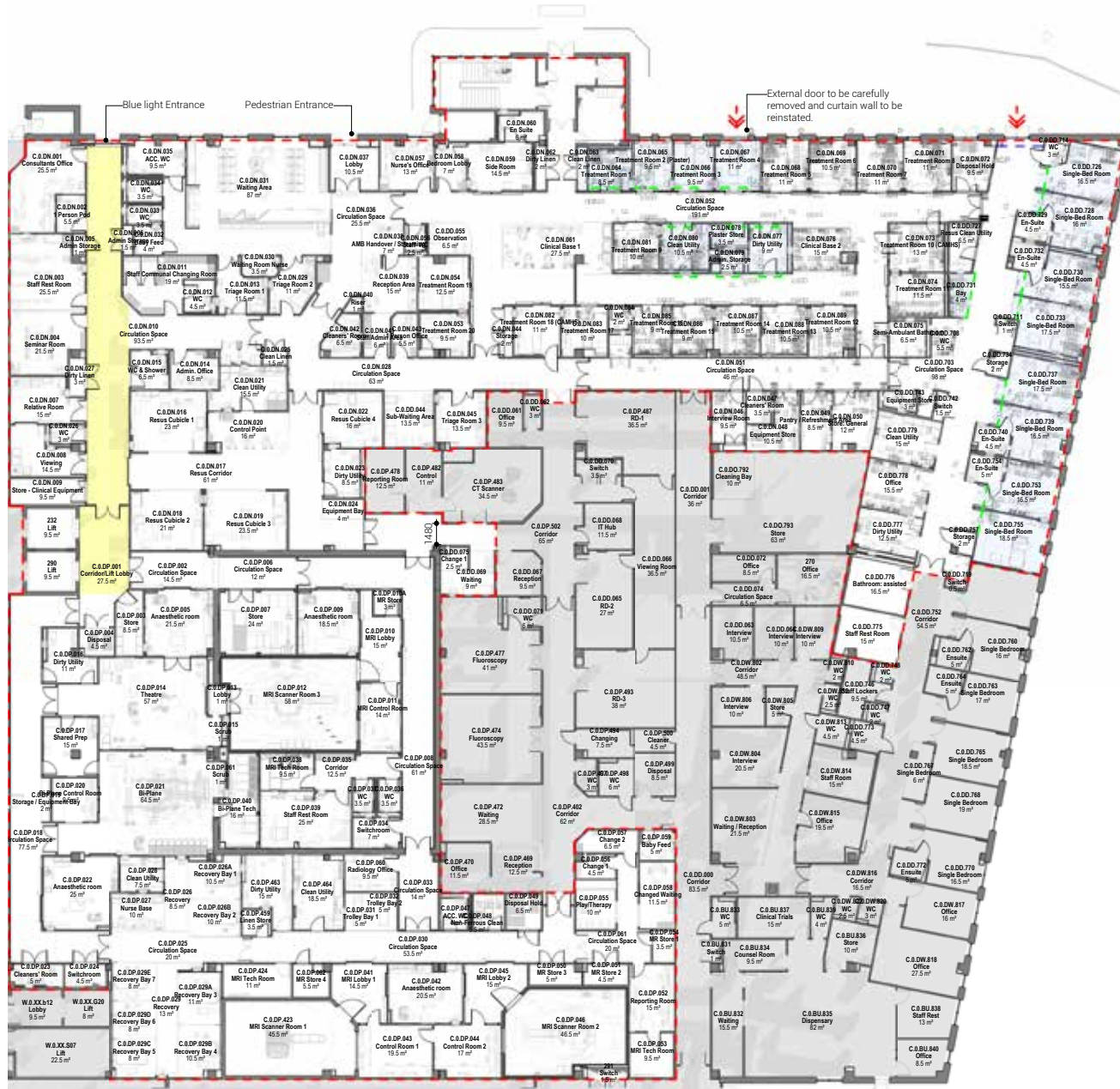


--- Dashed line indicates Area of Works - GIFA: 3329m²

By Department Legend

- As Existing
- CDU
- PED
- Enabling Works
- iMRI
- MR Resilience
- Paediatric X-Ray

Department Area Schedule	
Name	Area
PED	1494.5 m²
Paediatric X-Ray	13 m²
iMRI	816.5 m²
MR Resilience	463.5 m²
CCDU	381 m²



PHASING KEY

- Areas of works - To be vacant whilst works are completed
- Area outside of Scope
- Blue light route to be kept clear at all times

60 minutes fire rated & class 0 rated, full height hoarding, approximately 2.7m high. This will need to be reviewed by Trust Fire Office and Trust Infection Control Team

Contractor to seal up existing doorway with dust proof sheets.



