Aneurin Bevan University Health Board

Grange University Hospital:
Emergency Department Extension

Design & Access Statement

P012X-BDP-ED-XX-RP-A-001010

June 2023

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Aneurin Bevan University Health Board

BDP.

Revision History

Rev	Date	Revision Description	Issued By	Checked By
P01	07/06/2023	Planning issue	SW	RH

Contents

01

Introduction

1.0 Introduction

The Applicant and Need for Development

Aneurin Bevan University Health Board (ABUHB) was founded in 2009 and provides health services to a population of c. 600 000 in South East Wales and employs c. 14 000 staff. A range of services are provided from a large number of sites across the region, including a number of local general hospitals, but complex acute care services are delivered from a centrally located facility - the Grange University Hospital.

The Grange University Hospital opened in November 2020 as the designated Specialist and Critical Care Centre for Gwent, and provides care for the most seriously ill patients or those with significant injuries who cannot be safely managed at a Local General Hospital. The hospital has 450 beds, and features a 24-hour Acute Assessment Unit, Emergency Department, and Helicopter Pad.

The Emergency Department's design was predicated on the assumption that patients would be pre-triaged prior to being admitted and would mostly arrive via ambulance transfer or helicopter. However, since opening, the department has seen a greater-than-expected number of patients arriving as "walk in" cases, predominately by private car. This has led to instances of overcrowding in the Emergency Department. Whilst the Health Board has sought to encourage people to consider alternative services if they become unwell, there remains a clinical requirement to accommodate the number of patients arriving at the hospital. As a consequence the layout and accommodation at the ED Front Door has been reassessed and the need for additional waiting space has been identified.

Purpose of this Report

This Design and Access Statement has been prepared by BDP in support of a planning application for an extension to the existing Emergency Department (ED) at GUH, together with associated landscaping, access and parking arrangements.

The DAS explains the design principles and concepts that have been applied to the development and how the proposals are a suitable response to the site and its setting, and demonstrates how it can be adequately accessed by prospective users.

Discussions have been held with both the Civil Aviation Authority and Babcock, who operate the air ambulances, and their comments are included in the Helipad Report in the Appendix. In addition, section 4 of this report considers the Landscape & Visual Impact of the proposed extension.

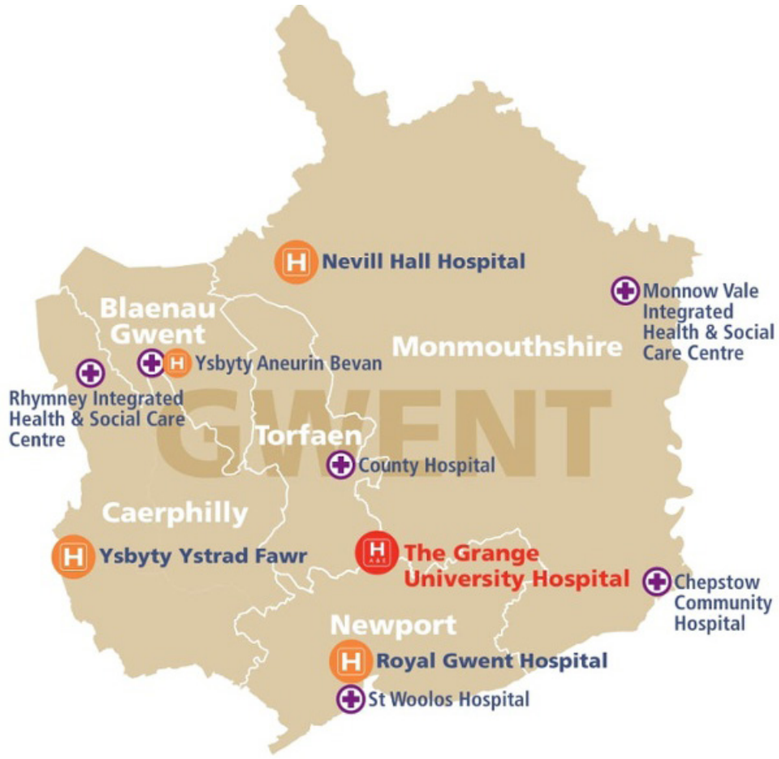
Planning documentation

The DAS should be read alongside the following documents which have been prepared in support of the planning application:

