

New EDCAU

Barnsley Hospital

Design & Access Statement

Barnsley Hospital NHS
Foundation Trust

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This Design and Access Statement has been produced by **DAY Architectural** on behalf of **Barnsley Hospital NHSFT** for the new **Emergency Department, Childrens Admissions Unit (EDCAU)** and submitted to Barnsley Council.

The design has been developed in conjunction with:

Barnsley NHSFT - Client
Mott Macdonald - Civil and Structural Engineer
Turner & Townsend - Cost Consultant

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DAY

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00 Introduction Overview

0.0 Introduction

The purpose of the report is to give an overview of the project from the early concept design stages, through the history and background of the development finishing with the final scheme.

We believe that good design stems from the underlying 'Big Idea' or KDP (Key Design Principles) which should be strong enough to drive the whole design process and create a framework for design decision making throughout the evolution of a scheme, creating a sense of consistency and completeness.

DAY's Key Design Principles for the **EDCAU** are just that; a catalyst from which the rest of the design stems. It should be a singular solution to the problems and opportunities identified through initial analysis of the brief, context and typology which will hold the design together throughout the process; a constant focus, regardless of the project stage, and a defender of the design solution.

0.1 Overview

The proposed EDCAU has been designed to support the bringing together of the Children's Emergency Department (ED) and Children's Assessment Unit (CAU) into a co-located integrated model of care to support the rapid turnaround of children using an assessment model in place of a traditional, predominantly inpatient based, model on behalf of Barnsley Hospital NHS Foundation Trust.

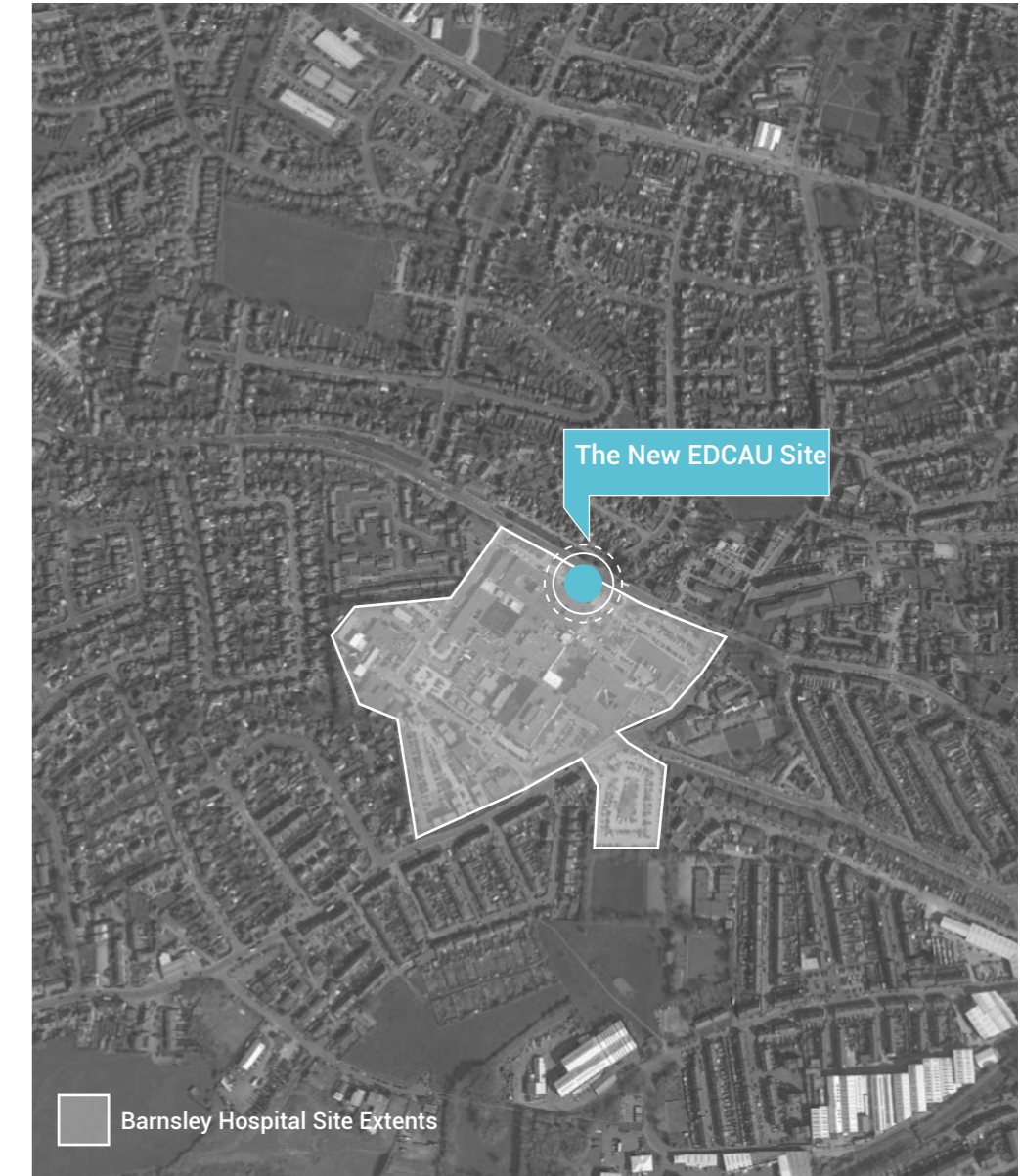
The paediatric offer in Barnsley has significant scope for modernisation and transformation. Ensuring appropriate ambulatory services are in place is a key enabler to the delivery of broader Integrated Care System (ICS) plans, which is a critical component of the future operating model of the district general hospital.

This initiative aims to deliver a better patient experience for children and families accessing urgent and emergency paediatric care at Barnsley Hospital. The proposed physical reconfiguration of the Emergency Department footprint, releasing additional adult ED capacity, will significantly strengthen the Trust's clinical strategy of consistently delivering urgent and emergency care within the 4 hour access standard.

IMPORTANT:

Please note that this application has been prepared in conjunction with the following:

- Phase 1 works of the EDCAU which has been granted to proceed as Permitted Development
- EDCAU Phase 2 Outline Planning application REF - APPLICATION NO. 2018/0918
- The previous Outline Planning application should be referenced with particular attention to the planning conditions relating to the drainage strategy.



0.2 Barnsley Hospital

Barnsley Hospital NHS Foundation Trust covers an area of approximately 8.2 hectares. The Hospital, built in the 1970s, provides approximately 380 beds and serves a population of 250,000 people within the boundaries served by Barnsley Metropolitan Borough Council.

The Hospital gained Foundation Trust status in 2005 and today provides a full range of district hospital services to the local community and surrounding area. These services include emergency and intensive care, medical and surgical care, elderly care, paediatric and maternity services, along with diagnostic and clinical support. The Trust also provides a number of specialised services, such as cancer and surgical services in partnership with other NHS organisations.

The Trust's principal commissioner is Barnsley Clinical Commissioning Group which is responsible for commissioning health services for the population of Barnsley.

03. Response to CQC Report

The October 2017 inspection rated the Trust as Good overall. The proposed development supports the delivery of some of the recommendations issued in the CQC report, specifically around caring for patients in adult ED and for patients with mental health care needs in both adult ED and children's services.

The extension of adult ED majors will support recommendations around the privacy and dignity of patients who have previously been cared for on corridors whilst waiting for admission in times of extremis.

This will be achieved by increasing majors capacity from 16 to 24 including an ambulatory area, reducing the excess of patients over cubicle space.

The report also recommended that patients with mental health needs are cared for in a safe environment which has been risk assessed in order to meet their needs in both children's and adult services.

Both of the above recommendations have been at the heart of the design of the new build and to the revisions proposed to the current ED setup.

04. Project Phasing Overview

The Children's Assessment Unit and Children's Emergency Department will be brought together into a new build co-located integrated model of care to support the rapid turnaround of children using an assessment model in place of a traditional, predominantly inpatient based model. This will relocate the current CAU from the eighth floor of KL Block onto the ground floor, adjacent to the existing emergency department.

Phase 1:

To enable this to happen, the existing ambulance entrance will be re-located from the North elevation fronting onto to Gawber Road, to the East elevation of the new build.

This will mean that essential adjacencies to resus and the bereavement suite will be retained, as will a single point of ambulance arrival and handover for both adults and children.

Once the external works are complete, a temporary ambulance will be created, and work on the new build will commence.

Phase 2:

When the new build is complete, the Paediatric emergency department and CAU will move in and occupy the new build, and work will commence on the adult majors expansion.

To compliment the reconfiguration, the existing inpatient ward, which is on ward 37 also on eighth floor of KI block, will move to O Block which is significantly closer to the new co-located children's emergency department and children's assessment unit.

05. Key Objectives for EDCAU

- **To reduce the number of patients being admitted for an inpatient stay** where they could be treated with less child and family disruption in a CAU located within a close proximity to children's ED. An increased focus on ambulatory and short stay pathways will at the heart of the clinical model
- **To extend the service opening hours from a 12 hour service Monday to Friday to a 24 hours a day 7 days a week service**, reducing potentially avoidable ward admissions when a CAU service is not operating. Importantly to match our service offer with changed demand
- **To increase capacity to meet forecasted demand** in both adult majors and for non-elective children's services
- **To improve the clinical relationship between**

The New EDCAU aims to To reduce the number of patients being admitted for an inpatient stay where they could be treated

children' ED and CAU teams in order to more collaboratively manage medically unwell children

- **To reduce overall reliance on inpatient beds** and to improve the resilience of the service in managing within an established bed-base
- **To provide bespoke facilities for patient attending with mental health needs**
- **Ambulance handover will be more efficient due to the additional capacity in adult majors.** Patients who have previously required a period of supervision under the care of YAS colleagues at times of extreme pressure will be able to be handed over to BHNFT ED staff in a more timely fashion due to the extra space that will be available.
- **Patients will be treated in the vicinity of the emergency department for both their emergency department care and their CAU pathway** without the need for a more lengthy and disruptive transfer to the paediatric ward unless absolutely necessary. This makes both the patient and the family stay at the hospital shorter in most instances and ultimately less disruptive to family life.



01 Site Context & Analysis

Overview

1.0 Overview

- The purpose of this document is to:
- Explain why the extension is required;
- Summarise the appraisal of context, the principles and factors that have informed the building's location and size; that has led to the proposal, including assessment, involvement, evaluation and design;
- Describe the key architectural, landscape and access parameters that have been considered as part of the design.

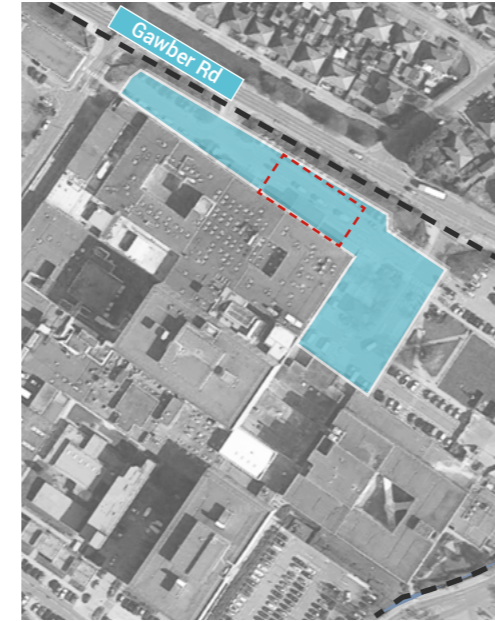
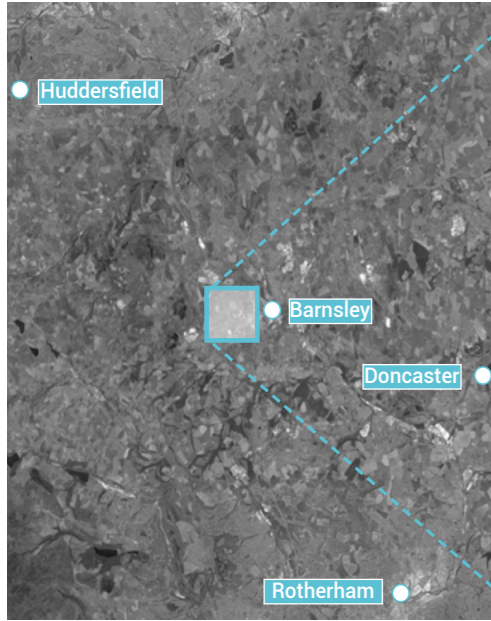
This Design and Access Statement should also be read in conjunction with the following appended documents:

- BFS/Trust Sustainable Development Standard (Trust equivalent to BREEAM)
- Flood risk assessment and drainage strategy
- Geotechnical and geoenvironmental report
- Barnsley Hospital CCTV Survey Report (13.02.19)
- Barnsley Hospital Utility Survey Report (13.02.19)
- MMD-397596-00-XX-DR-D-0002 Tree Removal Proposal



01 Site Context & Analysis

Macro to Micro Scale



1.1.1 Macro Context

Barnsley is a town in South Yorkshire, England, located halfway between Leeds and Sheffield. Historically in the West Riding of Yorkshire, the town centre lies on the west bank of the Dearne Valley.

1.1.2 Meso Context

Barnsley is surrounded by several smaller settlements which together form the Metropolitan Borough of Barnsley, of which Barnsley is the largest and its administrative centre.

1.1.3 Micro Content

The hospital provides a full range of district services to the local community and surrounding area. These include emergency department services, outpatient clinics, inpatient services and maternity and children's services.

1.1.4 Proposed Site

The proposed site is to the North of the Hospital site fronting Gawber Road and sits directly in front of the existing Emergency Department and Main Entrance.

01 Site Context & Analysis

Site Context



- ① Barnsley Hospital
- ② Renal Dialysis Trust HQ
- ③ Mortuary
- ④ Estates and Facilities
- ⑤ Education Centre
- ⑥ Admin Block
- Ⓐ Staff Parking
- Ⓑ Public Parking
- Ⓒ Accessible Parking

01 Site Context & Analysis

Historic Analysis

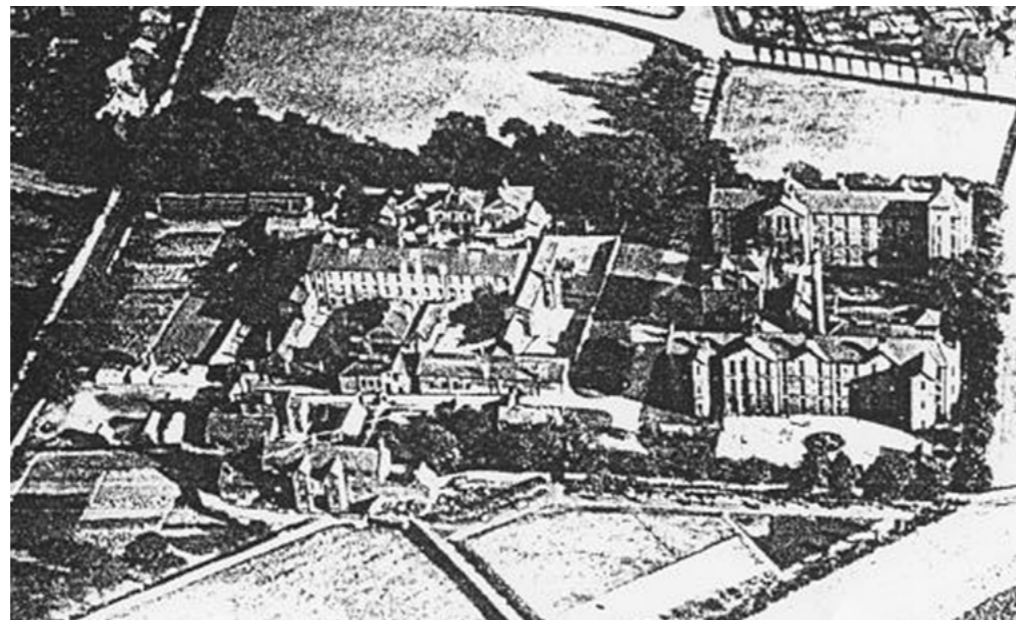
1.2 Historic Mapping

The following historic maps and images illustrate the development of the proposed site and the surrounding context for approximately 130 years. The maps show how the site has developed from a rural context to an urban one as well as the significant development of the Hospital Site.



1890

Barnsley Hospital has its origin in the infirmary wards of Barnsley workhouse. Barnsley Poor Law Union was formed in early 1850 but the town workhouse in St Mary's Place remained in use until new, purpose-built premises were built in 1852 in Gawber Road. Additions to the infirmary accommodation were made in 1875.



Barnsley North-West 1928

01 Site Context & Analysis

Historic Analysis

1.2 Historic Mapping

The following historic maps and images illustrate the development of the proposed site and the surrounding context for approximately 130 years. The maps show how the site has developed from a rural context to an urban one as well as the significant development of the Hospital Site.



1950

It became Barnsley Municipal Hospital in 1930 but renamed St Helen Hospital in 1935 before joining the National Health Service in 1948.



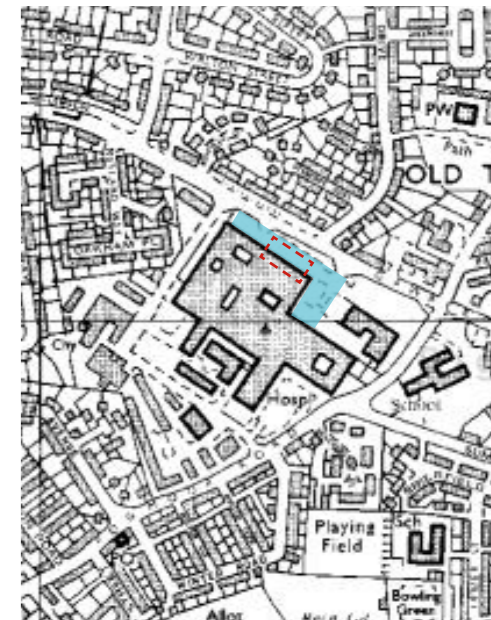
1970

The old workhouse buildings used by the St Helen Hospital were demolished.



1980

There was a major redevelopment of the site to create Barnsley District General Hospital. This was completed in 1977. Stone from the demolished St Helen Hospital was recovered and used in the landscaping of the area around the main entrance of the new Barnsley District General Hospital.



1990

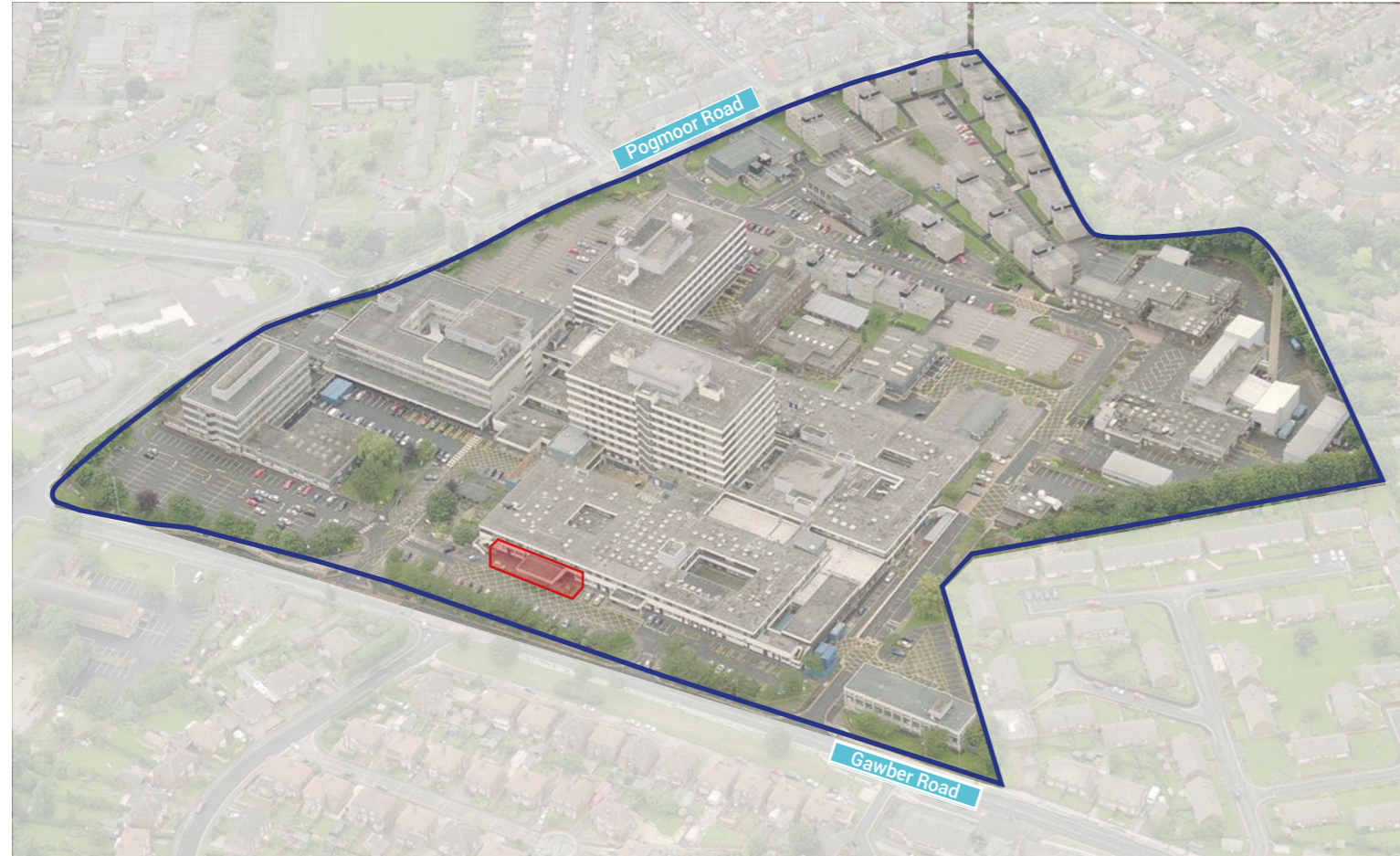
Barnsley District General Hospital gained Trust status in 1993.