NOTES:

Contractor to allow for out of hours work (evenings and possibly weekends) to be determined and agreed.

Dust mats to be installed at entrance/exit of work areas to prevent dust being spread through adjacent areas.

This drawing requires further development between the Contractor, Trust and End Users and is issued as a guide to the Phasing & Constraints only.

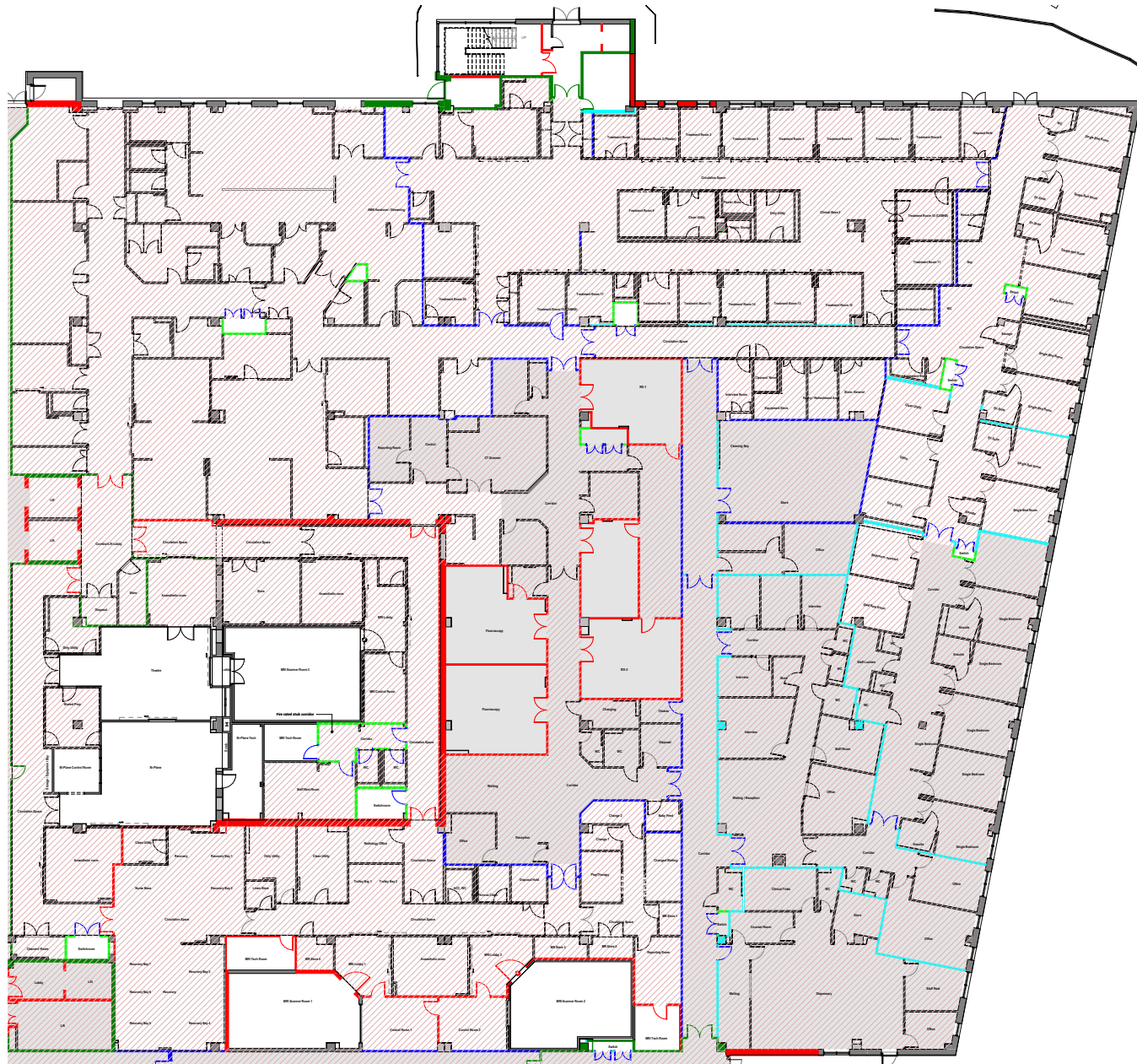
Contractor to allow for fire rated Hoardfast hoardings, access doors, and temporary signage to all phases as indicated aside. Please note hoarding locations are not shown and the exact locations are to be agreed with the Trust.