- Application forms and certificates
- Application drawings
- Planning Statement
- Transport Assessment, Framework Travel Plan and Active Travel Assessment
- Ecological Assessment
- Noise Impact Assessment
- Energy Strategy
- Pre-Application Consultation Report (to be provided following the outcome of the statutory consultation period)

Design Team

- Architect: BDP
- Ecologist: BDP
- Principal Designer (CDM): BDP
- Planning Consultant: BDP
- Civil & Structural Engineer: WSP
- MEP Engineering: AECOM
- Whole LIfe Carbon Assessor: AECOM
- Sustainability /BREEAM: AECOM
- Acoustician: AECOM
- Project Manager: Gleeds
- Cost Consultant: Gleeds
- Transport: ADL Highways & Engineering Ltd



ABUHB's hospitals and healthcare facilities

The Grange University Hospital

The Clinical Need

As discussed, to improve patient and staff experience, the Health Board has identified the need to reconfigure and expand the Emergency Department in order to provide additional waiting spaces and assessment rooms.

The proposals recorded in this report will address these existing capacity issues, and are not intended to result in an increased number of patients using the Emergency Department, or provide additional services. Patients should only attend the Emergency Department if they have a serious and life-threatening condition that needs urgent medical attention. The Health Board are encouraging people to consider alternative services if they become unwell. The inclusion of e-triage points immediately on entering through the new ED front door is intended to direct patients to more suitable, alternative ABUHB facilities elsewhere is appropriate.

The Proposals

The proposals will upgrade the Emergency Department through provision of a two storey extension building (with a partial third storey for plant) which extends the main waiting room in order to create seating capacity for at least 78 patients and provide additional staff facilities.

In turn, these new spaces will enable wider reconfiguration of the department to provide an increase in assessment rooms, 6-10 ‘Fit to Sit’ rooms for patients awaiting admission to hospital, and an additional ECG room to ensure that patients experiencing chest pain can be seen within appropriate timescales. The additional space will create a more purposeful, brighter and calmer environment for patients, and improvements will also be made to the provision of toilet facilities and signage.

The extension will be smaller in scale than the main five-storey hospital building, and connect to the existing Emergency Department via a linking corridor between the two. The new building will be constructed from high quality materials which integrate with the existing hospital while ensuring that the building is clearly visible as a front door to the Emergency Department, aided by an entrance canopy and large format signage on its exterior.

The colour palette used will reflect that of the main hospital entrance to the south of the site, providing two bookends to the hospital building. The incorporation of a higher proportion of glazing on the east facing façade takes full advantage of the hospital’s landscape context, to provide long distance views across the Monmouthshire countryside.

The extension will provide a new entrance to the Emergency Department for patients arriving by private car, and will be clearly signposted from a dedicated emergency arrival car park accessed separately to the hospital’s main staff and visitor parking facilities. The route between the car park and entrance has been devised in order to minimise conflicts with blue light vehicles.

The new facilities are intended to address existing demand for emergency care, and should not result in additional patient or staff trips to the hospital. Further information is provided in the Transport Assessment prepared by ADL Highways and Engineering Ltd, submitted in support of the planning application