01 Site Context & Analysis

Existing Surrounding Context



1.3 Site Boundary

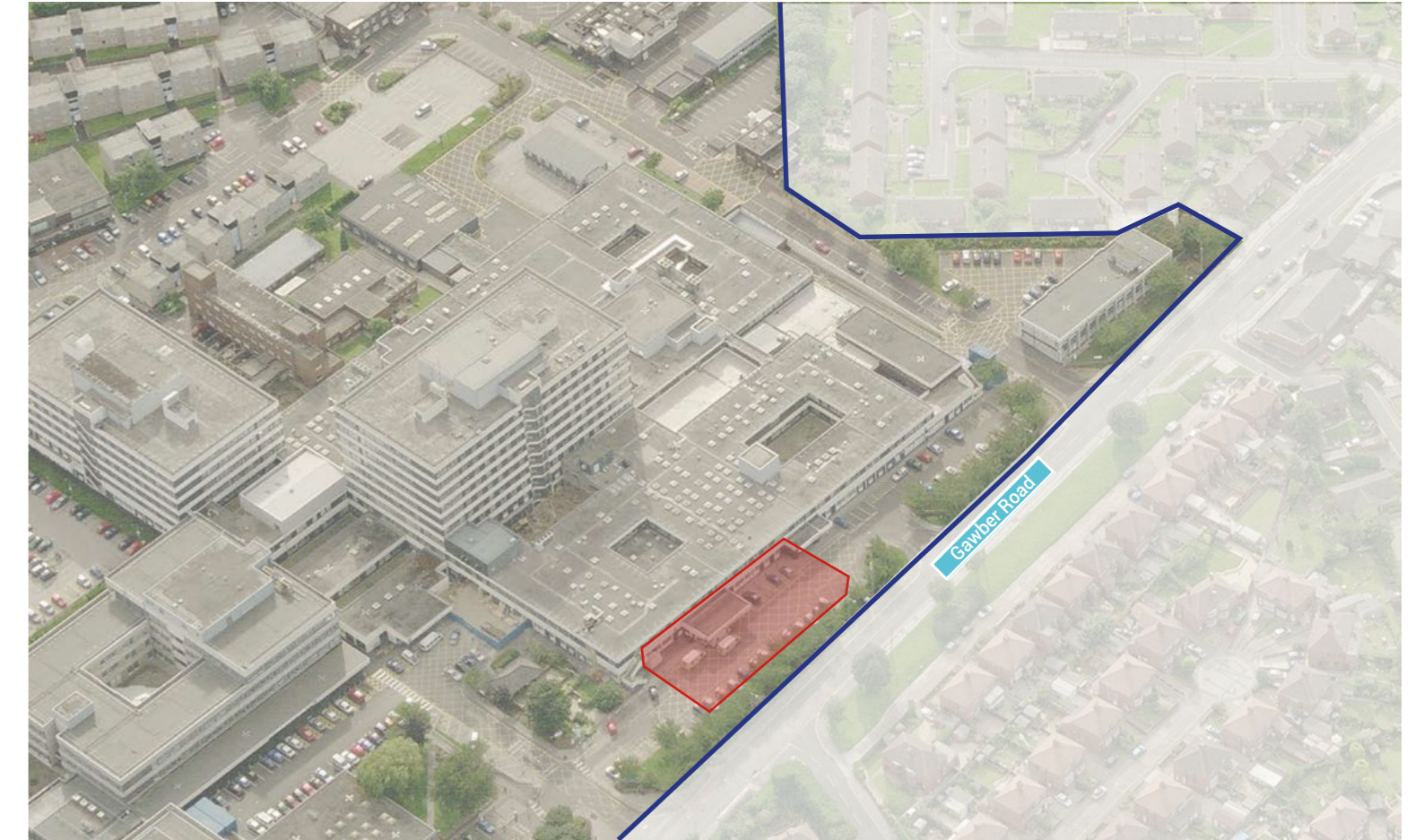


— Extends of hospital site boundary
— Extends of proposed site boundary

Aerial perspective of existing site

01 Site Context & Analysis

Existing Surrounding Context



— Extends of hospital site boundary
— Extends of proposed site boundary

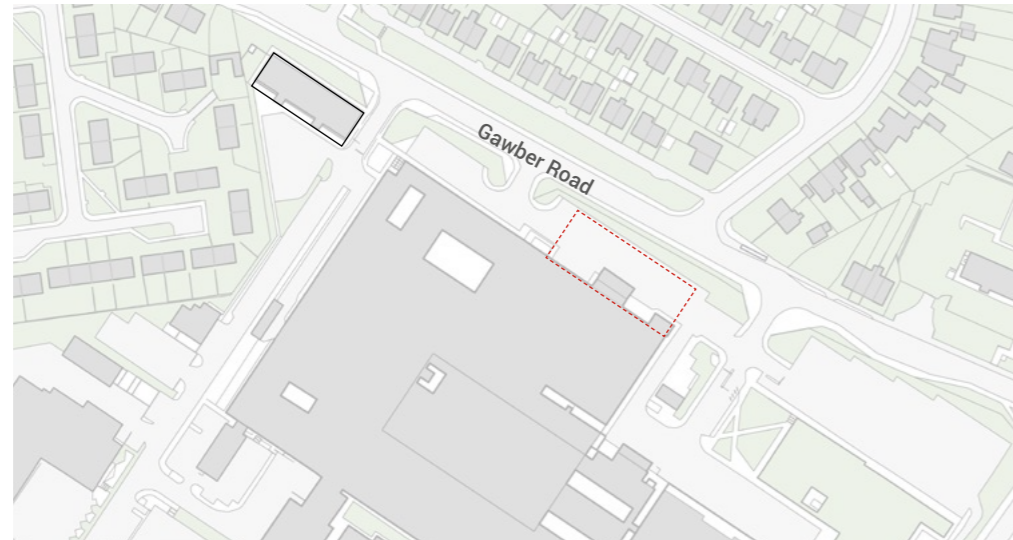
Aerial perspective of existing site

01 Site Context & Analysis

Existing Surrounding Context



- Site Location
- Renal Dialysis Trust HQ



1.4 Renal Dialysis Trust HQ

The existing Renal Dialysis Trust HQ is also prominent along Gawber Road and is one of the first buildings that can be seen on the approach to Barnsley Hospital. This building has a strong modular appearance with a consistent vertical rhythm that runs along the facade. The proportions of this adjacent building to the site will need to be taken into consideration, the more prominent active facade topped with a solid banding.

01 Site Context & Analysis

Existing Surrounding Context

1.5 Existing A&E Department Facade

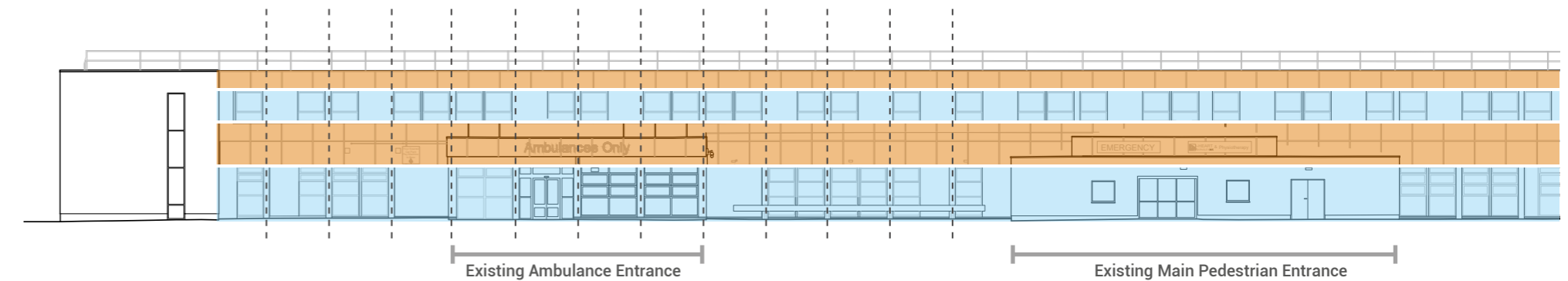
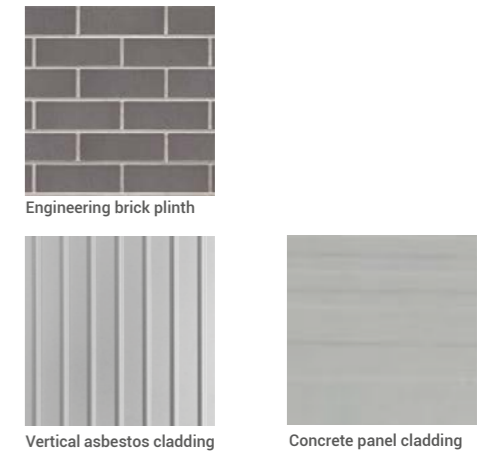
The prominent horizontal banding divides the building facade. Large windows puncture the larger horizontal mass of the building. This break in the mass creates a lower plinth element that is treated differently to the upper facade.

The appearance of the existing building is very monolithic and heavy with its materiality with a mass of varied concrete textures throughout the existing facade. The facade is based on a relatively standardised grid however with the first floor and ground floor elevations reading slightly differently but still within the elevational grid.

North Facade & Demolition



Existing material palette



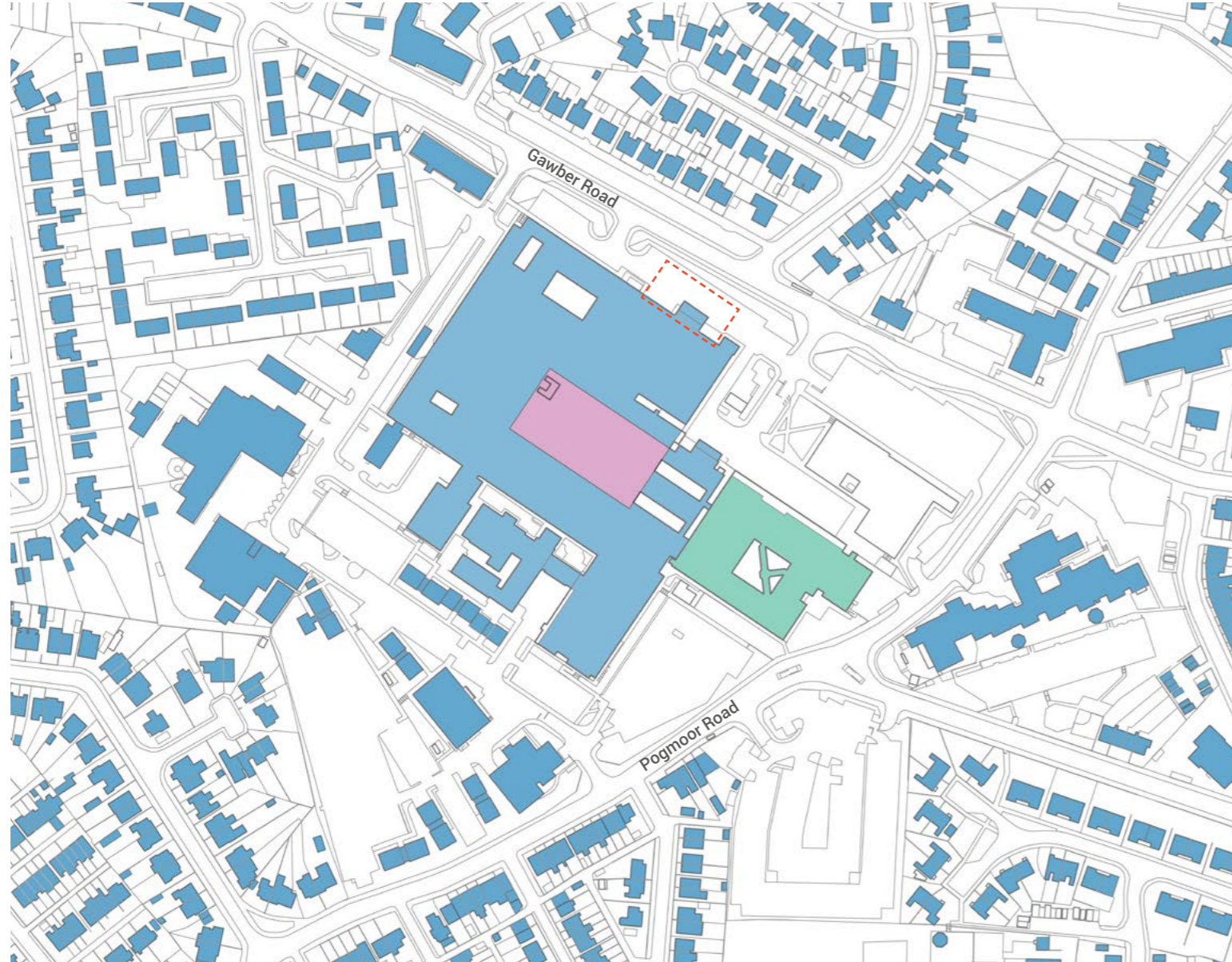
01 Site Context & Analysis

Building Heights

1.6 Building Heights

The building heights surrounding the site are all relatively of a similar nature. The Hospital site and the surrounding areas are all relatively low rise and of a domestic scale.

The only element that is much more prominent is the height of the existing tower block which is often used as a wayfinding element to locate the Hospital are not many high rise buildings within a large proximeter of the site.



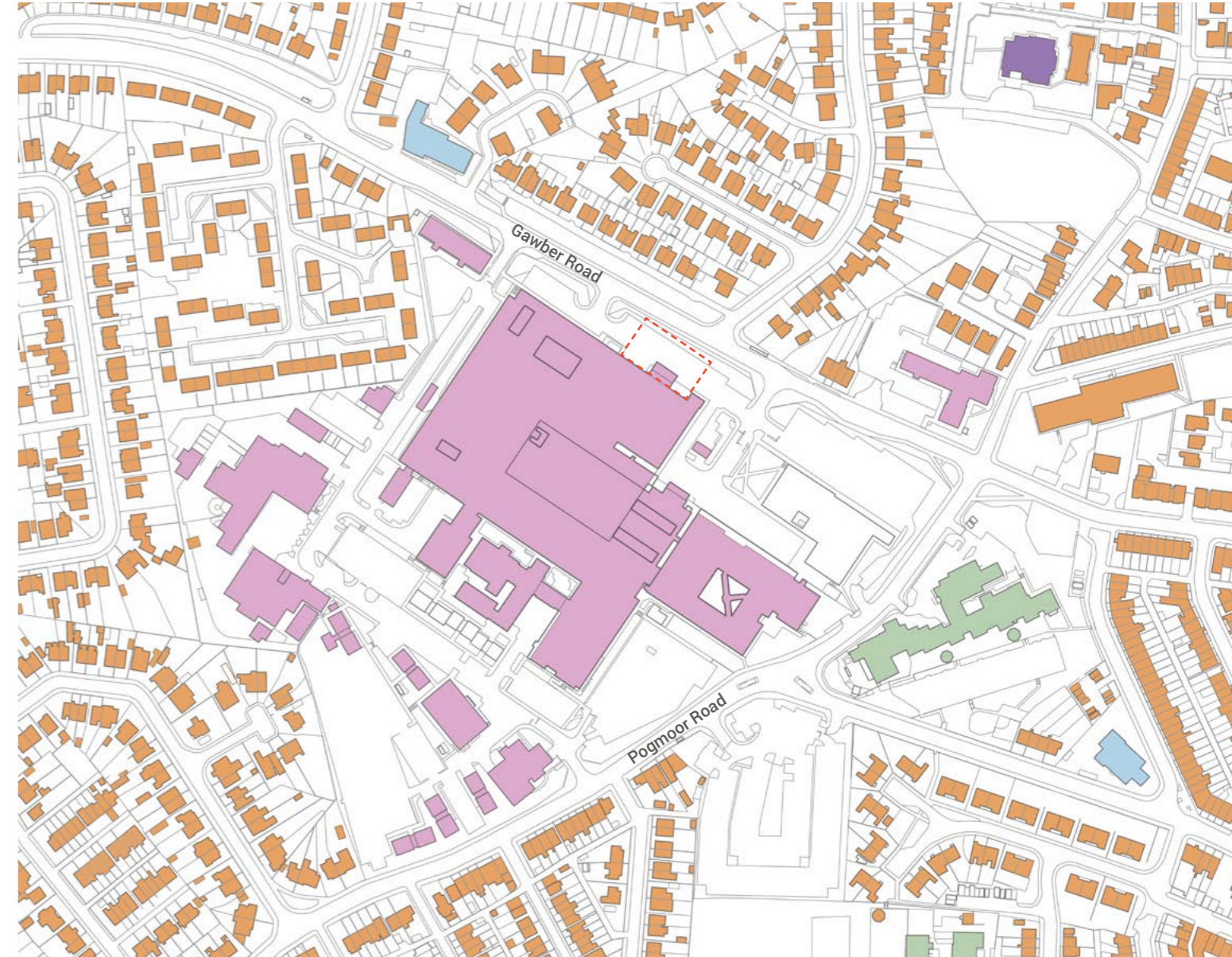
- Site Location
- 21-30 M
- 16-20 M
- 10-15 M
- 05-09 M
- 00-04 M

01 Site Context & Analysis

Land Use and Character

1.7 Land Use & Character

The existing Hospital Site is predominantly surrounded by Residential housing estates. The main area of consideration for the residential areas are the housing fronting Gawber Road adjacent to the proposed site, however these houses are located across the road and are sat at a lower level, this is demonstrated later on in the document on the proposed site section.



- Site Location
- Public Amenities
- Residential
- Education
- Religion
- Hospital

01 Site Context & Analysis

Open Space & Public Realm

1.8 Open Space & Public Realm

The existing green space is relatively minimal directly surrounding the site, it is mainly owned green space provided for nearby schools. The Hospital has a small dedicated green area to the North East of the Hospital site and a green boundary perimeter that is sited along Gawber Road that acts as a landscape buffer between the existing residential houses and the existing hospital site, this will also ensure more privacy within the proposed unit as the existing blossom trees are located along this green buffer strip.



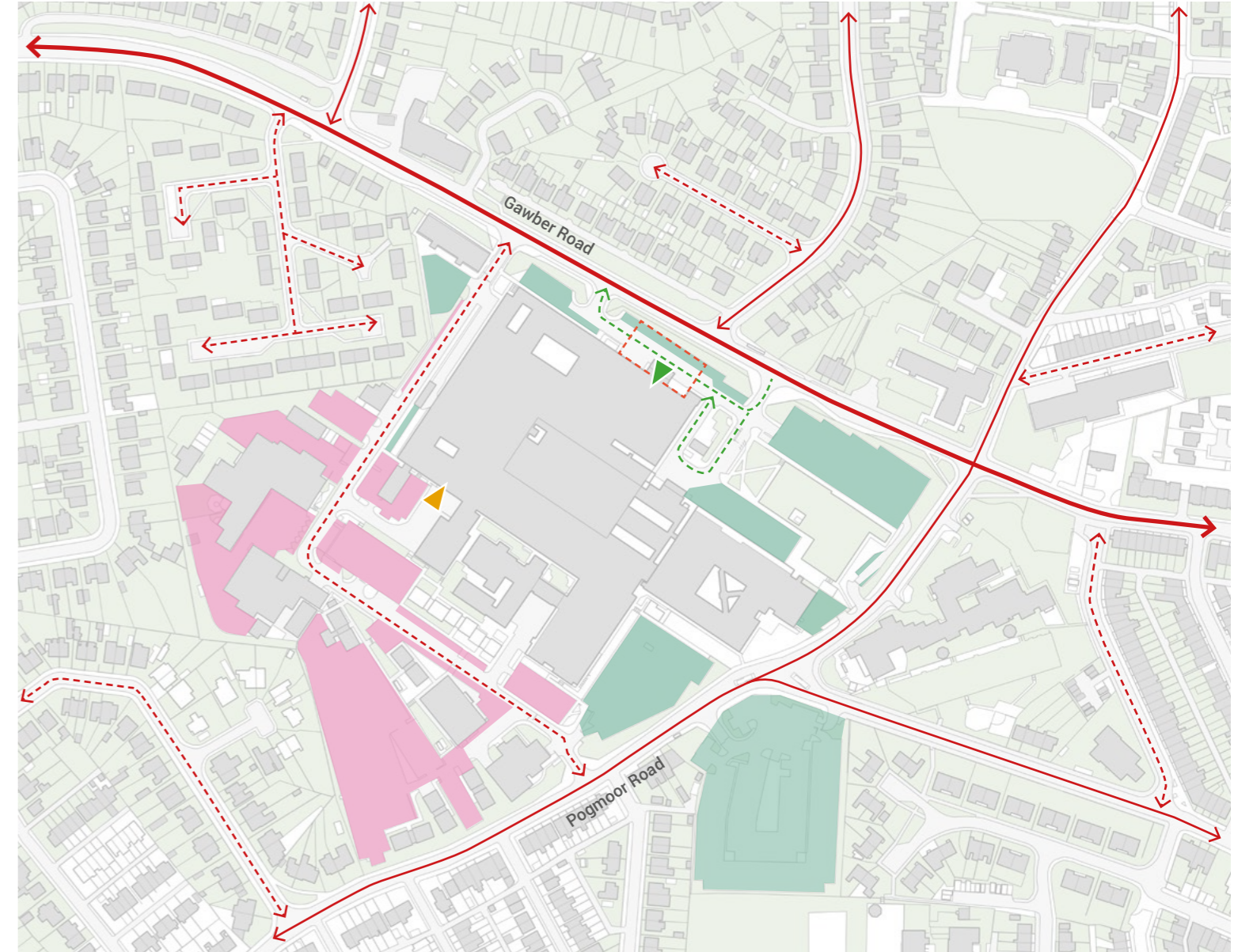
- Site Location
- Open Space

01 Site Context & Analysis

Vehicular Route

1.9 Vehicular Routes

The main approach to the site is along Gawber road, of which the proposed EDCAU will be fronting. This can be a very busy road as it is a key access road to the hospital.