Contractor to make provisions for all Health and Safety Signage.

Contractor to liaise with Trust prior to any disconnection of existing services.

Drawing to be read in conjunction with M&E drawings.

It is assumed that there is no asbestos within the scope of works - Trust to confirm.

**FIRE STRATEGY KEY**

- 30 Min Fire Resisting Wall - Hazard Rooms and protected Corridors
- 30 Min Fire Resisting Sub-Compartment Wall
- 30 Min Fire Resisting Compartment Wall
- 60 Min Fire Resisting Compartment Wall
- 120 Min Fire Resisting Wall
- Cavity Barrier Above Ceiling
- M FD30S Fire Rated Door
- M FD60S Fire Rated Door
- M FD120S Fire Rated Door
- / / / Extent of Sprinkler Protection
- Area out of scope

Summary of Fire Strategy

It is intended that the existing fire evacuation strategy currently in place for the department will continue to be implemented following completion of the proposed works and these proposals will be supplementary. It is the responsibility of the Trust to ensure that the existing and proposed strategy is being implemented and managed by the Clinical Team. All staff (including temporary) are to be trained and made aware of this strategy. The Trust are responsible for updating their operational policy, including the management of the evacuation based on the current design.

Existing Compartmentation

- All existing fire rated walls and sprinkler coverage indicated are assumed. The Contractor must inspect these before any works are carried out using a third party accredited company. Any walls that do not achieve their required fire rating (i.e. defective fire-stopping) are to be reported to the Fire Officer and the Architect.
- The fire compartmentation between each level will be 60minutes between sprinklered levels and 90 minutes between non-sprinklered levels assumed. All existing fire rated partitions to be confirmed on site that they extend to soffit above.

Proposed Compartmentation

- The minimum period of fire resistance provided by external walls will be 60 minutes in accordance with HTM 05-02 Firecode, section 6.4.
- All firestopping works are to be carried out by a third party accredited company.
- First and second floor slab to achieve 90mins Fire Rating. Existing third floor roof below new chillers to be checked to achieve 90minutes fire rating.
- Roof to achieve 60mins Fire Rating.
- Note: All fire rated partitions to reach soffit. All structural steelwork to be intumescent painted to achieve min 90mins fire rating.

Proposed Access Control

- Trust to provide confirmation of all access control strategies.

- 60 minutes fire rated & class 0 rated, full height hoarding, approximately 2.7m high



PROPOSED ACCESS CONTROL

Outside of this plans demise.

PLAN LEGEND

Push to Exit/Enter secured by magnetic locks, no security control required to exit.

DRAWING CODES

RF PPC aluminium doorset by specialist subcontractor as part of RF cage. To incorporate a power operated latching system, with automated door seal, indicated by door operation light. Built in limit switch connected to scanner.

MGL Magnetic Lock

SW Swipe Card Access Control to enter/exit (NET27)

DIGI Digilock Access Control to enter

PTE Push Button To Enter/Exit

FL Fused Link to release with fire alarm

ATO Doors With Manual Override

SEN Automatic open via sensor

HO Hold Open with fused link to release with fire alarm

CL Closer

MS Mental Health Specialist Ironmongery (TBC)

EX Existing door (no works)

***** Lever latch, with euro profile cylinder lock, suited

Lever latch, with euro profile cylinder lock, thumb turn inside

~ Lever latch, internal thumb turn lock with indicator

⬆ "In use" indicator

■ CCTV location, to M&E specification

NOTE:

Fire alarm activation will be programmed to override all access control to fail open.