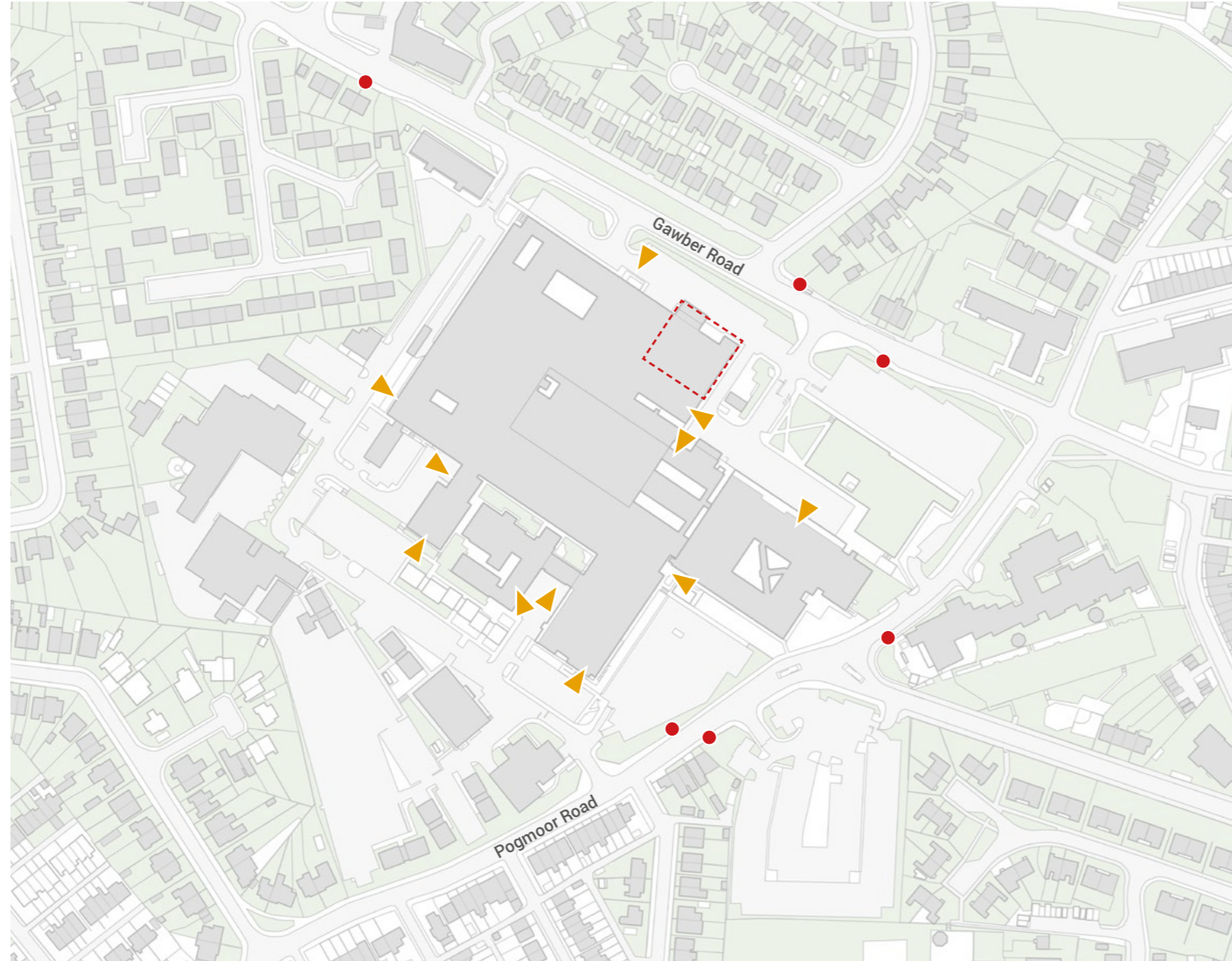
- Site Location
- ↔ Primary Roads
- ↔ Secondary Roads
- ↔ Tertiary Roads
- ↔ Service Roads
- ↔ Ambulance Route
- Car Park
- ▶ Deliveries
- ▶ Ambulance Access

01 Site Context & Analysis

Pedestrian Routes

1.10 Pedestrian Routes

The existing pedestrian routes are varied across the existing Hospital site.



- Site Location
- Key Pedestrian Routes
- Pedestrian Access to Hospital Entrances
- Bus Stop

01 Site Context & Analysis

Vehicular & Pedestrian Approach



Vehicle Approach_Car Park / Blue Light Route

Existing Blue Light route and vehicular access to Car Park. Often congested and confusing for vehicular route to navigate Car Park and has a lot of conflict with other vehicles.



Vehicle Approach_Blue Light Approach

Existing access route via Gawber Road to access the Car Park and Blue Light Ambulance Route access.



Pedestrian Approach_Main Entrance

Existing Main Entrance to access Emergency Department and other Red Zone facilities.



Vehicle Approach_Car Park / Blue Light Route

Projected canopy for existing ambulance drop off zone, can only accommodate for circa 2-3 ambulances at any one time.



Vehicle Approach_Car Park / Blue Light Route

Cars and ambulances sharing the same route to the existing entrance of the Emergency Department.



Existing Entrance Pedestrian Approach

At present conflict between pedestrian and cars, these conflicts will be remedied within Phase 1 of the scheme to provide clearer navigation and separation of blue light, pedestrians and vehicles.

01 Site Context & Analysis

Existing Environmental Constraints

1.11 Environmental Constraints

The opposite diagram shows the existing constraints around the proposed site which have been considered and have informed the proposed design.



- Sunpath Diagram
- Prevailing Wind
- Demolition of Existing Entrance
- Noise from Gawber Road

01 Site Context & Analysis

Distances From Proposal

1.12 Distances From Proposal

The nearest non-healthcare related building to the proposal are residential housing - 47 metres across Gawber Road. This does not intervene or overlook the nearby housing in addition to incorporating the existing cherry blossom trees in between.

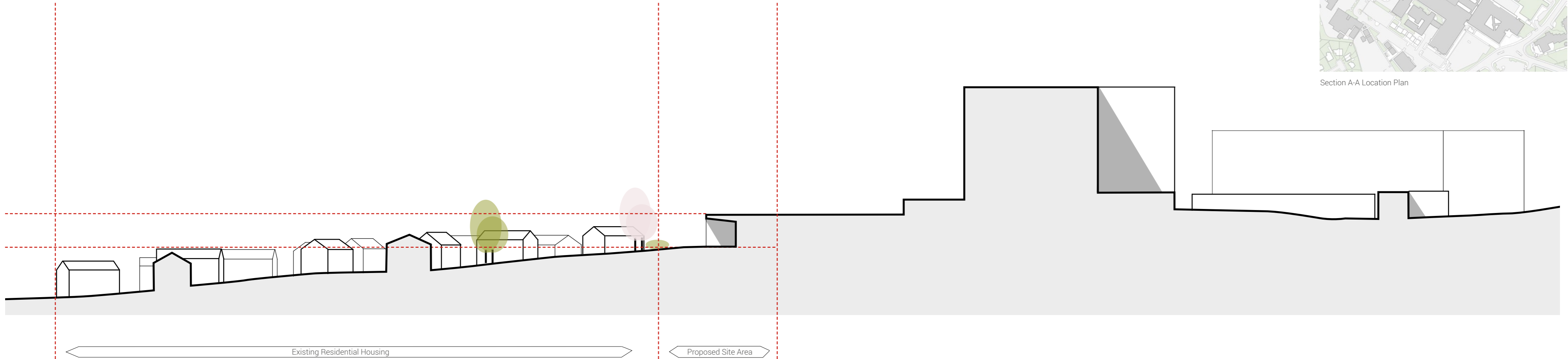


01

Site Context & Analysis

Existing Section Through the Hospital, Proposed Area and Surroundings

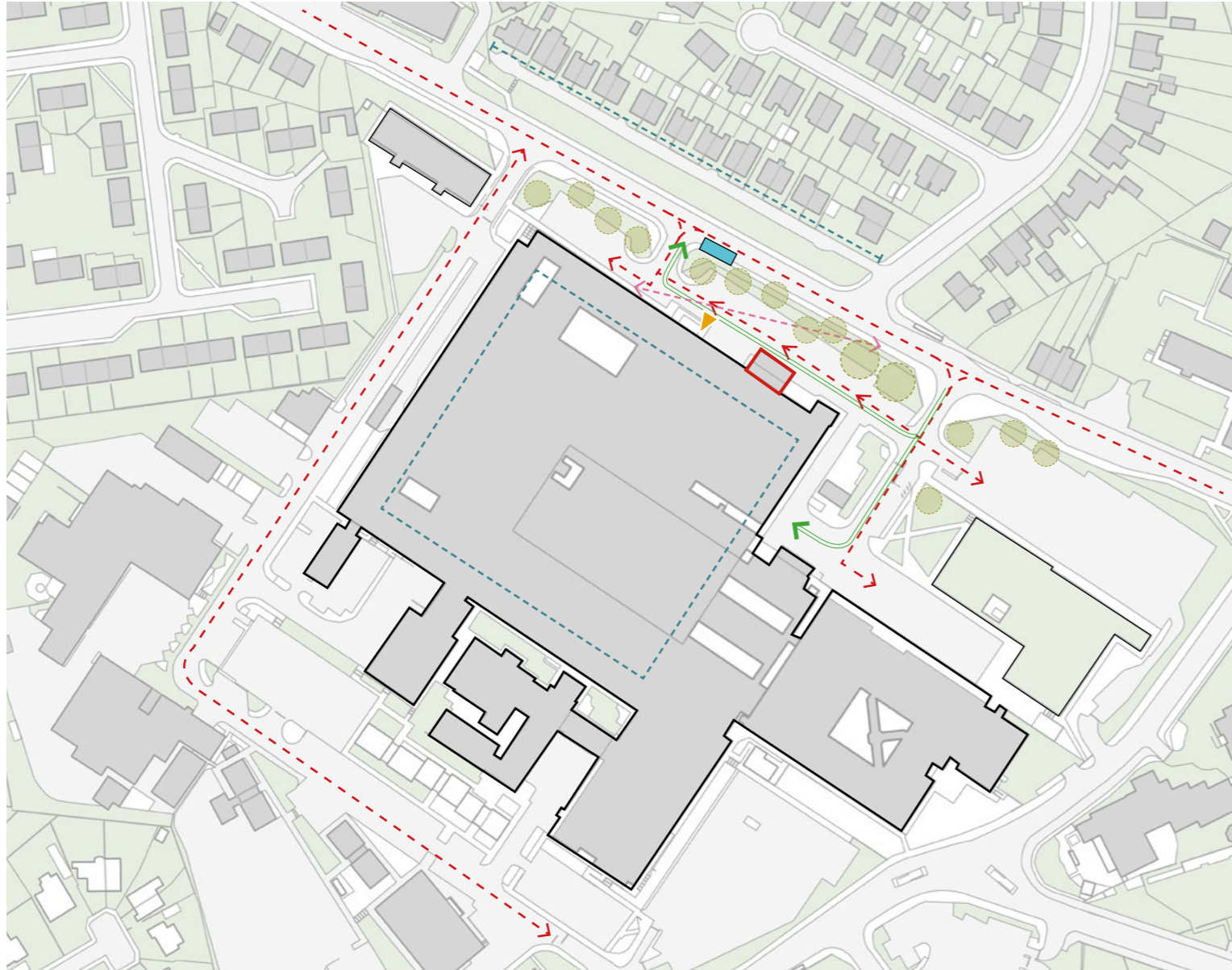
1.13 Section A-A





1.14 Physical Environmental Constraints

The opposite diagram shows the existing constraints around the proposed site created by the existing buildings, roads, and hospital operations.



- Indicative area of existing roof lights on existing hospital roof
- ▶ Existing Main Entrance to be retained
- Existing Residential Housing
- Existing Trees to be retained (indicative locations refer to proposed site plan for exact locations)
- Existing Electrical Store/ Transformers
- ↔ Existing drainage services running in close proximity of the site
- ↔ Existing Ambulance Route merging with Vehicular Route
- Existing Vehicular Route
- Existing Ambulance Canopy

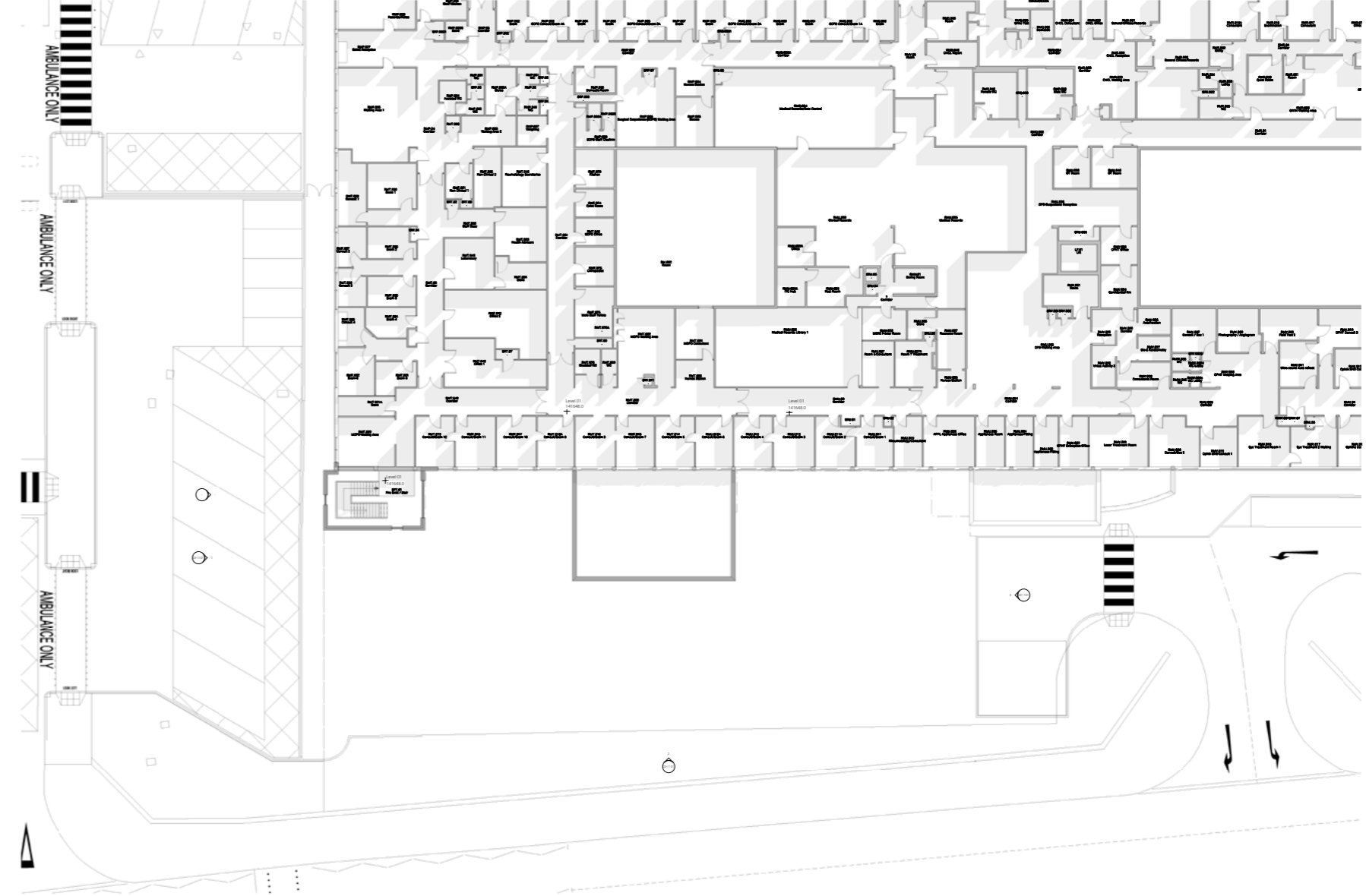
02 Existing Information

Existing Ground Floor Plan



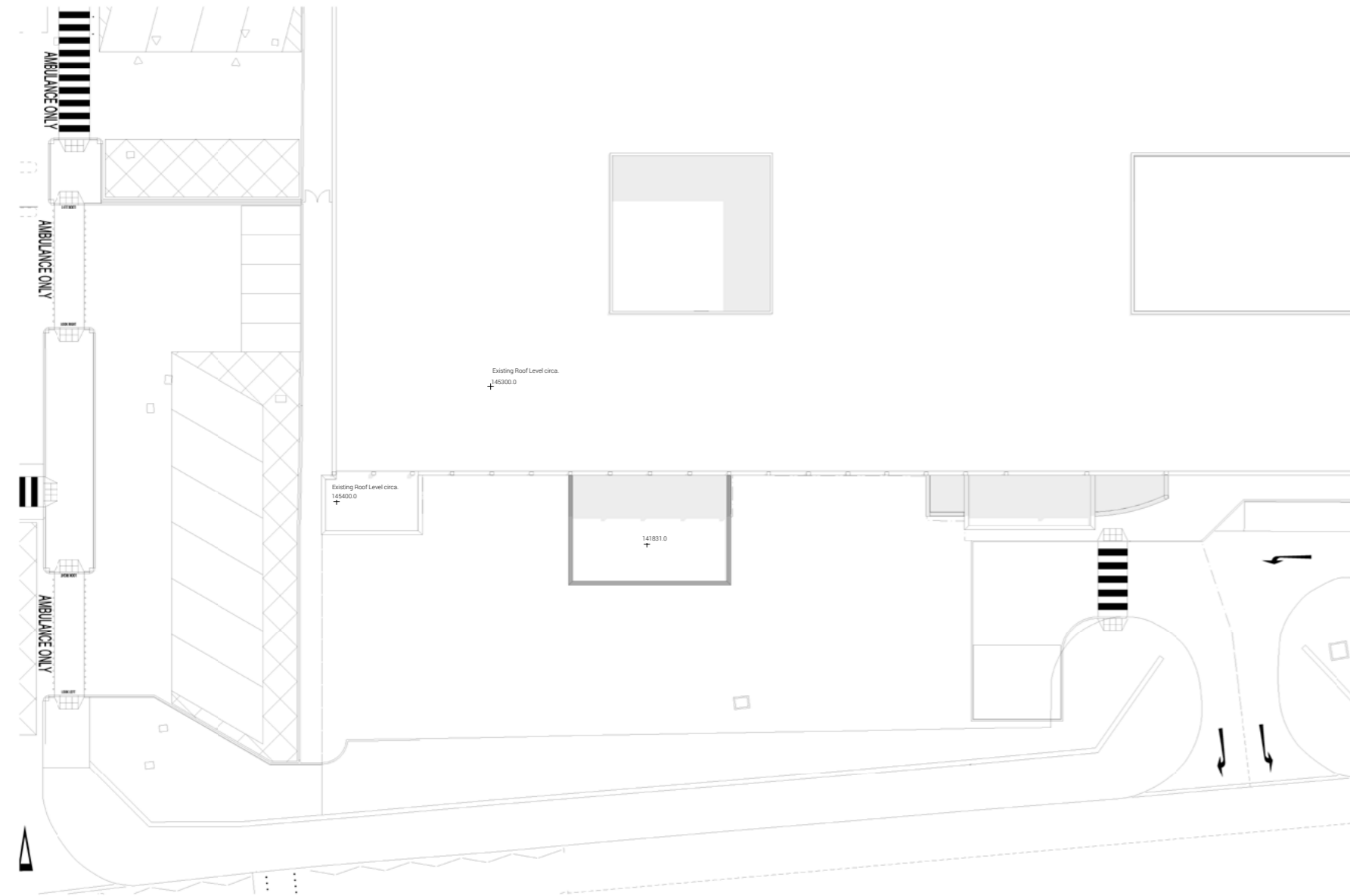
02 Existing Information

Existing First Floor Plan



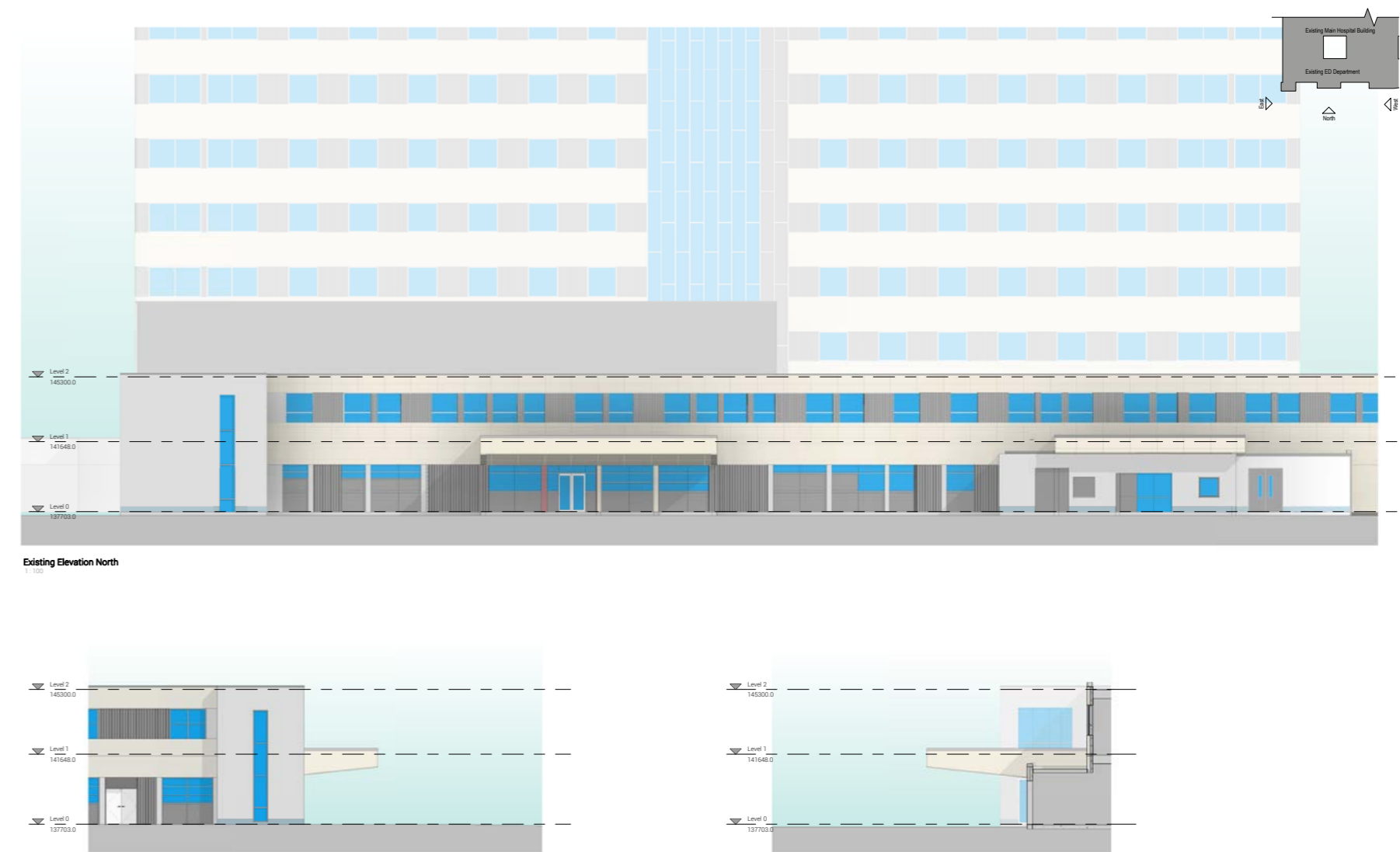
02 Existing Information

Existing Roof Plan



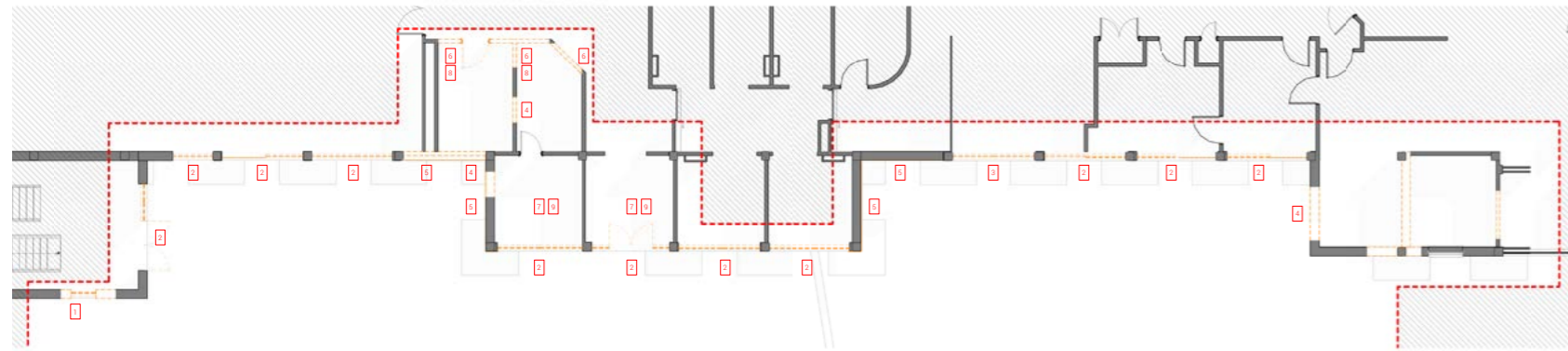
02 Existing Information

Existing Elevations

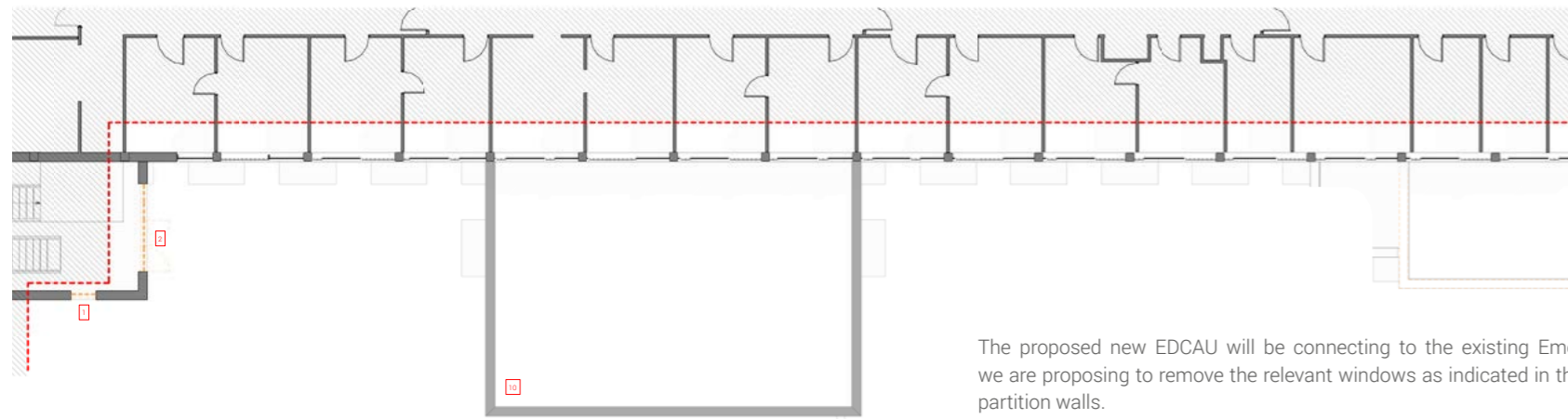


02 Existing Information

Demolition Plan



Demolition Ground Floor Plan



Demolition First Floor Plan

KEY

Area outside of Scope

DEMOLITION SCOPE OF WORKS

Denotes elements to be demolished

Denotes elements to be retained

The proposed new EDCAU will be connecting to the existing Emergency Department, therefore we are proposing to remove the relevant windows as indicated in the drawing above and infill with partition walls.

We will also need to access the proposed EDCAU roof via the existing staircore, therefore we will need to reconfigure the existing curtain walling to create an access door onto the roof with infill below as this will abut up to the proposed building.

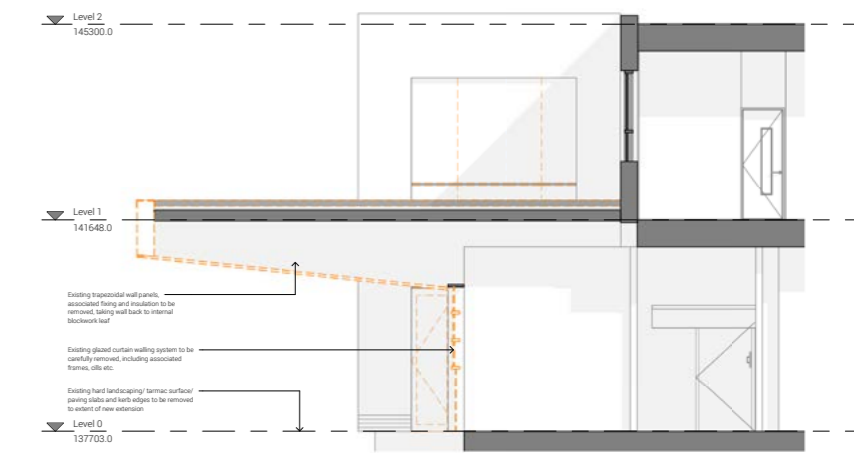
The existing curtain walling on the North facade of the existing staircore will need to be removed and replaced with the reconfiguration of a new double access fire escape door

02 Existing Information

Demolition Elevations



Demolition South Elevation



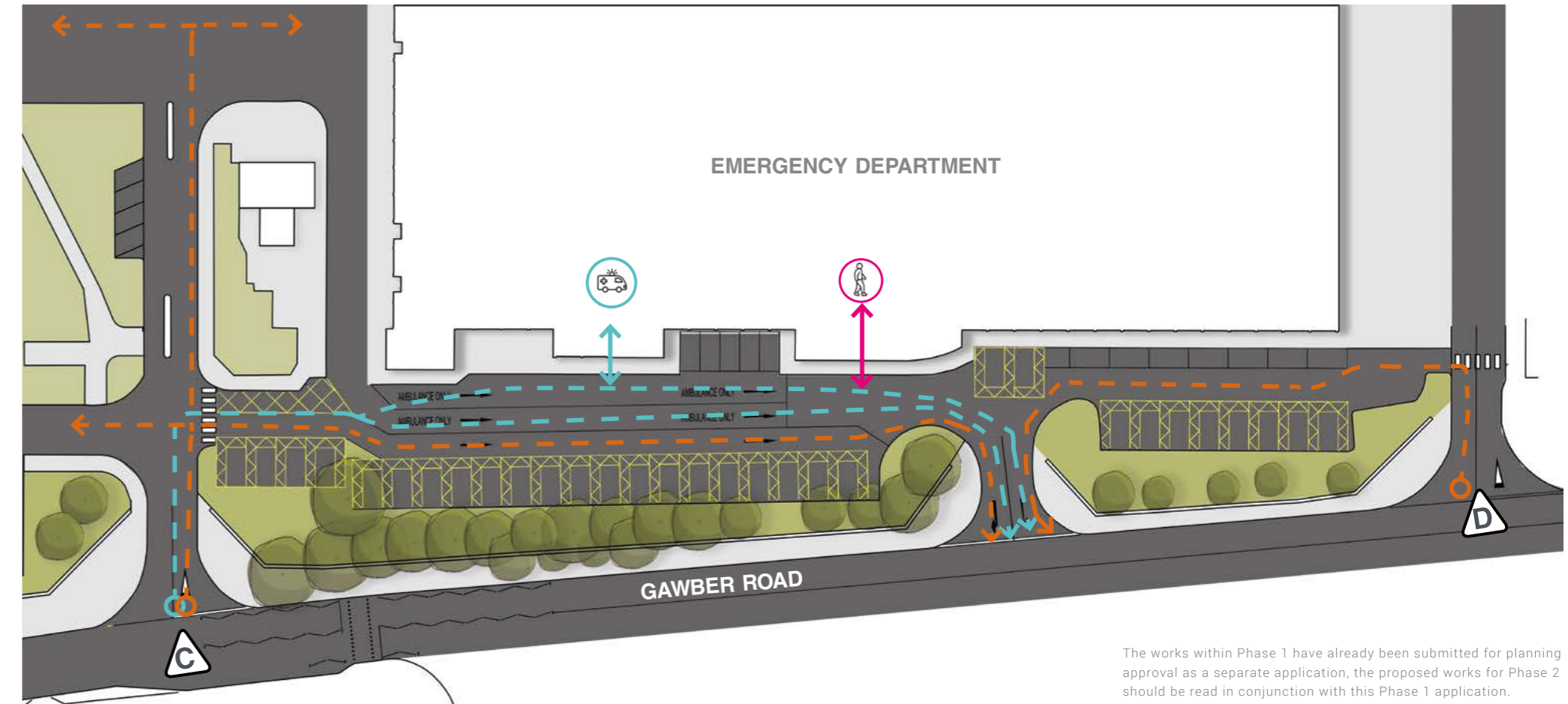
Section 1 Existing

02 Design Development

02 Design Development

Phase 1 Works

2.0 Existing Plan



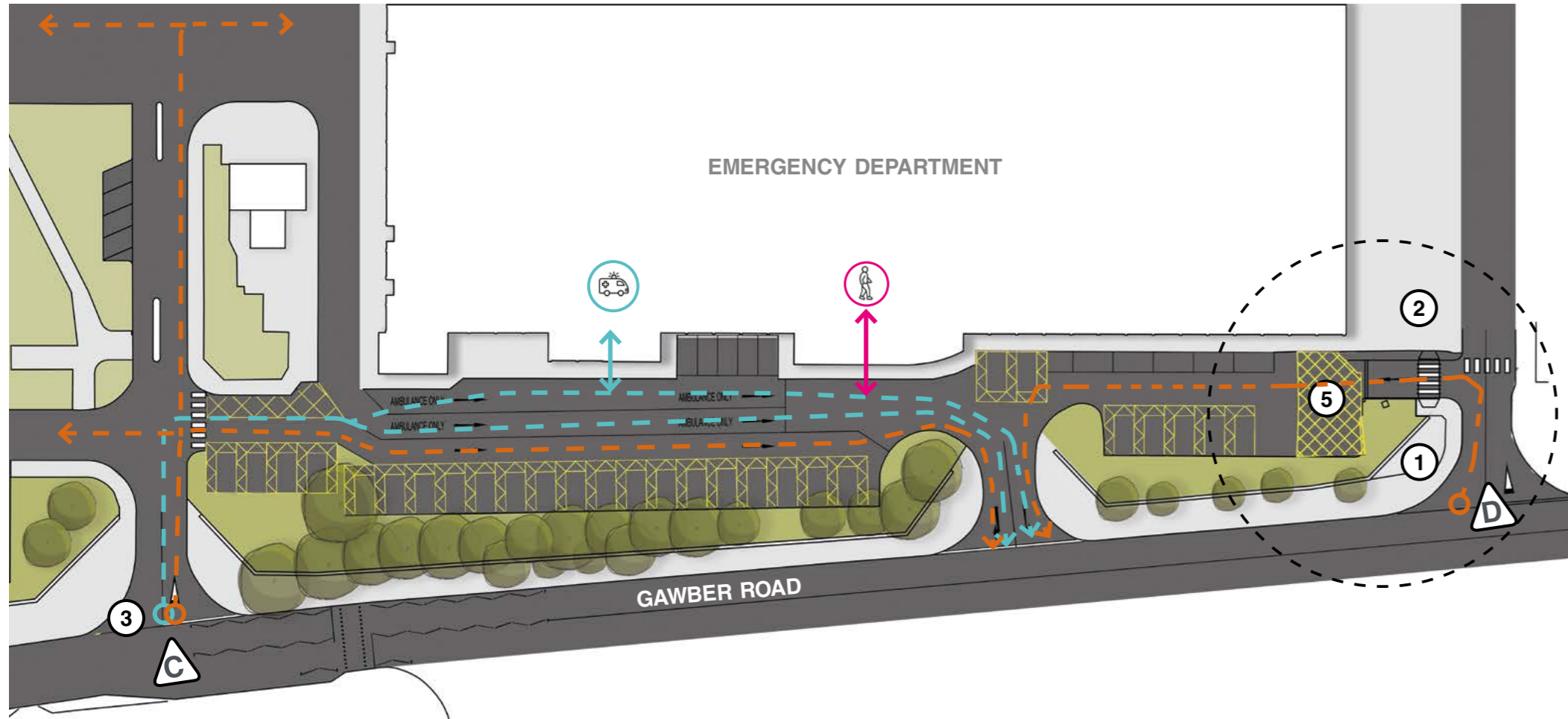
- ↔ Main Entrance
- ↔ Ambulance Route
- ⚠ Site Entrance
- ↔ Vehicular Route
- 🚑 Existing Ambulance Entrance
- 🚶 Walk in Entrance

The works within Phase 1 have already been submitted for planning approval as a separate application, the proposed works for Phase 2 should be read in conjunction with this Phase 1 application.

02 Design Development

Phase 1 Works

2.1 Temporary Works // New Junction entrance D-immediately before the existing barrier



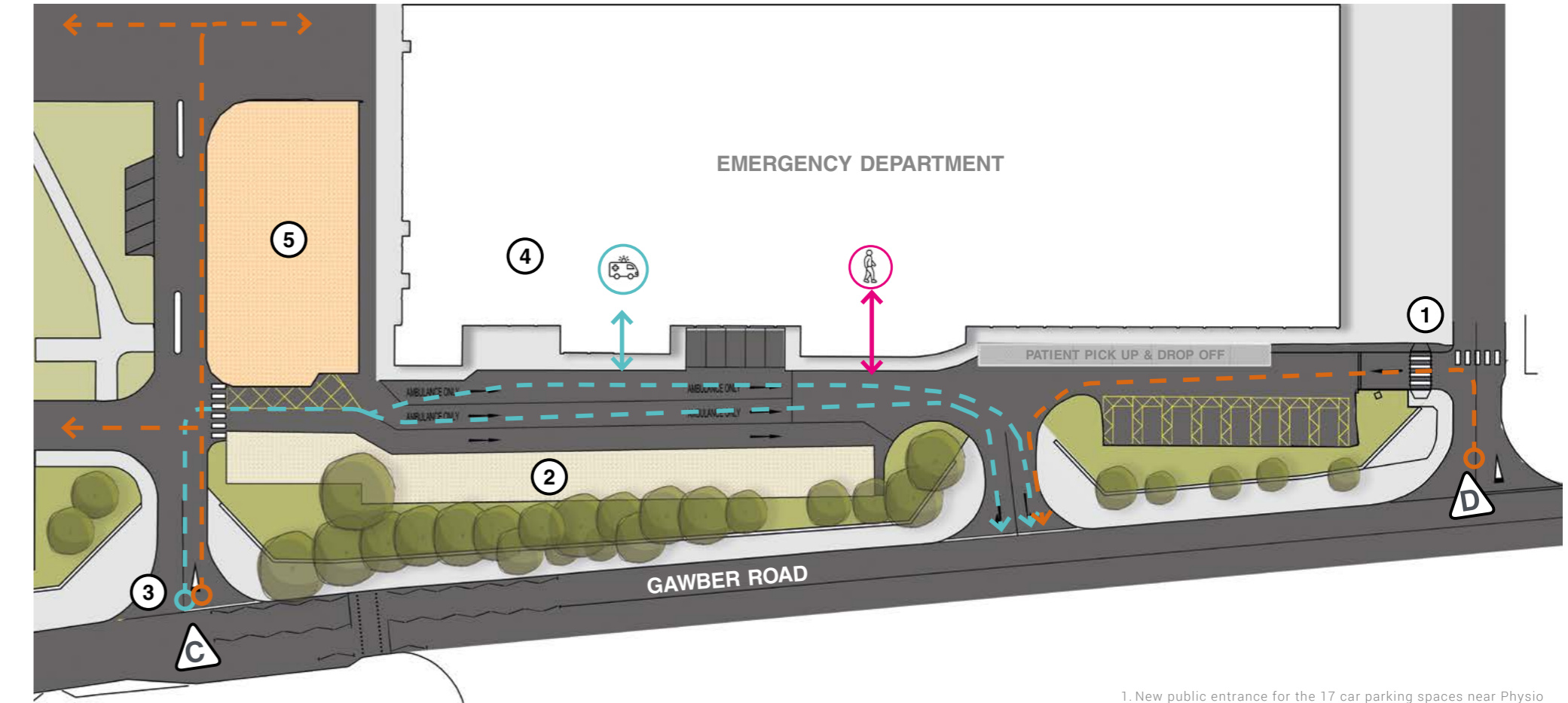
- Main Entrance
- Ambulance Route
- Site Entrance
- Vehicular Route
- Existing Ambulance Entrance
- Walk in Entrance

1. Suspension of 7 normal and 10 disabled car parking bays.
2. New junction to car park 5 from entrance D (in only - for cars).
3. The patient transport service and Ambulances will not be affected.
4. Deliveries to M & S/WH Smith and retail units in the Atrium will not be affected.
5. This area will not be available for the mobile scanner.
6. CCTV camera 10 will need to be relocated – discussions on going with Security (ML & AF).