Red to indicate manual access control.

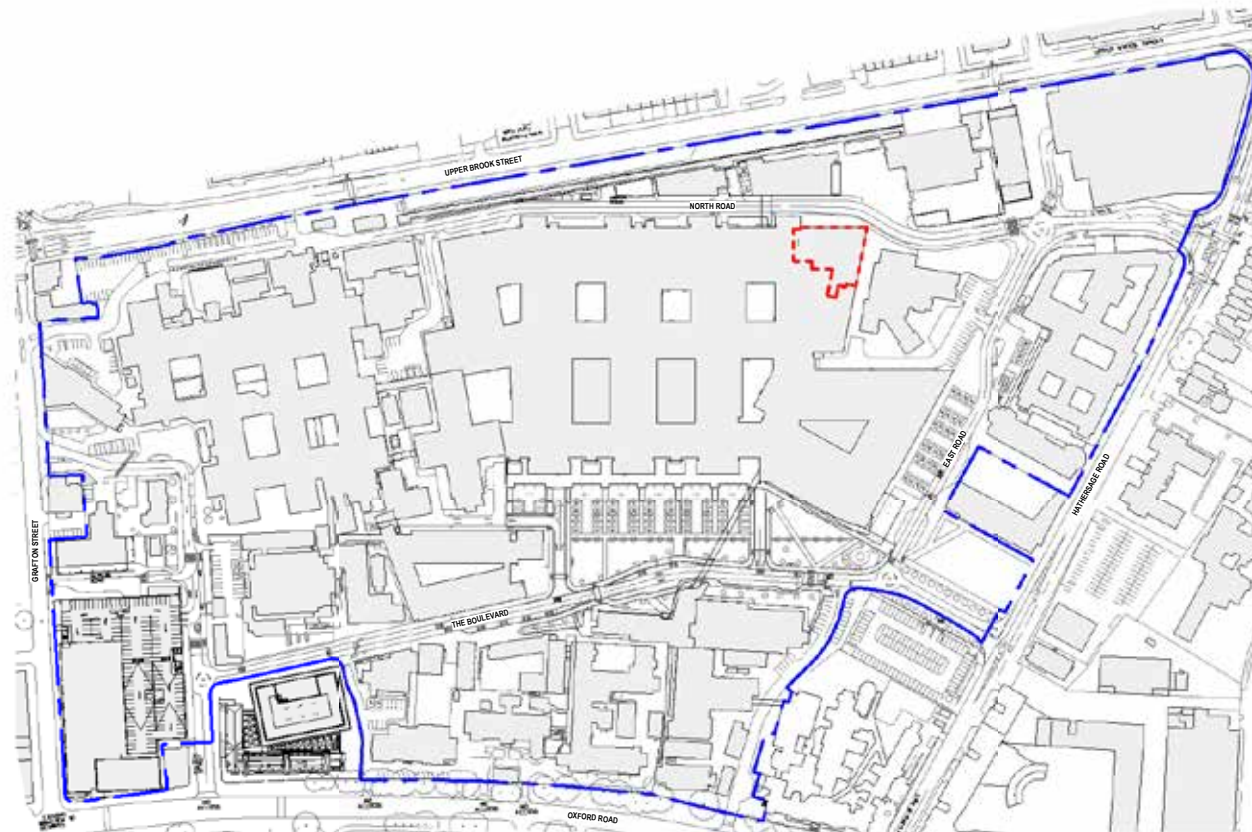
Green to indicate access control requiring electric supply.

To be read in conjunction with door details and schedule.