02 Design Development

Phase 1 Works

2.2 Temporary Works // Existing pipe diversion – front of the podium



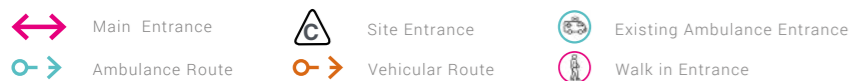
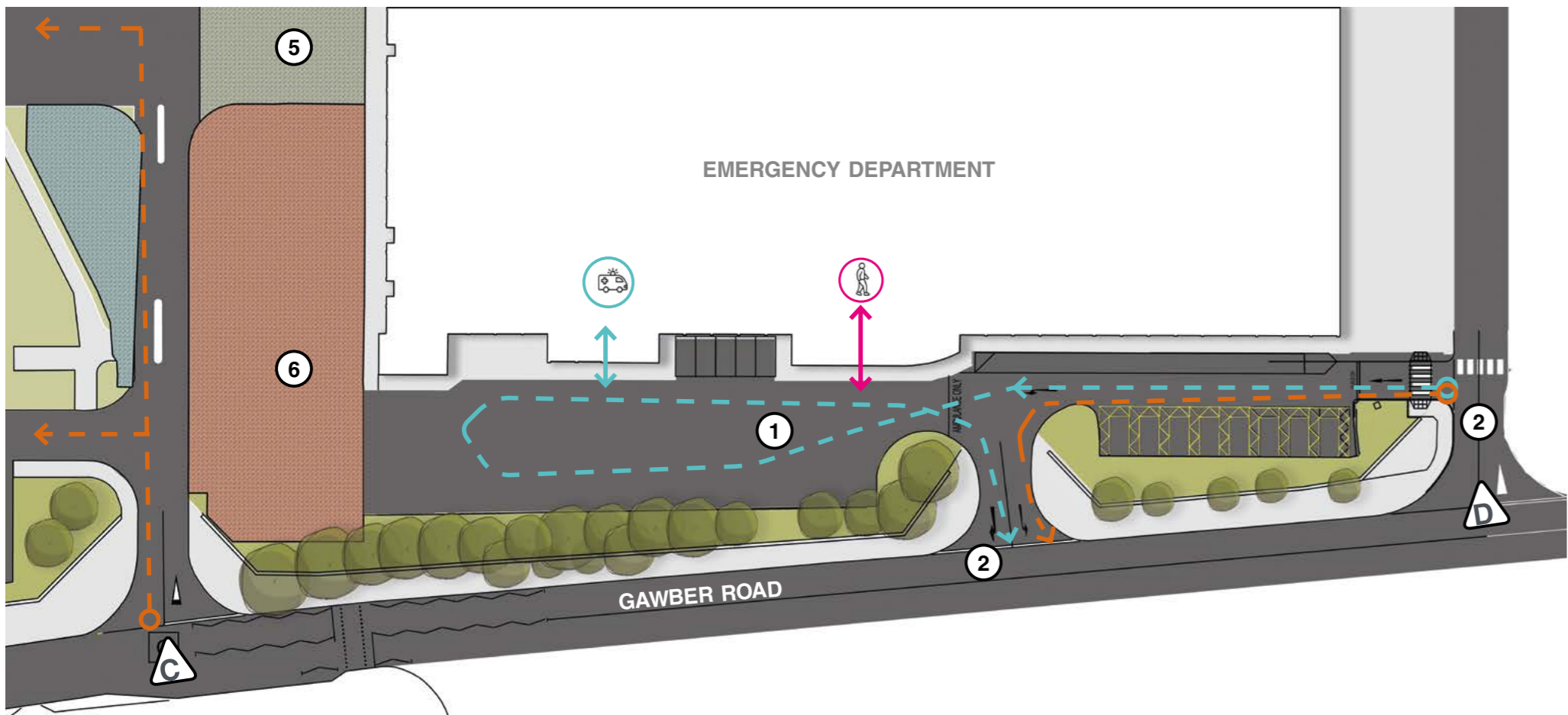
- Main Entrance
- Ambulance Route
- Site Entrance
- Vehicular Route
- Existing Ambulance Entrance
- Walk in Entrance

1. New public entrance for the 17 car parking spaces near Physio (entrance D car Park 5) will become operational and will be accessed from entrance D.
2. The 21 disabled car parking spaces opposite current ambulance drop off will be permanently terminated.
3. No change to ambulance ingress and egress.
4. Carryout enabling work in ED for the new temporary ambulance entrance.
5. Contractor works on going in this area, hoardings erected and demolition works commenced.

02 Design Development

Phase 1 Works

2.3 Temporary Works // Construction – front of main hospital (Main Area Adjacent)

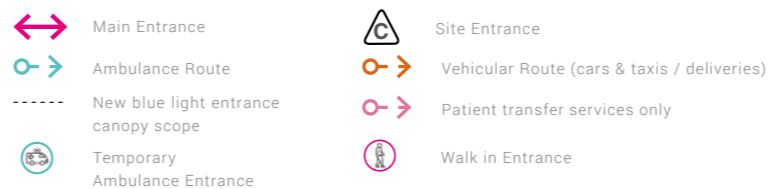
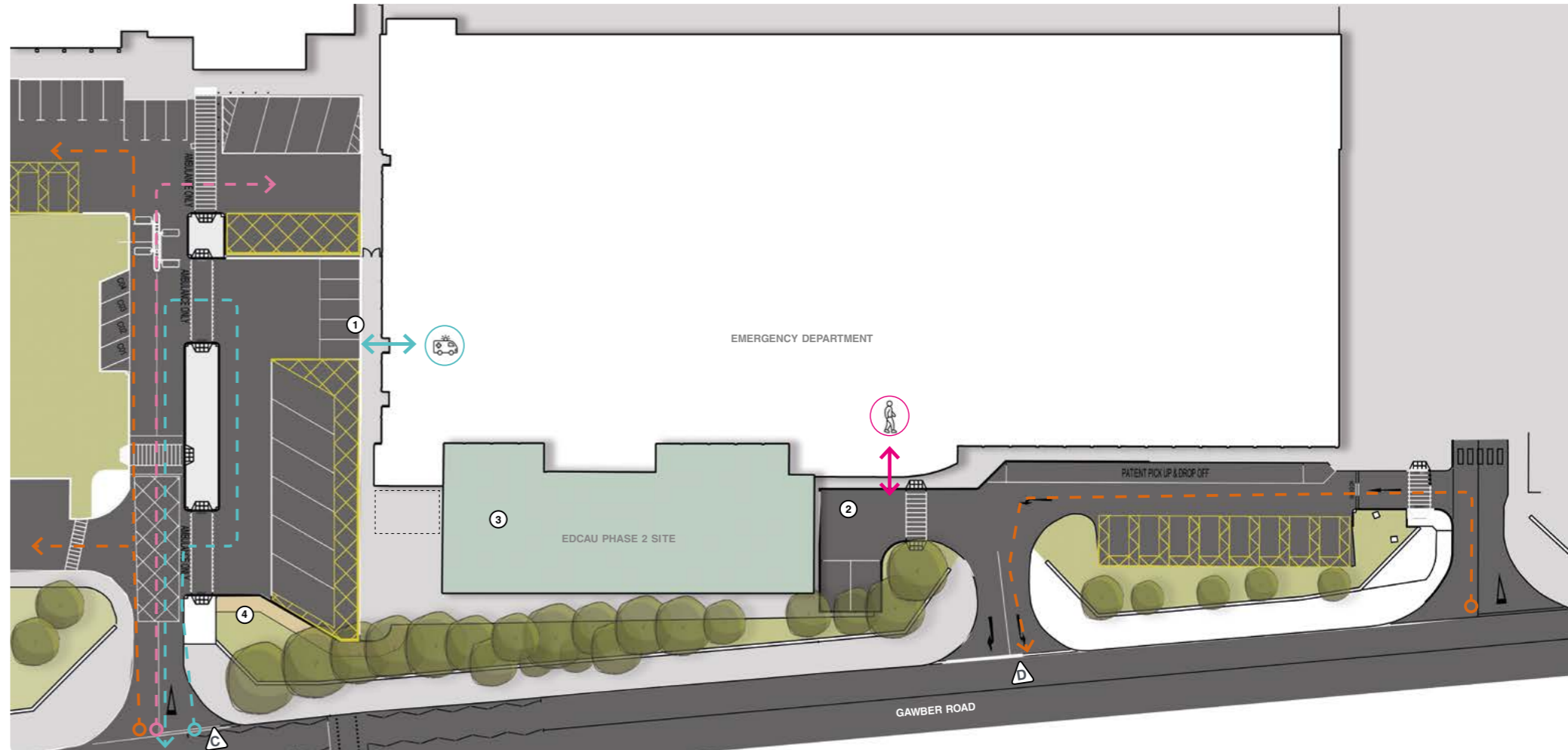


1. New temporary arrangements for ambulance drop off, handover and departure are in place.
2. The Ambulance entrance is via the new junction at Entrance D and they will leave via entrance C/D.
3. Staff/Security/ Car Parking Manager will need to be made aware.
4. The patient transport service will be affected, as will deliveries to M & S/WH Smith and retail units in the Atrium.
5. The work to area where there are patient transport pick up and drops will be carried out – as a discreet package of work to minimise disruption.
6. Increased area for Phase 1 works to commence.

02 Design Development

Phase 1 Works

2.4 Completion Phase 1 – Operational // Start of Phase 2

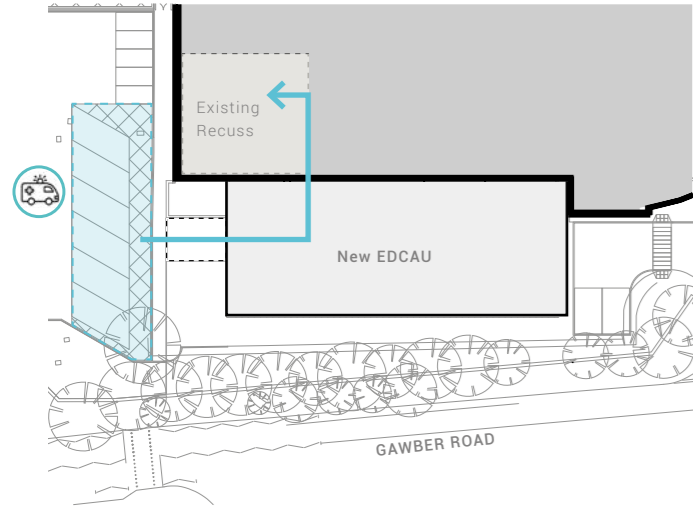


1. Ambulances will use the new area and temporary entrance for patient drop off's until completion of the new Ambulance entrance for EDCAU.
2. Cars/taxi's will be able to drop off patients via the new entrance adjacent D and egress via the existing opening C/D opposite the ED walk in entrance.
3. Phase 2 to start on site following completion of Phase 1.
4. Proposed new pathway.

02 Design Development

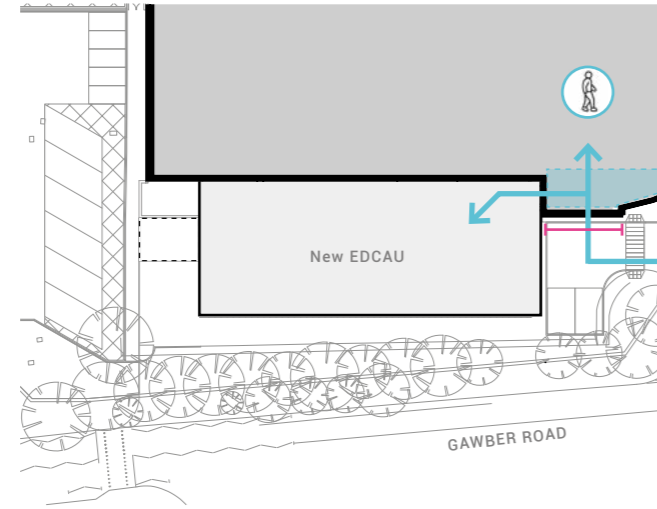
Key Design Principles

2.5 Key Design Principles



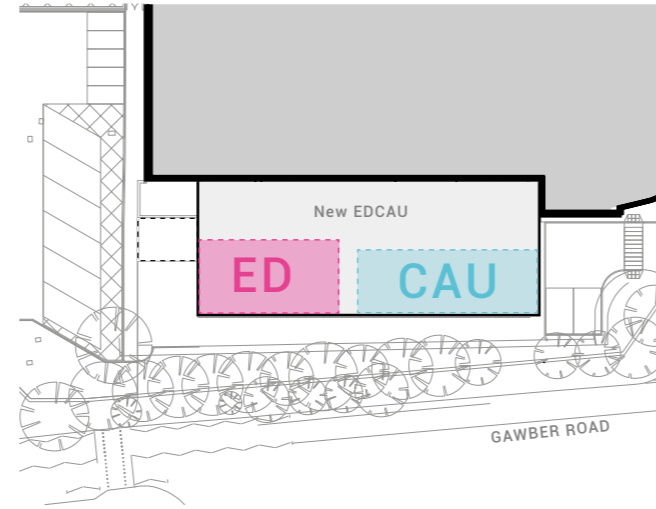
Revised Blue Light Entrance Route

- Due to the Phase 1 works relocating the ambulance drop off bay we needed to ensure that the proposed new blue light entrance was considered in response to this.
- We wanted to ensure that there was more of a proficient touch down area for the ambulance drop off as currently it is relatively restricted.
- This relocation of the blue light entrance also allows a reduced time to reach the existing Recuss department



Retain Existing Entrance

- Ensuring that the design fulfils the 'Front Door' principal in HBN 15-01 – with a single point of entry for easier navigation.
- Ensuring that the access and entry into the new EDCAU is closely monitored and controlled by one key entrance through the existing building.
- Highlighting the new entrance space with light touch works so that it ties in with the new proposal and still ensures it is easily identifiable for the public for ease of navigation



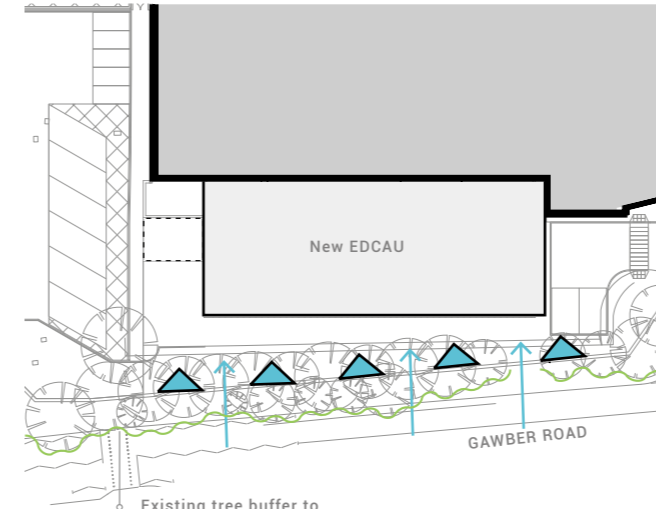
Combine ED & CAU Facilities

- Bringing together of the Children's Emergency Department (ED) and Children's Assessment Unit (CAU) into a co-located integrated model of care to support the rapid turnaround of children using an assessment model in place of a traditional, predominantly inpatient based model.
- Consideration of how both departments can work independently whilst being able to share key facilities.

02 Design Development

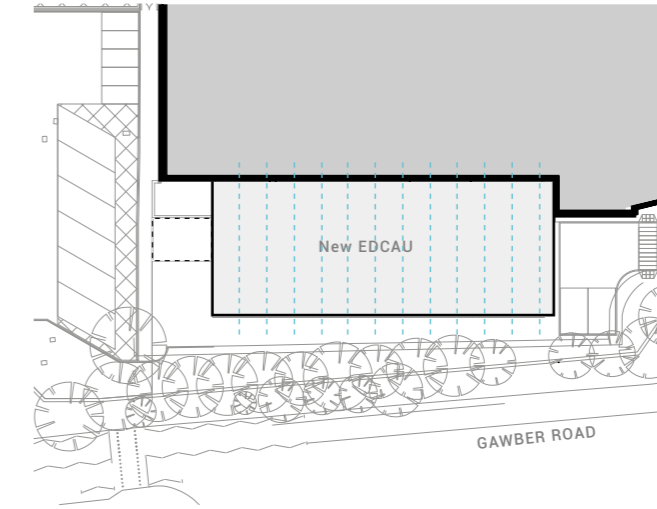
Key Design Principles

2.5 Key Design Principles



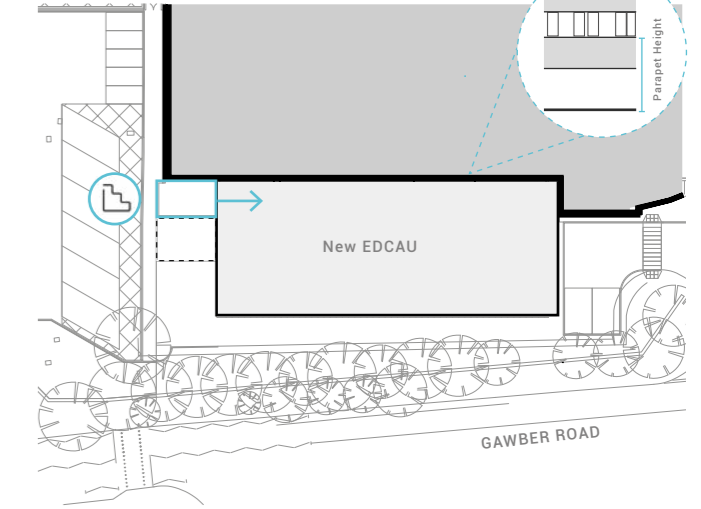
New Hospital Frontage

- Creation of a playful new facade frontage to the hospital which is relatively prominent, although screened by the existing cherry blossom trees that will be retained.
- The facade will sit closer to Gawber Road than the existing Emergency Department and provides a great opportunity to create more of a landmark facade along the road frontage upon approach to the hospital main entrance.



Modernisation of modular facade

- The existing facade is a modular style 1960's building that is divided into an irregular grid like system. We wanted to explore this grid system and look at how we can create a more updated version of this style but introducing more playfulness into the facade with the use of geometry and colour.



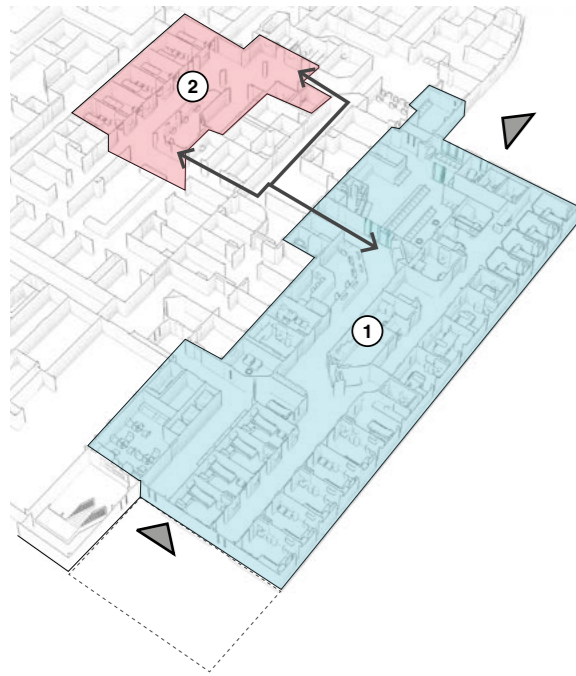
Connection to existing facade

- To ensure the proposed parapet does not exceed existing first floor window cill to ensure a sensitive approach to the connection to the existing facade.
- Use and reconfiguration of existing escape stair case to access proposed roof for minimal disruption to existing accommodation.

02 Design Development

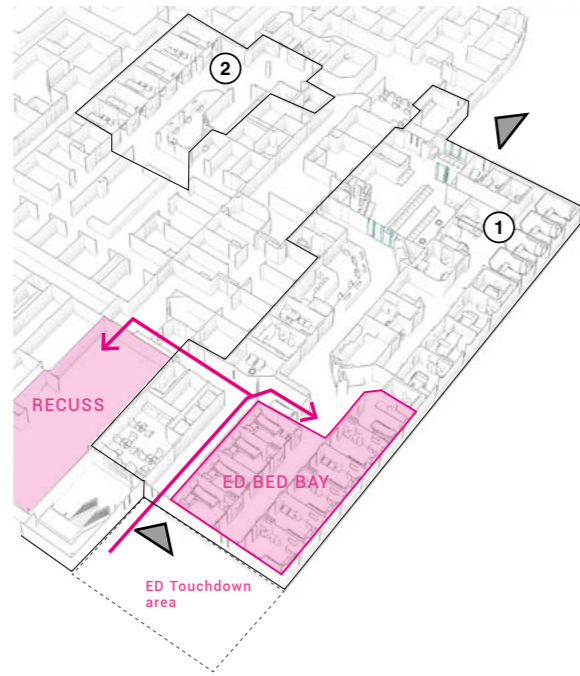
Schematic Diagrams

2.6 Schematic Diagrams



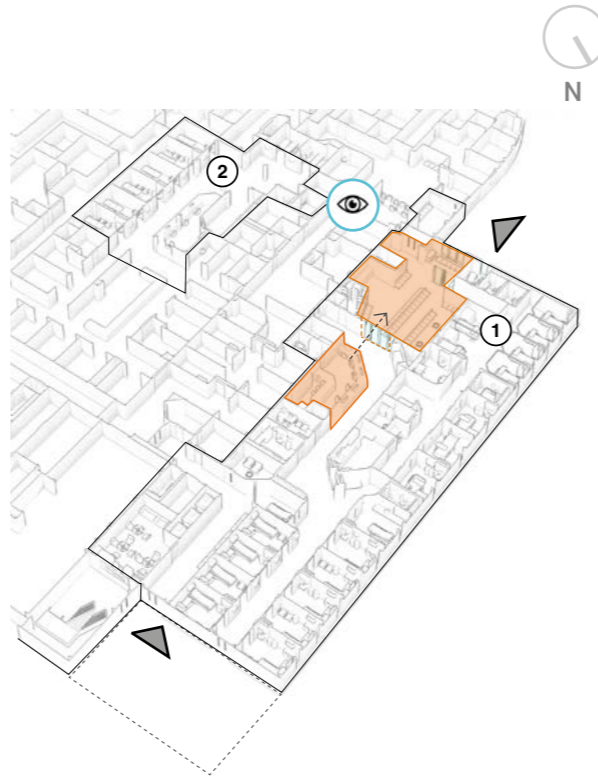
Connection between new EDCAU and Majors refurbishment

- ① New Build EDCAU Phase 2
- ② New Majors Refurbishment Phase 3



ED located close to blue light entrance and existing recuss

- ① New Build EDCAU Phase 2
- ② New Majors Refurbishment Phase 3

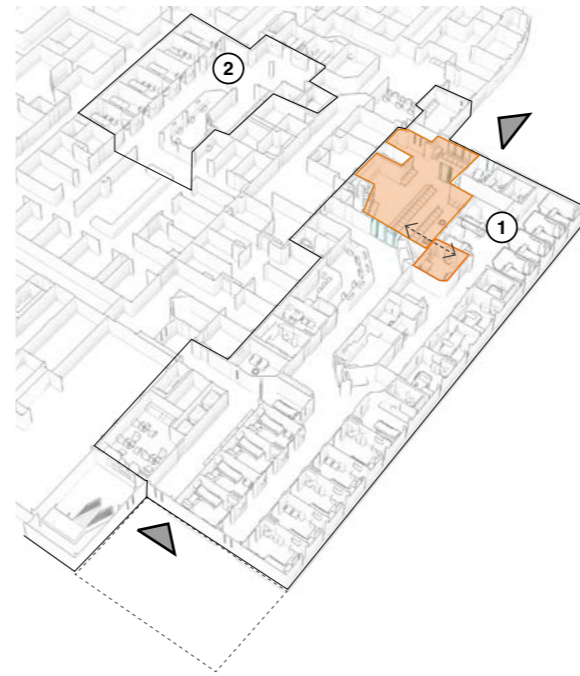


Close observation from Reception and Waiting Area

- ① New Build EDCAU Phase 2
- ② New Majors Refurbishment Phase 3

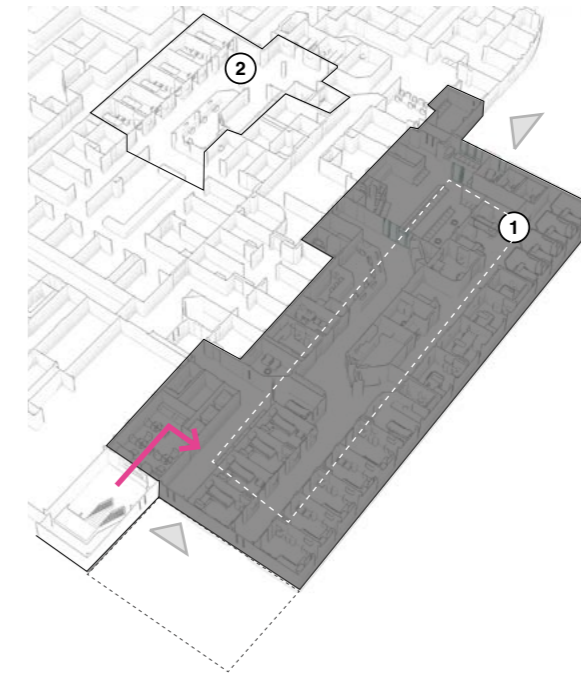
02 Design Development

Schematic Diagrams



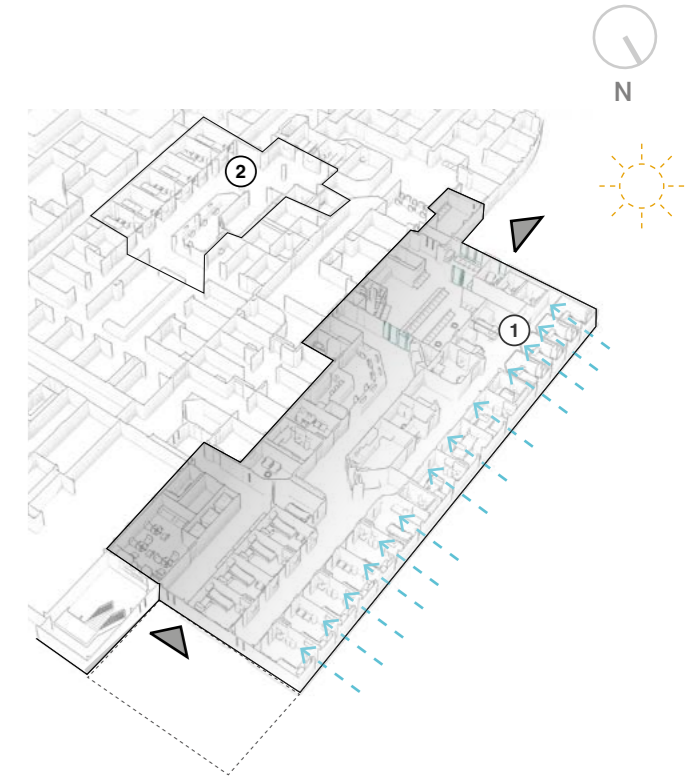
CAU assessment double access from waiting room

- ① New Build EDCAU Phase 2
- ② New Majors Refurbishment Phase 3



Existing staircore to be amended to access proposed roof / plant

- ① New Build EDCAU Phase 2
- ② New Majors Refurbishment Phase 3



Potential linear windows to allow light to penetrate into the floorplate

- ① New Build EDCAU Phase 2
- ② New Majors Refurbishment Phase 3

02 Design Development

Concept

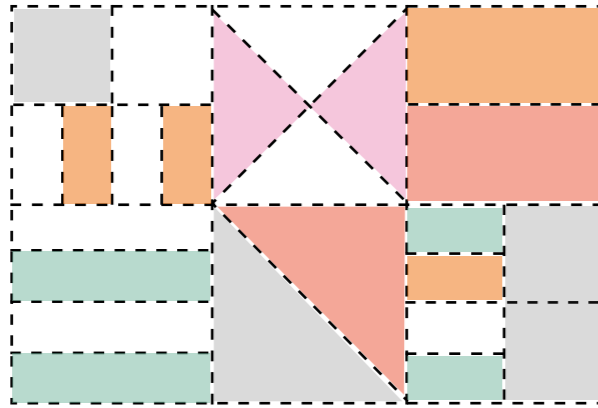
2.7 Concept

As the existing facade of the ED building is a very modular 1960's design, we are proposing to incorporate this modularity into the facade of the EDCAU. However instead of the form being very regular, as it is proposed to be a children's department we wanted to play with this modular form by creating more dynamic geometric patterns within this more fixed grid system.

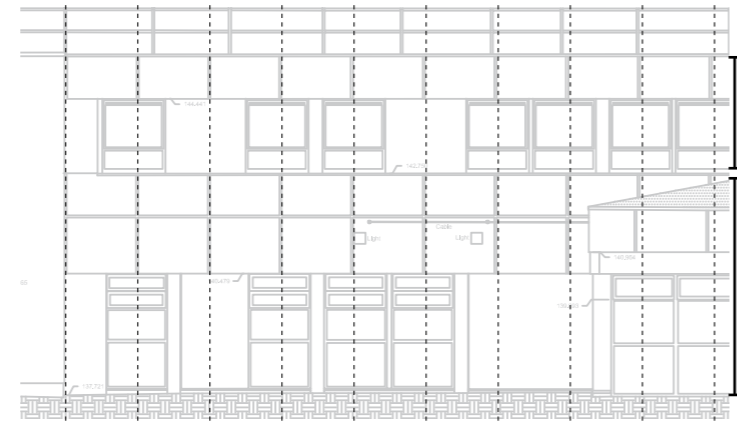
In contrast to the existing white concrete and grey linear facade we wanted to propose a variety of pastel colours along the facade to help create a more iconic and playful facade that can be identified upon approach of the Hospital.



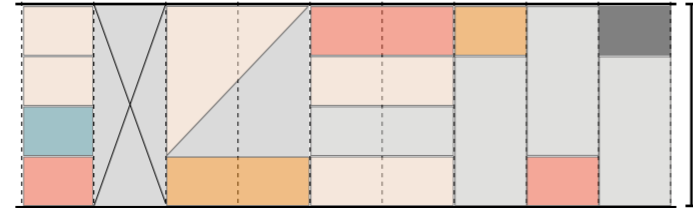
Geometric Children's Toy



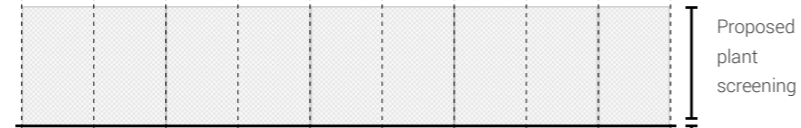
Distilled geometric pattern for facade interpretation



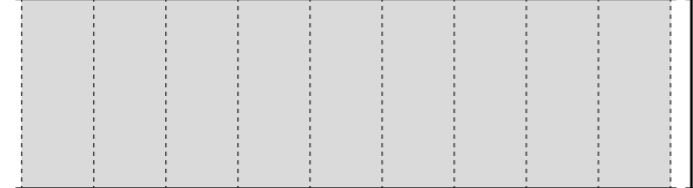
Existing facade fronting Gawber Road



Proposed geometrical pattern on proposed



Proposed plant screening



Proposed occupied facade

Proposed elevation proportions

02 Design Development

Concept



Sketch Elevation

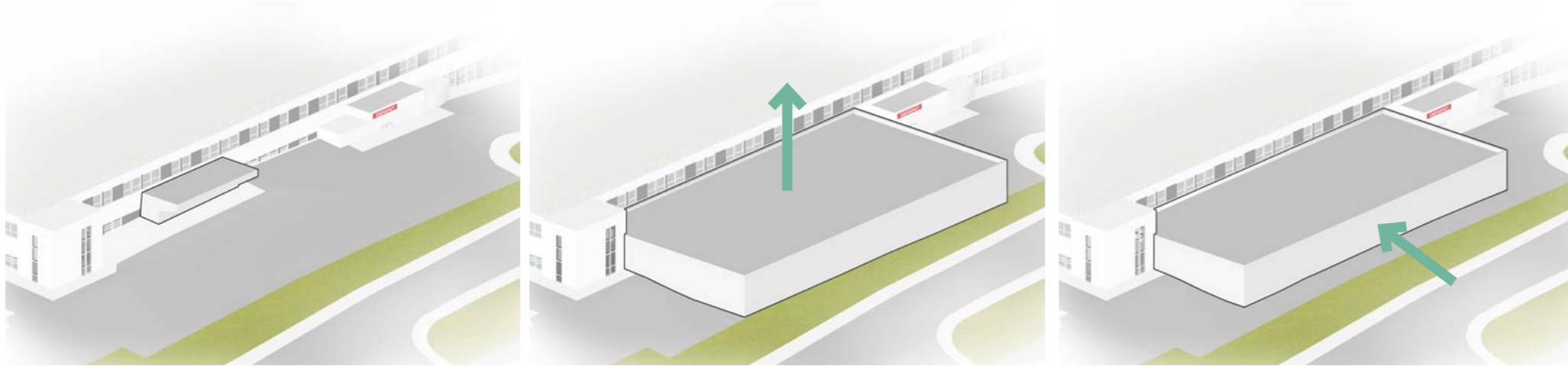
Extents of New Proposal

- ① Banding mirroring existing banding
- ② Long vertical windows to continue with modular scale / proportions
- ③ Development of concept playful geometries
- ④ Mesh surround to conceal proposed AHU / Plant
- ⑤ Proposed height of mesh to tie in with existing building line
- ⑥ Existing tower block

02 Design Development

Design Development Sequence

2.8 Design Development Sequence



Strip back of Existing Entrance Canopy

The strip back of the existing entrance maximises the potential for an entrance facing the main road, it also allows to relocate the blue light ambulance route as per Phase 1 proposal to allow more distinct patient and visitor flows.

Extrusion of Mass

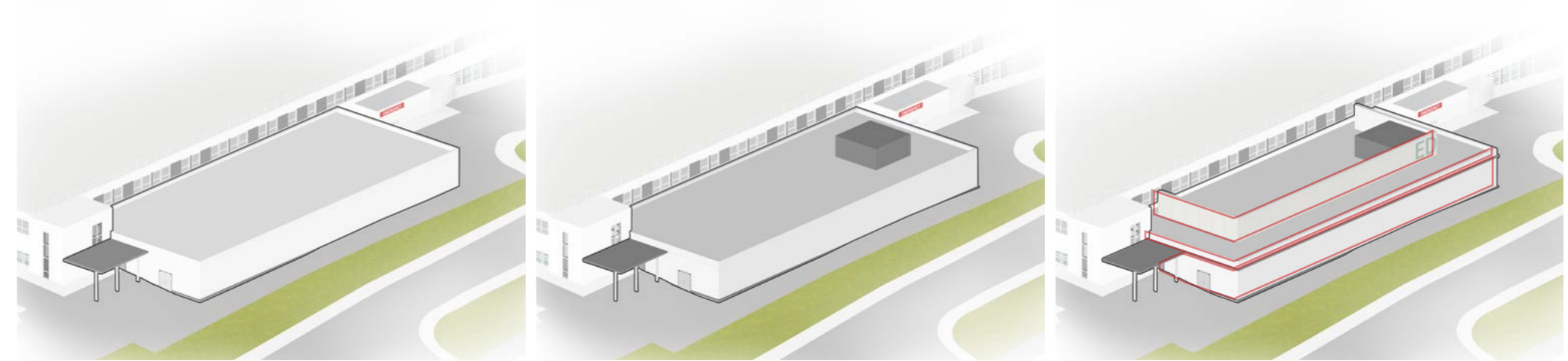
The proposed footprint stretches towards the site boundary to maximise the extension area. The mass is extruded to align with the existing building facade.

Cut Back Mass To Protect the Tree Boundary

From the extruded site mass, the building mass is then cut back to protect the existing tree boundary located on Gawber Road.

02 Design Development

Design Development Sequence



New Ambulance Entrance

Proposed new ambulance entrance to tie in with phase 1 works as this now sits adjacent to the new ambulance drop off bays, there is a much larger touch down area than before to ensure more efficient flows.

Plant on Top

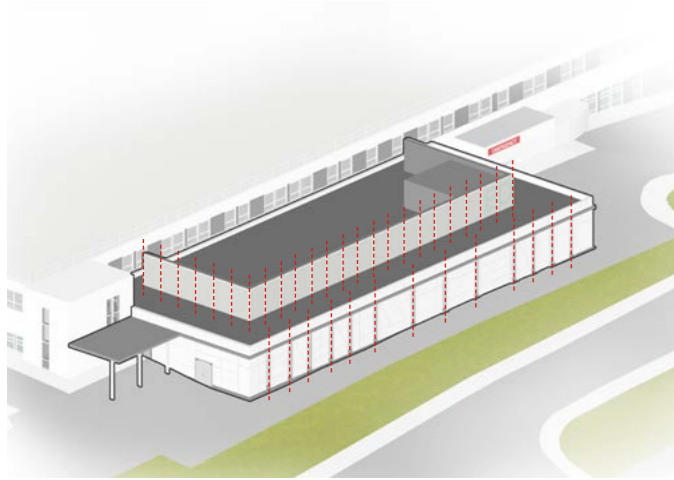
Due to the nature of the unit and associated M&E requirements the new proposed plant will have to sit on top of the proposed EDCAU (Box representative of plant - refer to roof plan for actual plant requirements). There was discussion of the proposed plant being located on top of the existing building however there are already a lot of services / roof lights on this roof which would have made co-ordination very difficult and would have made a more harsh ducting connection to serve our building.

Banding to Match Existing

The facade treatments and proportions are influenced by the existing hospital horizontal banding.

02 Design Development

Design Development Sequence



Verticality Element and Full Height Windows

The prominence of the existing adjacent to the site needs to be largely considered. The rhythmic vertical element of both ___ and the hospital allows the opportunity to demonstrate this on the proposed facade. Full height windows and cladding design can continue this vertical element.



Modular Facade Grid and Playful

The use of modular facade grid with varying angles can break up from the surrounding vertical and horizontal elements. Introducing vibrant colours adds a component of play.



Landscaping

The colourful facade helps to tie in with the surroundings via the existing cherry blossom trees and also helps to inject some colour and playfulness into the existing hospital facade, particularly due to the nature of it being a children's ward.

02 Design Development

Design Development Sequence



03 Stakeholder Engagement

Workshops and User Groups

3.0 Overview

During the Stage 2 Design development process, there has been an extensive level of Stakeholder Engagement which has taken place. This has been undertaken with key representation across all of the prospective Clinical Service Users, whom will operate within the new EDCAU when delivered. Extracts of such dialogue / background are contained in this section.: These are purely extracts to illustrate some context to these discussions. Detailed Minutes and Notes were taken by the PM to capture all of the detailed dialogue. The result of this process was the approval and sign-off of 1:50 Room Loaded Plans and a vast selection of 1:20 Room C-Sheets.

In addition to the Clinical Stakeholder Engagement, the Team have also engaged extensively with many non-clinical staff members who will be involved in the day to day running or working within the proposed EDCAU.

To assist with this process, DAY have utilised 3d live design workshops to assist with visual representation of all the key areas within the new EDCAU building, to aid design development further with all the stakeholders being fully engaged and collaborated with.