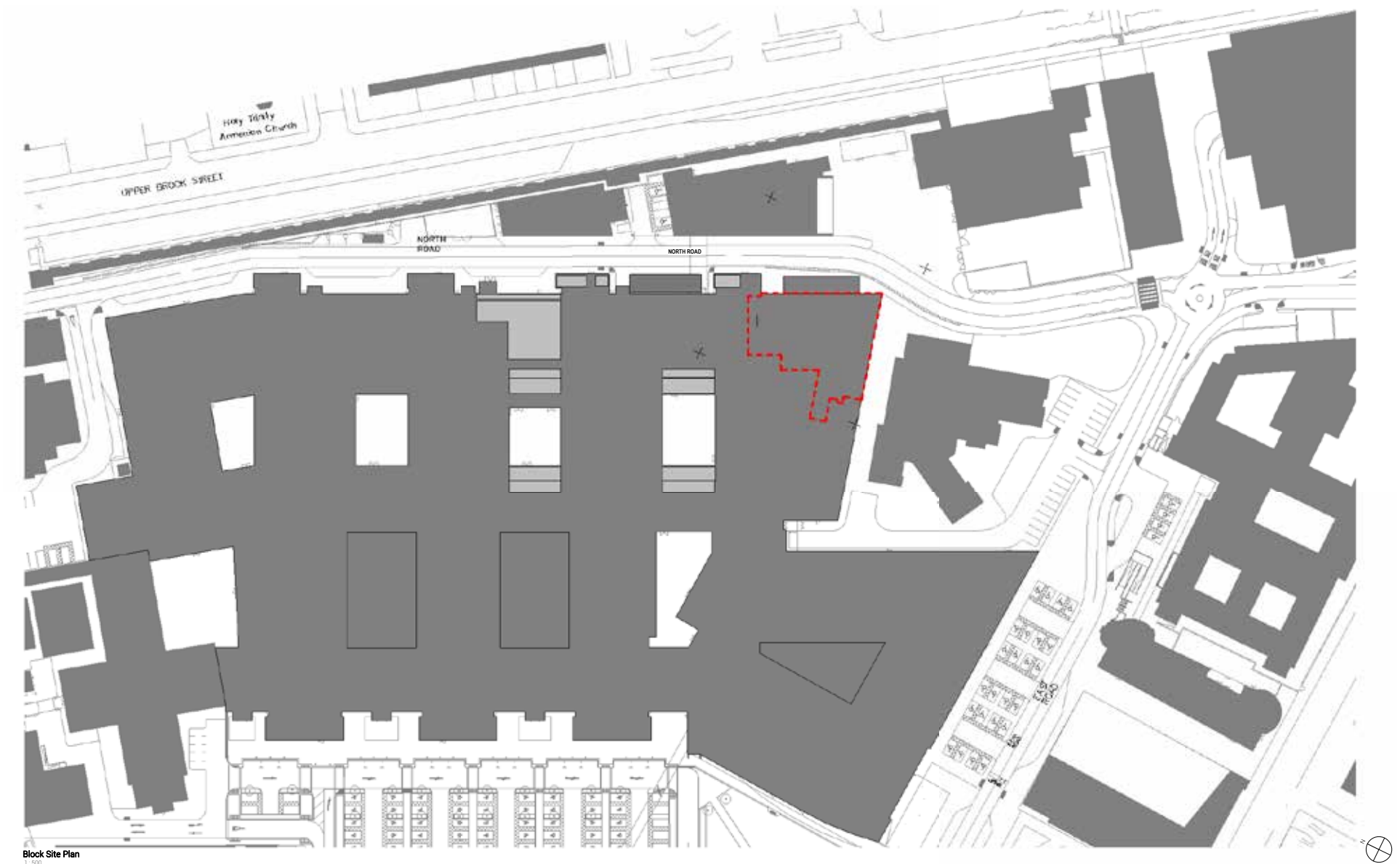
ALL STRATEGIES, INCLUDING; CLEANING, MAINTENANCE AND REFUGE TO ALIGN WITH THE TRUST'S EXISTING PLANS AND PROTOCOLS

05

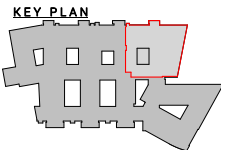
Appendix



DEMISE LINE KEY
— Scope of Works
— M1 site boundary

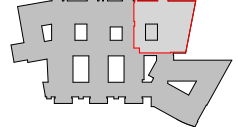




Level 00 - Existing GA Plan
1:200

Level 00 - Proposed GA Plan
1:200

KEY PLAN

Key Plan
1:2000

KEY

--- Dashed line indicates Area of Works - GFA: 3323m²

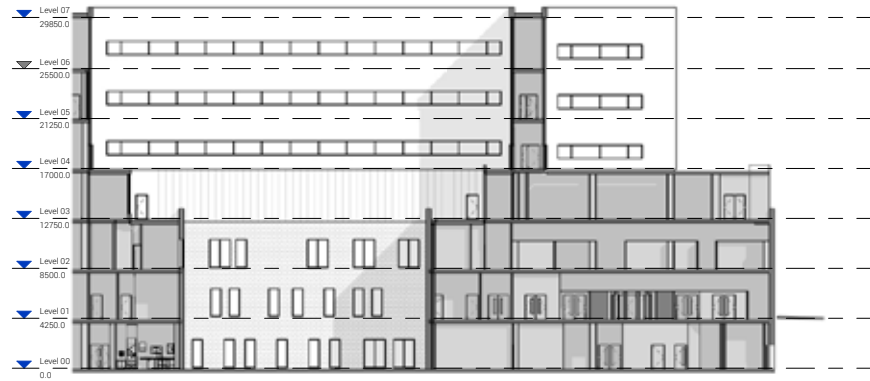
By Department Legend

- As Existing
- CCU
- CCU
- Enabling Works
- MRI
- MR Resilience
- Paediatric X-Ray

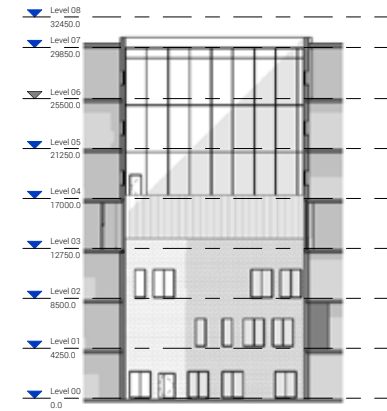
Department Area Schedule	
Name	Area
PED	1484.5 m ²
Paediatric X-Ray	13 m ²
MRI	916.5 m ²
MR Resilience	453.5 m ²
CCU	381 m ²

0 2 4 6 8 10
SCALE 1:200





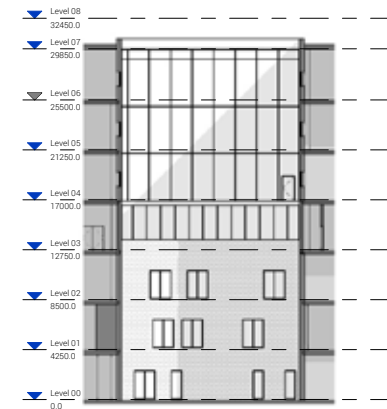
Courtyard Elevation A - Existing
1:200



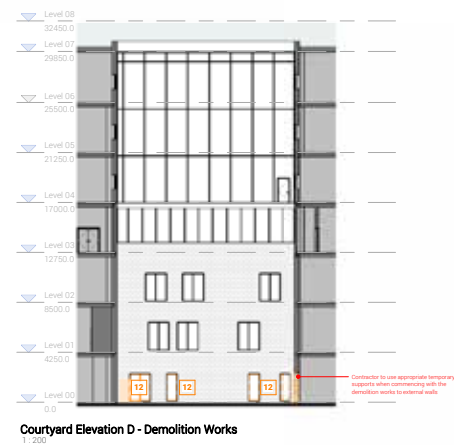
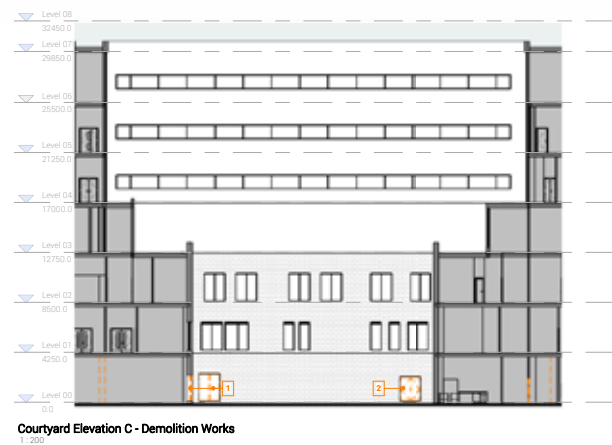
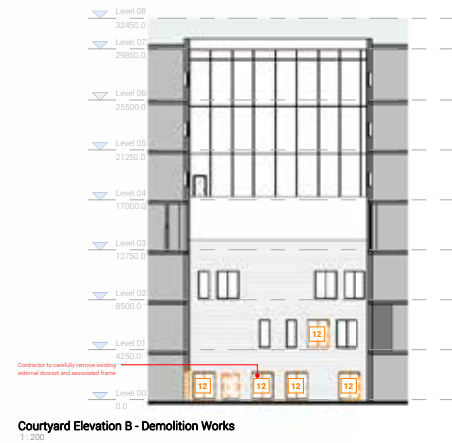
Courtyard Elevation B - Existing
1:200