Trust Project Team	Children's Services	H&S Advisor	ED Dept.	CAU Dept.	Trust AP
Alison Fearn (PM)	Ben Dockwill	Gill Lammes (IC)	Hannah Ryan	K Nunn	Ian Austin
Rebecca Lord (HOP)		Alex Fisher (WASP)	Anita White	JP Dales	C Makey
Mick Bailey		Paul Vam Plew (Protec)	Charlotte Marsh	P Sharma	JD Bedford (TFO)
Steve Butler			Laura Hill		Antonia Crossland
Chris Kelly					Dave Dabell
Christine Fishe					Richard Wright
Matt Hall					Mohammed Sajard (SM)

Stakeholders consulted during multiple focus groups/workshops for their designated department

- ** PM - Project Manager (Trust)
- HOP - Head of Projects
- TFO - Trust Fire Officer
- IC - Infection Control
- SM - Sustainability Manager

This information was also agreed with;

- Pharmacy Dept.
- Materials Management
- IT Department
- Domestic Services
- Lead Paediatrician
- Facilities Management Team
- Catering (ISS)
- Supplies - Yorkshire ambulance service

03 Stakeholder Engagement

Meeting Summary

Meeting Date	Purpose	Meeting Notes
18.06.19	Initial follow up meeting with Trust upon first DTM	Discussions around the general layout of the GA Plans / review of previously proposed plans from Stage 2 submission in more detail to ensure all requirements have been considered prior to first Stakeholder Engagement Meeting.
25.06.19	Initial Stakeholder meeting following project handover to DAY	<ul style="list-style-type: none"> Increase waiting room capacity circa 60 people Improve sight lines between the staff base and waiting area Review of Main Entrance area Discussion took place about the adjacency of the 6 bedded area and ED cubicles and staff base and ancillary room (Drug's IV, Clean and Dirty Utility)
02.07.19	Follow up Stakeholder meeting to address key amendments	<ul style="list-style-type: none"> Stakeholders have requested staff touch down / write up areas near to 6 bed bay / CAU. New Paediatrics ED to still utilise the 'Big front door' approach as ED will need to assess every patient prior to them coming into the unit. Stakeholders agreed that the Changing Places facility could be omitted and relocated outside of the unit if required to allow for additional special requirements to be located within the proposed unit. The compromise was to add in additional shower facilities where possible to proposed accessible wc's.
15.07.19	Stakeholder Meeting discuss revised plan for sign off	<ul style="list-style-type: none"> Identified the write up spaces at the ED end as well as the CAU end. Provided a centralised Consumables store. Provided a place to store the linen trolley. Extended the staff base to demonstrate that up the 10 staff can use it. Created dual access to the Dirty utility. Added doors to attenuate sound and promote a calmer environment in the CAU end.

19.07.19	Initial discussion for room data requirements with Trust and Stakeholders prior to C Sheet presentation 22.07.19	Initial discussions to determine; <ul style="list-style-type: none"> clinical equipment (spec and locations within room) handing of rooms M&E specific requirements
22.07.19	C Sheet presentation with Stakeholders	<ul style="list-style-type: none"> Representative for each department available to ensure the C sheets were in accordance with the Trust's procedures / department function. <p><u>Key items:</u></p> <ul style="list-style-type: none"> CAU / ED – each department needs to be given a separate identity (can be defined by colour / ceiling / flooring etc) Dani centres located outside of rooms - Infection Control request Patients handed from right hand side Mindray monitoring required O2 and suction required Revised Staff Room layout
05.08.19	Final C sheet discussion for sign off and initial elevation discussions following on from project handover to DAY	<ul style="list-style-type: none"> Additional write up spaces for CAU Cubicles Relocation of double doors from 6 bed assessment into main corridor to create more of a sub compartment and reduce noise Relocation of linen bay Allowance for riser in consumables store following M&E Co-ordination Changed access into Quiet room following Structural Co-ordination Initial elevations presented to Stakeholder were well received - further consideration required for existing entrance area
08.08.19	Revised elevations issued to Stakeholders / Trust	It was agreed that it would be best to have non openable windows with manifestation to provide additional privacy for the building elevations due to the sensitive nature of the patients. As agreed, we will proceed we non openable windows in order to fully remove any unnecessary risk.

03 Pre Application Comments

Meeting Date 27.02.19

3.1 Overview

Prior to this Application, an Outline Planning Application has been submitted and granted which this document should be read in conjunction with. As DAY have been involved from Stage 2 onwards, we have documented the Stakeholder meetings etc that followed from this Stage 2 Handover, for the earlier design decisions / initial reasonings please refer to the outline planning application. A pre-application meeting with Barnsley Planning Department was held on 18th June 2018 with the Planning Officer Andrew Burton and the Principal Highways Development Control Officer, Barbara Wilson.

For Phase 1 of the scheme it was agreed by the Planners that this work would fall under Permitted Development therefore no planning application was required to be submitted.

An introduction to the scheme and an explanation for the need for development was given by Alison Fearn (Project Manager - Estates Department at Barnsley Hospital) and the Design Team (Race Cottam Associates and Mott MacDonald gave a summary of the approach to the building's design and transport strategy.

It was agreed that the boundary trees should be kept as far as possible. The outcome of the meeting was that the Planning Department suggested a full application would be better, but Alison Fearn confirmed the very tight program as the reason to seek outline approval, to demonstrate progress in terms of the Planning within dates set by the funding agency.

Please see below the relevant statements that have been required for this application as per the outline planning application.

Drainage Statement:

- See appended proposed drainage drawings from Mott Macdonald.

Tree Retention:

There are currently no TPO's in place on the site, however it was discussed where possible to retain as many of the blossom trees that are currently along the boundary frontage of the Hospital, which we have ensured that our design considers.

Construction method statement:

To be conditioned as can not be provided until Contractor is appointed.

Noise survey:

To be conditioned. It was agreed that site movements creating other noise generally are not affected by this proposal. Ambulances will arrive in the same location so there is no change here. The main entrance is proposed to be rationalized and improved generally which will give an improvement.

Further information required from Planning Officer are:

• Desk top ground investigation report
 - See appended (Barnsley Hospital - CAU & ED Geotechnical and geoenvironmental desk study 06 July 2018)

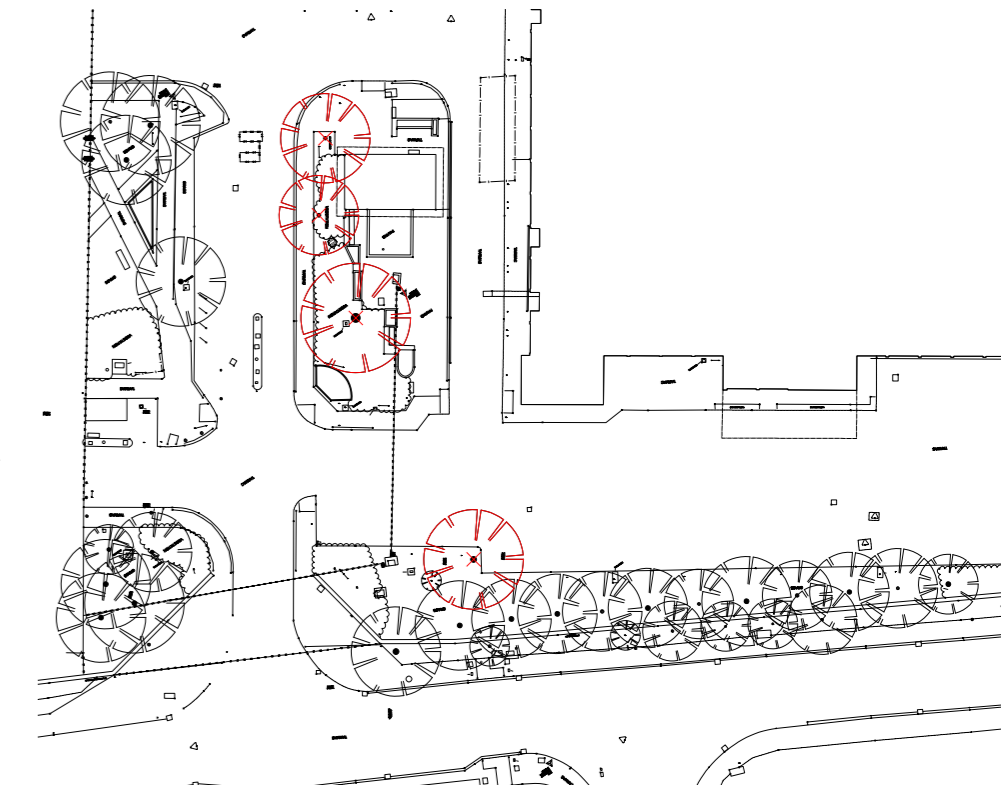
• Indicative layout/ landscape masterplan
 - Please refer to drawings & information provided within this document

• Indicative section plans
 - Please refer to Proposed Sections & information

provided within this document

• Site Location Plan site edged red with land in applicant control in blue.

- Please refer to Site Location Plan & information provided within this document



Mott Macdonald Phase 1 drawing reference _ MMD-397596-00-XX-DR-D-0002 Tree Removal

03

Stakeholder Engagement

Meeting Summary - Traffic Statement

3.2 Traffic Statement

The development proposal will occupy the current Accident and Emergency Department ambulance drop off area adjacent to Gawber Road and existing accessible parking spaces located adjacent to the northern elevation of the hospital. Consequently, current arrangements for the ambulance services, including the exit at the northern corner of the application site, [outside C5 block] become superfluous and will be addressed as part of the development proposal as outlined below.

A key factor in the movement framework of the proposed development is ensuring that ambulance services can access the emergency unit upon arrival and depart from the site to respond to another emergency call with minimal delay. A new dedicated operational area for ambulance services is proposed to be located adjacent to the new development, replacing existing hard landscaping areas and a redundant smoking shelter.

The existing parking area outside C5 Block is proposed to be used for drop-off and parking for patients arriving at the Accident and Emergency Department by independent means.

Vehicular Access

The current main vehicle access from Gawber Road does not need to be changed by the proposals and the current ambulance access route remains with some road replanning within the site. However, other options have been investigated, and entrance flows may be able to be improved by an overall re-thinking of the main entrance and adjacent car parking access. This includes the possibility of a widened 3 lane entrance from the main road, to give preference to ambulance movements and reduce car park queuing into Gawber Road. This would form part of future detailed considerations, all to be discussed and agreed with the highways department. The existing site egress outside C5 Block, currently

utilised as egress for ambulance services as well as egress from the existing car park, is proposed to be revised to allow both access and egress from Gawber Road to the new drop-off / parking area.

Pedestrian Access

The proposal seeks to retain existing pedestrian routes and crossing facilities along Gawber Road with some modifications at the Gawber Road site access oif required. The layouts oft the proposed modifications at Gawber Road site access and at the C5 Block car park access will be detailed in the next design stage. Existing pedestrian routes from Gawber Road to building entrances will be reviewed to give better separation from vehicles and more straightforward navigation. These will all be further considered and detailed in the next design stage with a view to provide a safer walking environment.

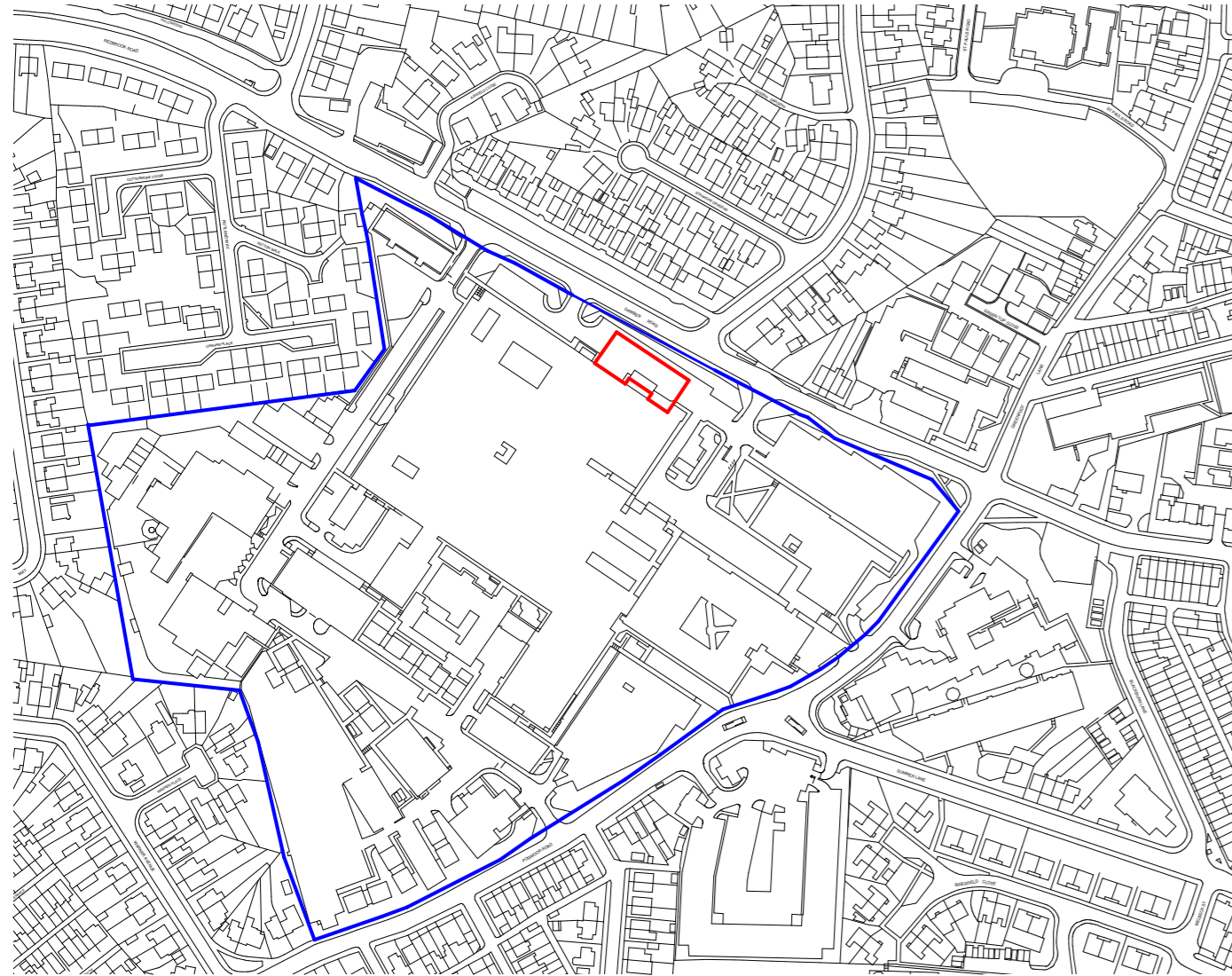
Emergency Access

The proposal will retain existing access arrangement for fire engines from the Gawber Road site access.

04 Design Approach

04 Design Approach

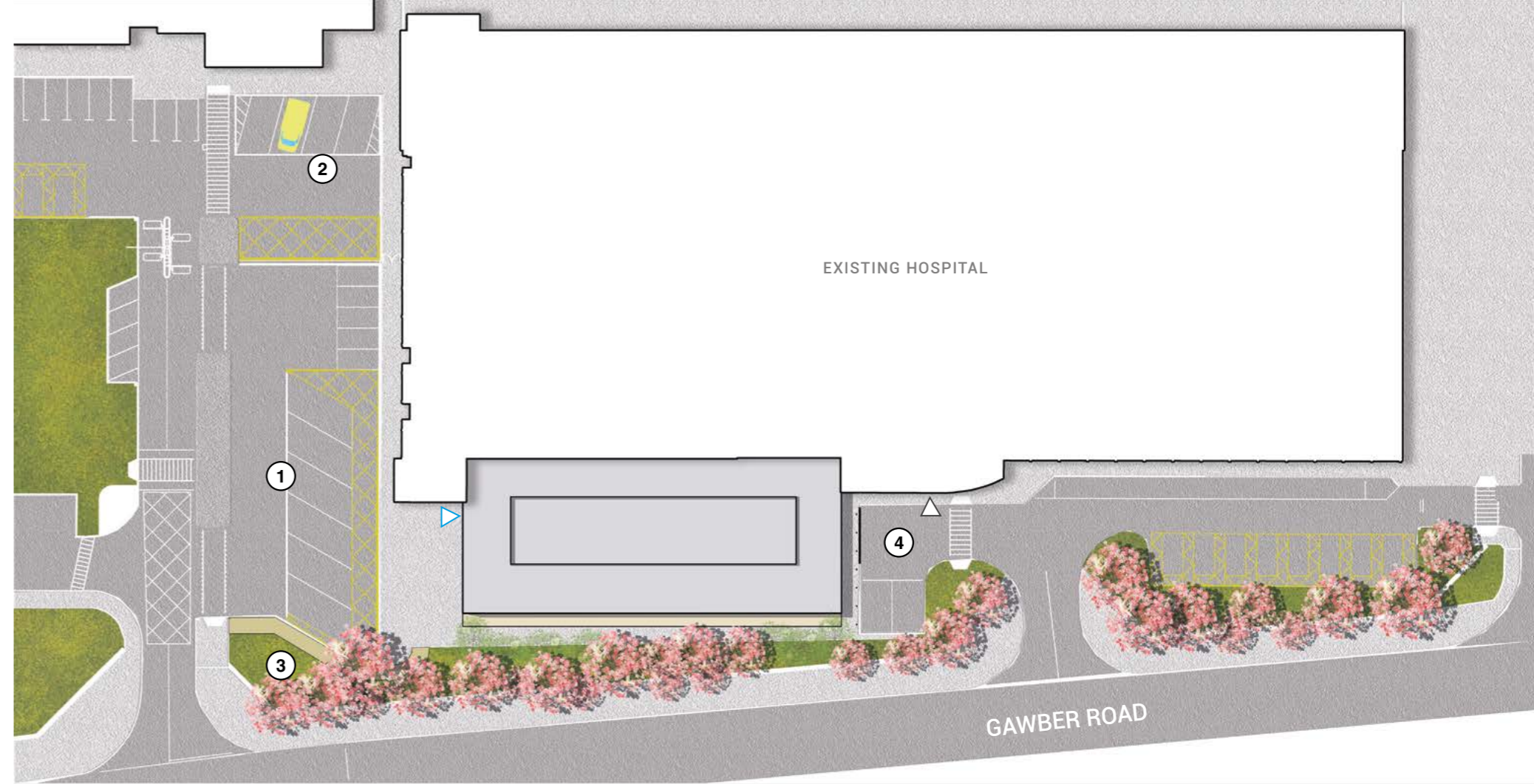
Proposed Location Plan



- Site Ownership Boundary
- Proposed Site Boundary Phase 2

04 Design Approach

Proposed Site Plan



- 1** Proposed Ambulance drop off bay
- 2** Patient Transfer Services Only
- 3** Existing cherry blossom trees to remain
- 4** Patient Drop off
- ▶ Proposed Blue Light Route
- ▶ Existing Main Entrance

04 Design Approach

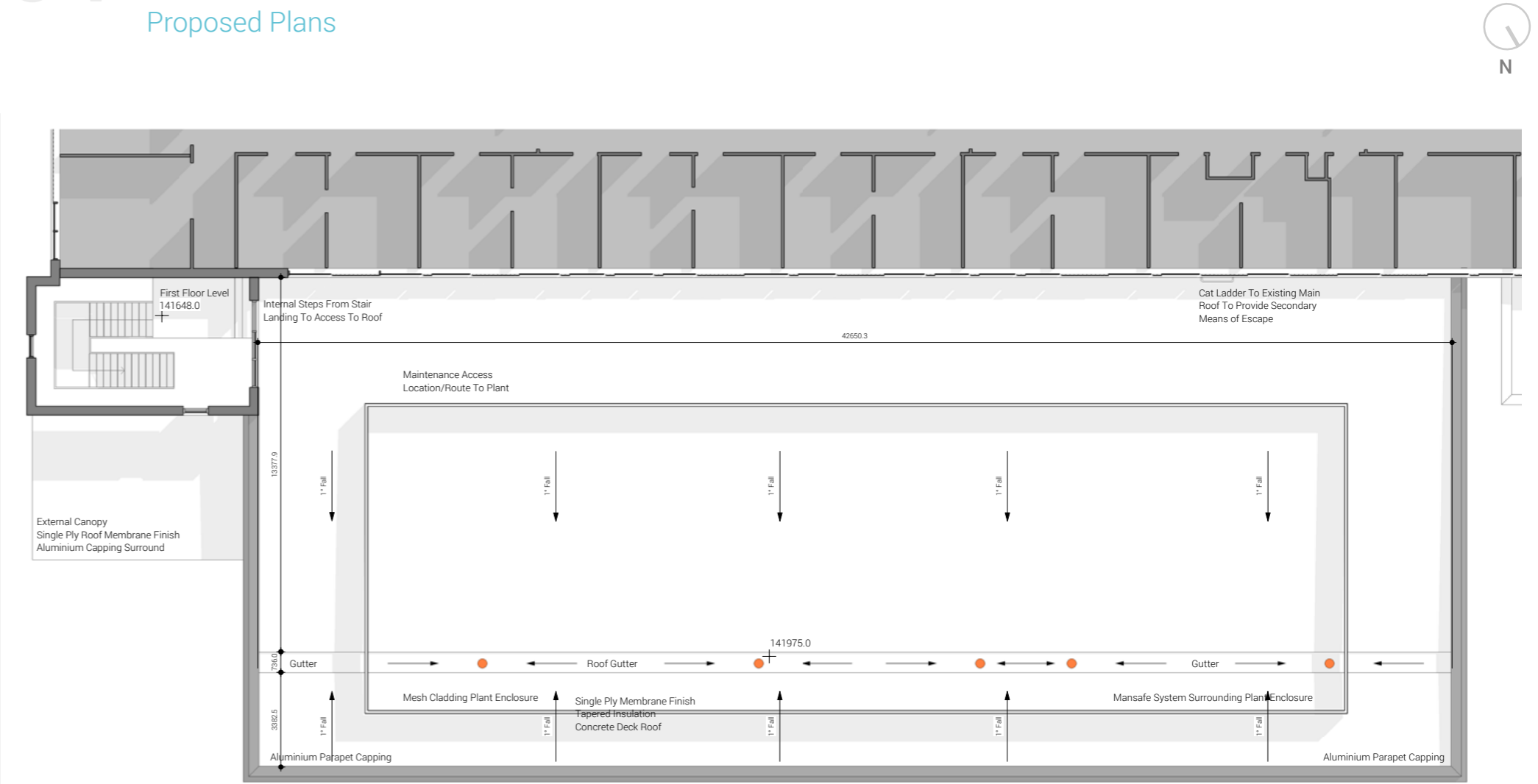
Proposed Plans



Proposed GA Plan
TOTAL GIA - 700 SQM

04 Design Approach

Proposed Plans



Proposed Roof Plan

04 Design Approach

Proposed Plans



- - - Phase 2 works
New EDCAU
- - -> New EDCAU
patient access
- - -> Blue Light
entrance
- - - Phase 3 works
New Majors
Department
- - -> New majors
patients access