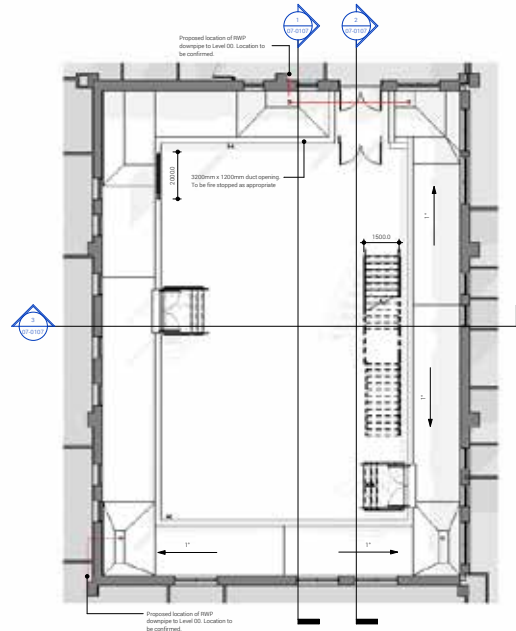


Courtyard Elevation C - Existing
1:200



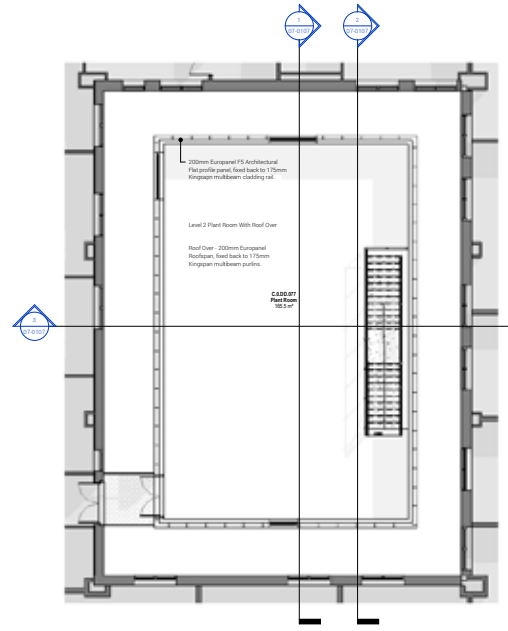
Courtyard Elevation D - Existing
1:200





Level 01 Proposed Plant Room

1:100



Level 02 - Proposed GA Plan

1:100



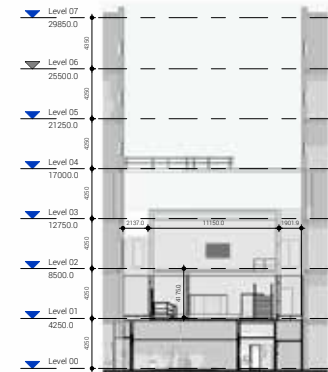
Plant Room Section 1

1:200



Plant Room Section 2

1:200

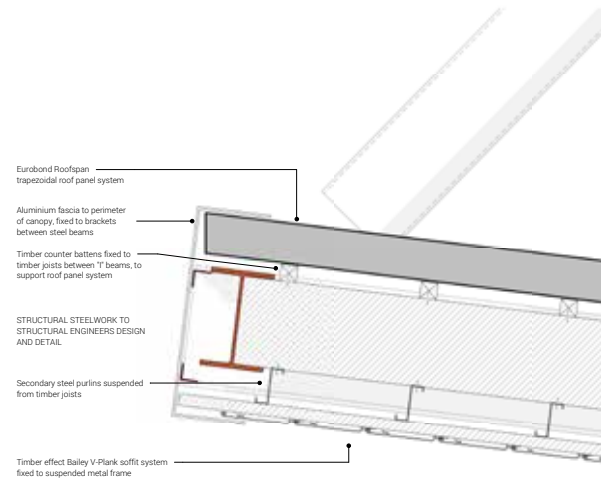


Plant Room Section 3

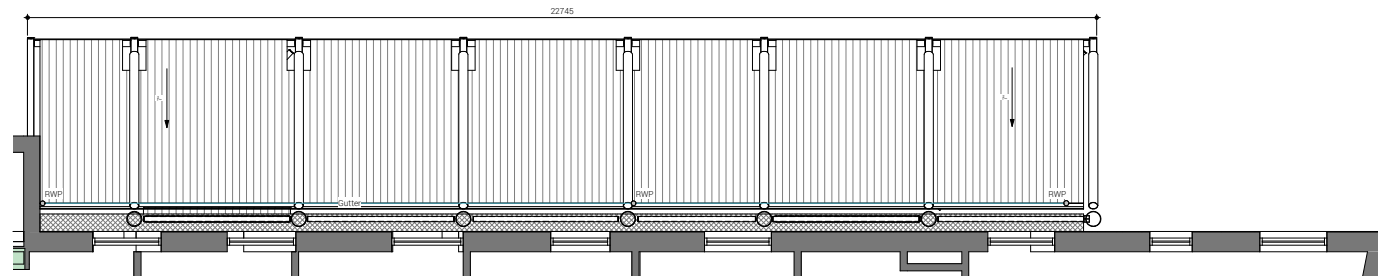
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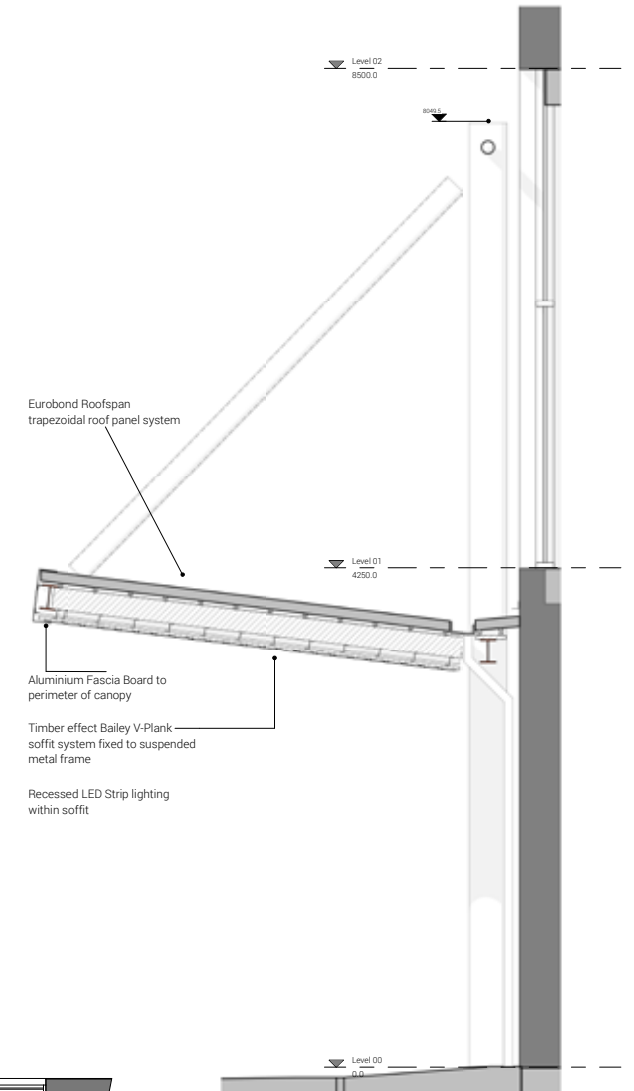
Canopy 3D View



Section through end of Canopy



New Canopy Plan



Canopy Section



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