Proposed GA Plans for EDCAU & Majors Department

04 Design Approach

Proposed Plans



Proposed GA Plans for EDCAU with Phase 1 immediate context

04 Design Approach

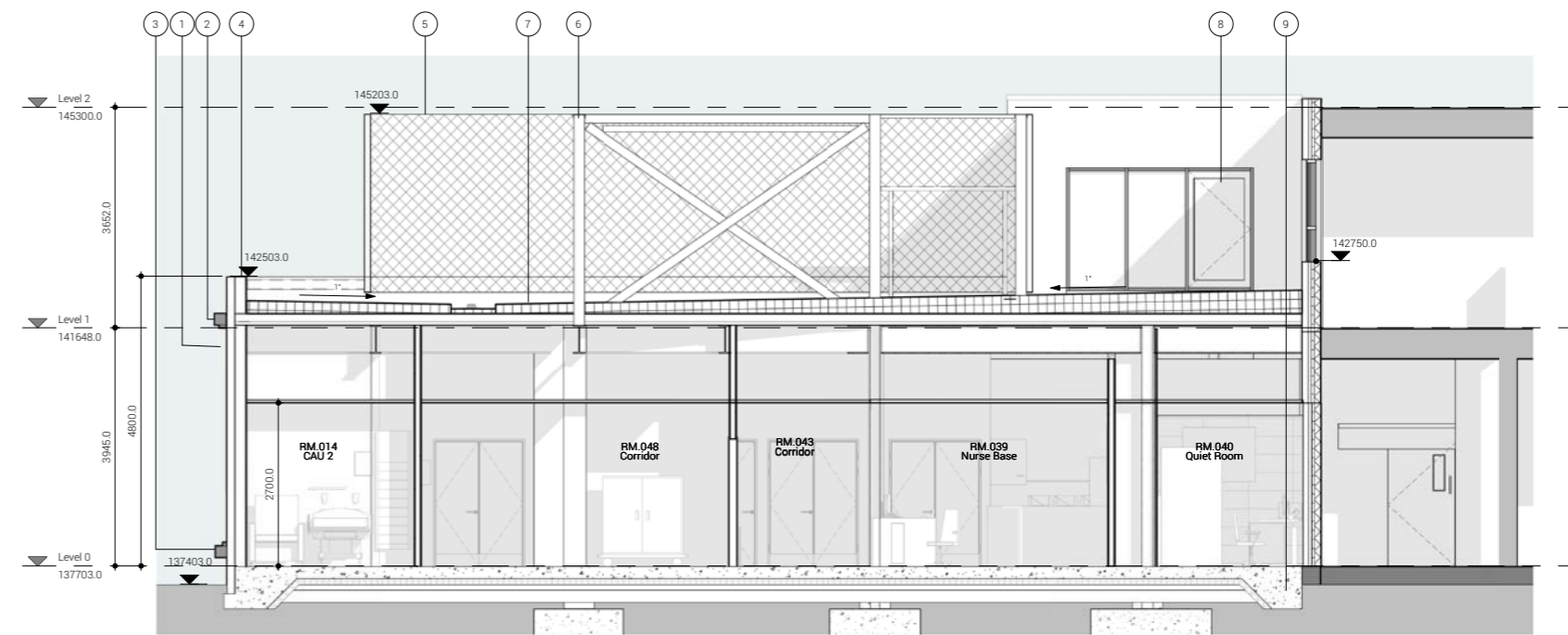
Proposed Section_Site Context



Residential Houses Existing landscape buffer Gawber Road Existing landscape buffer Proposed Site Area

04 Design Approach

Proposed Building Section



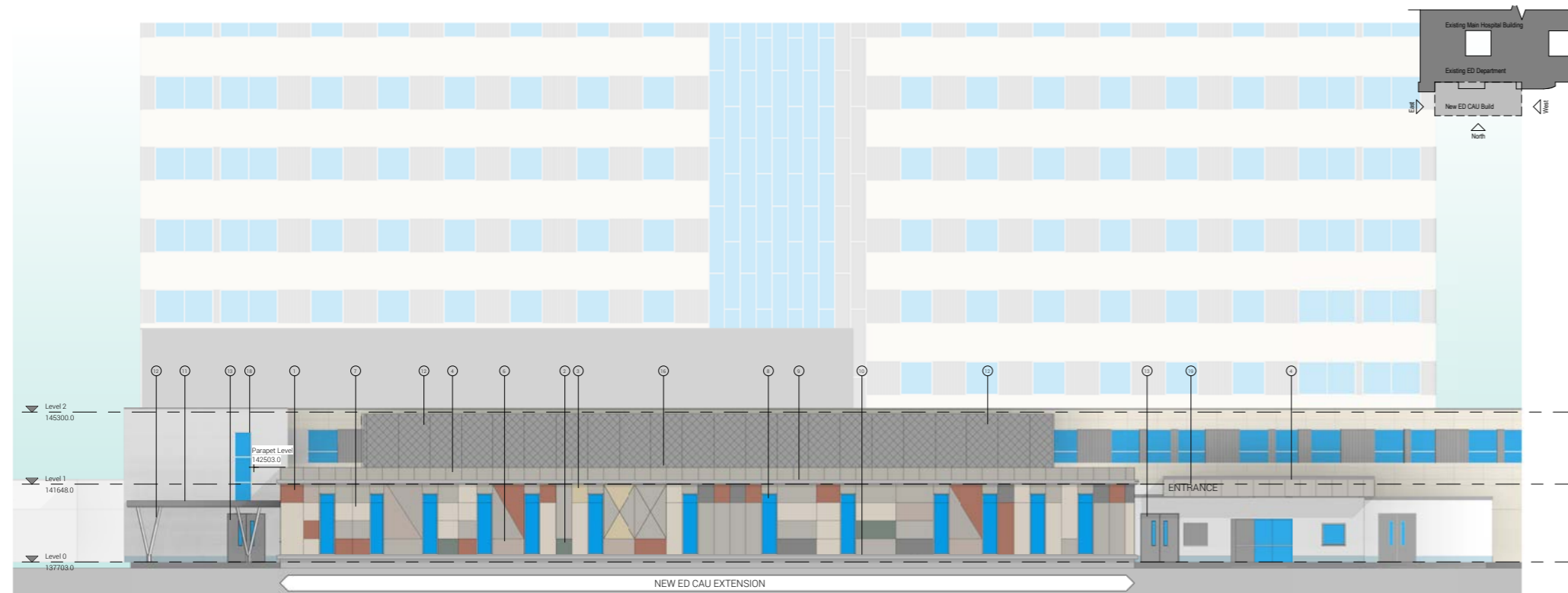
MATERIAL LEGEND

- 1 Equitone Tectiva Fibre Cement Board (or similar), SFS system between Steel Frame
- 2 Prefabricated Aluminium surround detail
- 3 Prefabricated Aluminium plinth surround detail, flush aluminium plinth
- 4 Aluminium parapet capping
- 5 Mesh screen to plant surround
- 6 Structural support to plant by S.E. engineers
- 7 Flat roof laid to 1deg fall, single ply membrane finish
- 8 New curtain walling with access door for maintenance to plant
- 9 Footings To S.E. Specification

Proposed Site Area Existing Building

04 Design Approach

Proposed Elevations



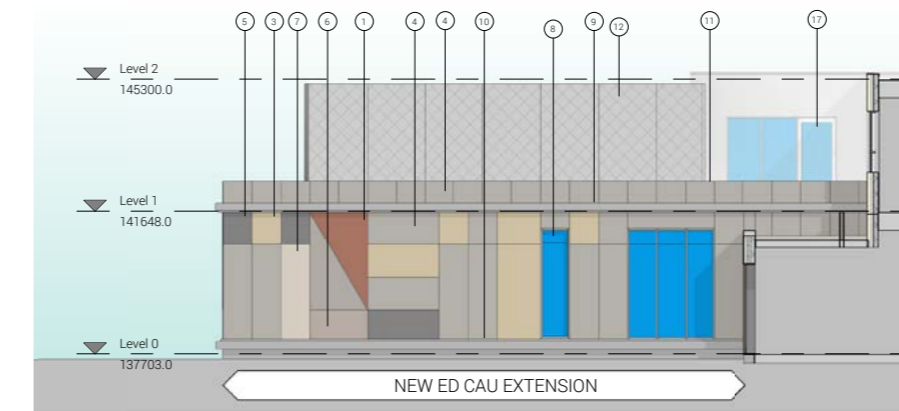
Proposed Elevation North

04 Design Approach

Proposed Elevations



Proposed Elevation East



Proposed Elevation West

MATERIAL LEGEND

- 1 Equitone Tectiva Fibre Cement Board (or similar), colour NCS 3030-Y9
- 2 Equitone Natura Fibre Cement Board (or similar), colour NCS S 4005-I
- 3 Equitone Tectiva Fibre Cement Board (or similar), colour NCS S 3020-Y
- 4 Equitone Natura Fibre Cement Board (or similar), colour NCS S 1502-Y
- 5 Equitone Tectiva Fibre Cement Board (or similar), colour NCS S 6005-E
- 6 Equitone Tectiva Fibre Cement Board (or similar), colour NCS S 1005-I
- 7 Equitone Tectiva Fibre Cement Board (or similar), colour NCS S 3010-I
- 8 Windows with manifestation, top panel opaque
- 9 Prefabricated Aluminium surround detail
- 10 Prefabricated Aluminium plinth surround detail, flush aluminium plinth
- 11 Aluminium parapet capping
- 12 Mesh screen to plant surround
- 13 Singly ply canopy finish, aluminium capping surround
- 14 Structural support to canopy by S.E. engineers
- 15 New fire escape door
- 16 Flat roof laid to 1deg fall, single ply membrane finish
- 17 New curtain walling with access door for maintenance to plant
- 18 New curtain walling to replace existing stripped, to match existing
- 19 New Entrance signage

04 Design Approach

Facade & Materiality

4.0 Overview

With the facade, we wanted to express the horizontal layers of the building to be sympathetic towards the existing facade and its prominent banding.

However we also wanted to inject this banding with horizontal modular elements to again give a subtle nod to its prominent 1960's surrounding modular construction.

The siting of the new EDCAU extension is situated along Gawber Road in front of part of the existing Red Zone Emergency Department.

As it is facing Gawber Road it is an excellent opportunity to create more of an interesting and iconic frontage for the hospital as Gawber Road is one of the key vehicular approaches to the site and into the main hospital visitors car park.

4.1 Facade Design

This design proposes to incorporate the modularity of the existing facade of the EDCAU. However instead of the form being very regular, as it is proposed to be a children's department we wanted to play with this modular form by creating more dynamic geometric patterns within this more fixed grid system.

In contrast to the existing white concrete and grey linear facade we wanted to propose a variety of pastel colours along the facade to help create a more iconic and playful facade that can be identified upon approach of the Hospital.


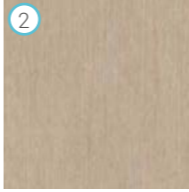

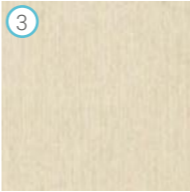
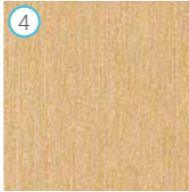

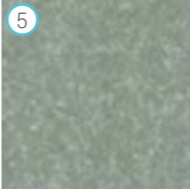
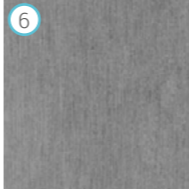
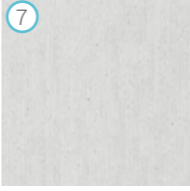
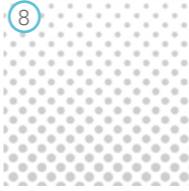
Due to the sensitivity of the patients and the close proximity to the surrounding main road etc, we are proposing non openable windows and for the scheme to be fully mechanically ventilated. This will also assist with infection control issues and any noise pollution that may have incurred from Gawber Road. This also allows us to propose a large full height window into many patient areas to really allow the light to penetrate deep into the floorplate.

04 Design Approach

Facade & Materiality

4.2 Facade Study

Main Material Palette



04 Design Approach

Facade & Materiality

4.53 Facade Study

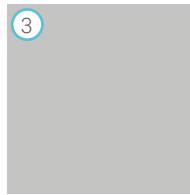
New Blue Light Canopy Material Palette



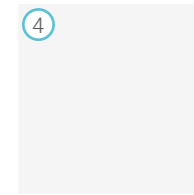
1 Timber to underside of canopy



2 Aluminium capping surround to canopy



3 Powder coated canopy structure



4 Obscured glazed fire exit doors



04 Design Approach

Facade & Materiality

4.4 Facade Study

Reclad Existing Entrance



1 Timber to underside of canopy



2 Aluminium capping surround to canopy



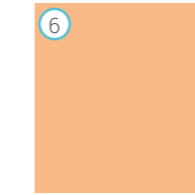
3 Fibre Cement Cladding NCS S 1502-Y



4 Grey new fire exit doors



5 Re-rendered existing entrance to match in with existing



6 New stand off entrance signage coloured



04 Design Approach

Facade & Materiality

4.5 Facade Precedent Imagery

We carried out a precedent study to understand how fibre cement board panels could be used in a more playful way to best reflect the design concept.

We also wanted to understand the most appropriate materiality that would best suit the context and the proportions of the site.



Conceptual Design/ James Barber Architects

The conceptual design of this vernacular although very different from our proposed scheme, helped to provide a good precedent for the proportions of a relatively tall single storey building.

The heavier bottom element is offset by the much lighter top element and is grounded by a darker plinth which helps to create a desired balance for the facade.



04 Design Approach

Facade & Materiality



Vita Contemplativa / GRUPPE

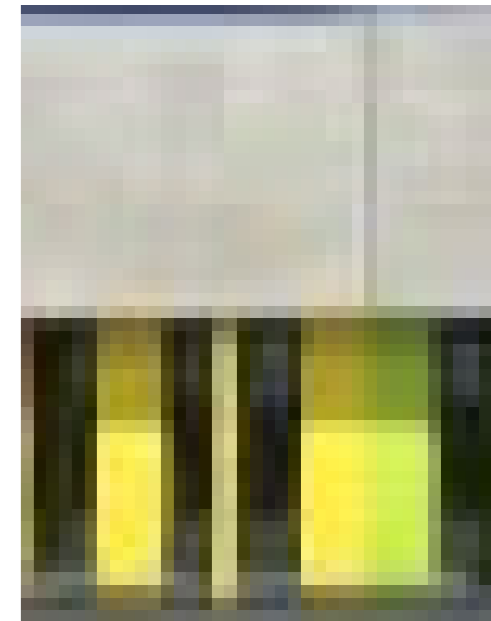
GRUPPE installed totems of colourful building blocks on the streets of Clerkenwell during the London district's annual design festival. GRUPPE used five different shades of fibre cement board, all chosen to match the tones of the existing streetscape.

The playful geometric shapes were a key element that we felt would reflect our concept well and could be produced in a modular economic way.



Colegio Público de Educación Infantil y Primaria / Código Arquitectura

The context to this proposed building was very modular and monolithic, the way that the proposed building divides itself into an upper monolithic element with a more dynamic vertical facade helps to ground the building well into the site and add interest to street level for the public and creates a more active facade.



04 Design Approach

Landscaping Strategy

4.6 Proposed Landscaping

At present on the existing site the area is currently relatively congested and not very pedestrian friendly with minimal defined routes / seated areas for patients and users to utilise. As Phase 1 predominantly looks at the new vehicular and pedestrian routes, this has helped to guide our landscaping strategy for Phase 2 so that the 2 phases will work well together.

As has been discussed with the planning officer, we will be retaining the prominent line of cherry blossom trees that front Gawber Road as these bring an aesthetic appeal to the area, assist with the surrounding noise pollution and help to provide privacy for the proposed EDCAU from the main road.

As there is already a green buffer to the North of the site, we will be adding to this by increasing the defensive planting i.e bushes etc to again further reiterate the sense of privacy for the unit.

We are proposing the perimeter of the scheme to be offset with a small gravel surround with some easy to maintain plants to help to ground the building and discourage people from approaching the building too close due to the sensitive nature of the building.

Due to the redesign of the surrounding roads i.e ambulance approach / blue light entrance we will ensure that there are bollards in place as a security prevention surrounding the proposed blue light entrance and also surrounding the main entrance.

To tie the proposed landscaping into the existing context, plants and shrubs currently on the site have been proposed which provides continuity. Similar species of plant will also require the same levels of maintenance which are already provided on the site.



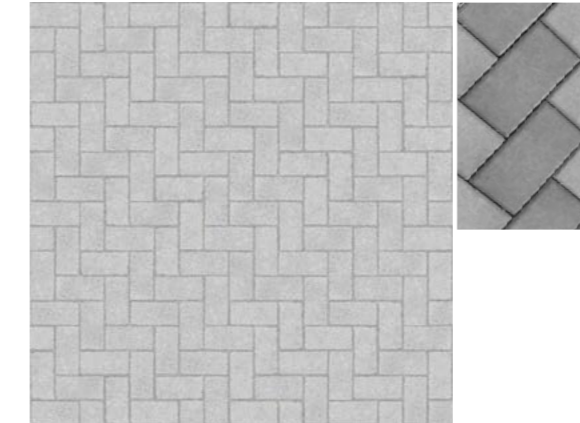
04 Design Approach

Landscaping ideas

1 Existing cherry blossom trees retained



2 New proposed hardscaping



3 New bollards



4 Proposed new defensive planting



5 Gravel offset to building



04 Design Approach

Visual Plan

4.7 Proposed Visuals



1. View upon approach to main entrance
2. Approach along Gawber Road
3. View from residential houses
4. Approach from main hospital vehicular route
5. Approach to blue light route
6. Close up facade view
7. Close up facade view pathway
8. Aerial view blue light entrance

04 Design Approach

Visual 1



04 Design Approach

Visual 2



04 Design Approach

Visual 3



04 Design Approach

Visual 4



04 Design Approach

Visual 5



04 Design Approach

Visual 6



04 Design Approach

Visual 7



04 Design Approach

Visual 8



04 Design Approach

Visual 9



05

Access

05

Access

Accessibility

Accessibility

The new extension is intended to be set at the same floor level as existing ensuring that there will be no steps [or ramps] between the new and existing.

The main pedestrian entrance to the area is intended to be shared with the existing adjacent entrance point and drop off and disabled parking bays can be provided nearby.

Accessible toilets are provided within the new paediatric waiting areas and unit. The ambulance access is re-provided and this can be done to the south of the extension, utilising the same site access point from Gawber Road.

The ambulance area is intended to be designed with level pavings throughout.

Within the building, all flooring will be designed for wheeled traffic including wheelchairs and trolleys.

Finishes generally will be of suitable contrast between main elements for easier visual recognition.

In general all design will be to the standards of Part M as a minimum and BS 3800.

For maintenance access for the plant / roof area for the proposed EDCAU, access is proposed from the existing staircore reconfiguration onto the proposed roof to ensure that there is clear and easy access onto the proposed roof for cleaning and maintenance. For further details please refer to the proposed roof plan. Further co-ordination to be carried out with Mott Macdonalds Structural Team.

05 Access

Proposed Access



- - - Phase 2 works
New EDCAU
- - - → New EDCAU patient access
- - - → Blue Light entrance
- - - Phase 3 works
New Majors Department
- - - → New majors patients access
- - - → Ambulance access / egress
- - - → Vehicular access patient car park
- - - → Drop off zone / resilience area access

06 Schedule & Strategy

Refuse Strategy



The waste will be held within the disposal hold areas until collected by facilities staff and moved to the main waste compound via the basement where it is then stored within a centralised location. The waste will be removed in CAU in the same manner as the existing ED.

06 Appendices

1. 20180918 Flood risk assessment and drainage strategy
2. 20180918 Geotechnical and geoenvironmental report
3. MMB-BH5132 Barnsley Hospital CCTV Survey Report (13.02.19)
4. MMB-BH5132-TS Barnsley Hospital Utility Survey Report (13.02.19)
5. MMD-397596-00-XX-DR-D-0002
6. BFS/Trust Sustainable Development Standard - Guiding Principle HTM 07-07 Sustainable Health and Social Care Buildings : Planning, Design, Construction and Refurbishment.

06 Appendices

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