1.2 Drawing Register

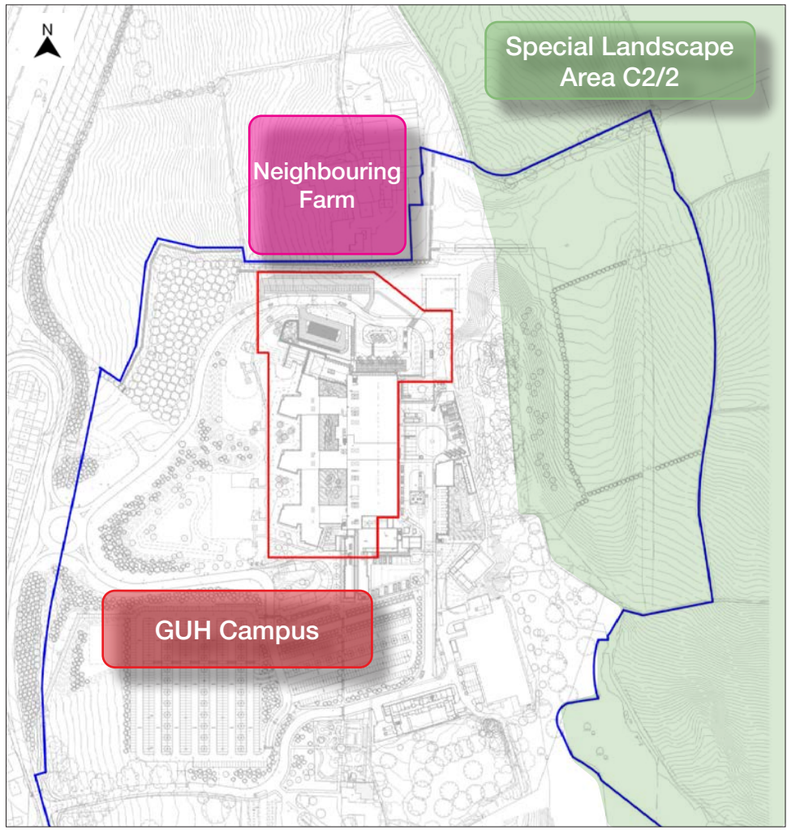
P012X-BDP-ED-XX-PL-A-901010	Site Location Plan
P012X-BDP-ED-XX-PL-A-901011	Existing Site Plan
P012X-BDP-ED-XX-PL-A-901012	Proposed Site Plan
P012X-BDP-ED-01-PL-A-201010	Existing Level 01 Plan
P012X-BDP-ED-01-PL-A-201011	Proposed Level 01 Plan
P012X-BDP-ED-02-PL-A-201010	Existing Level 02 Plan
P012X-BDP-ED-02-PL-A-201011	Proposed Level 02 Plan
P012X-BDP-ED-03-PL-A-201010	Existing Level 03 Plan
P012X-BDP-ED-03-PL-A-201011	Proposed Level 03 Plan
P012X-BDP-ED-03-PL-A-201013	Proposed Roof Plan
P012X-BDP-ED-XX-EL-A-201010	Existing Elevations North and East
P012X-BDP-ED-XX-EL-A-201011	Existing Elevations South and West
P012X-BDP-ED-XX-EL-A-201012	Proposed Elevations North and East
P012X-BDP-ED-XX-EL-A-201013	Proposed Elevations South and West

02

The Site & Context

2.1 Strategic context and existing hospital campus

The application site is located to the north of the Grange University Hospital campus in Cwmbran, and encompasses the location for the new extension building - immediately adjacent to the existing Emergency Department, visitor car parking and associated footpaths and a small area of landscape amenity. The roof level of the existing hospital (Zone 10, the Diagnostic & Treatment Block and Zone 20, Inpatient Blocks), has also been included within the red line boundary.



Site location plan

While the application site is located adjacent to an extensive complex of built development associated with the existing GUH, it sits within a wider context of open countryside and agricultural land. Special Landscape Area C2/2 South Eastern Lowlands lies directly to the east of the application site, and is designated for its high quality landscape and rolling agricultural lowland landscape, meaning it is protected from any development that would harm the individual and distinctive features of the area.

To the north, the site lies adjacent to existing farm buildings which sit outside the Special Landscape Area.

The hospital campus is located to the east and south-east of the town of Cwmbran, with the town centre to the west and train station to the north-west. The site is accessed from a roundabout on Caerleon Road which was brought forward as part of construction of the GUH, and has two arms serving the hospital. The northern arm runs towards the existing ED building and current application site, and is used as a dedicated access for emergency arrivals; while the southern arm runs towards a larger area of visitor and staff car parking located to the south of GUH, next to the hospital's main entrance.

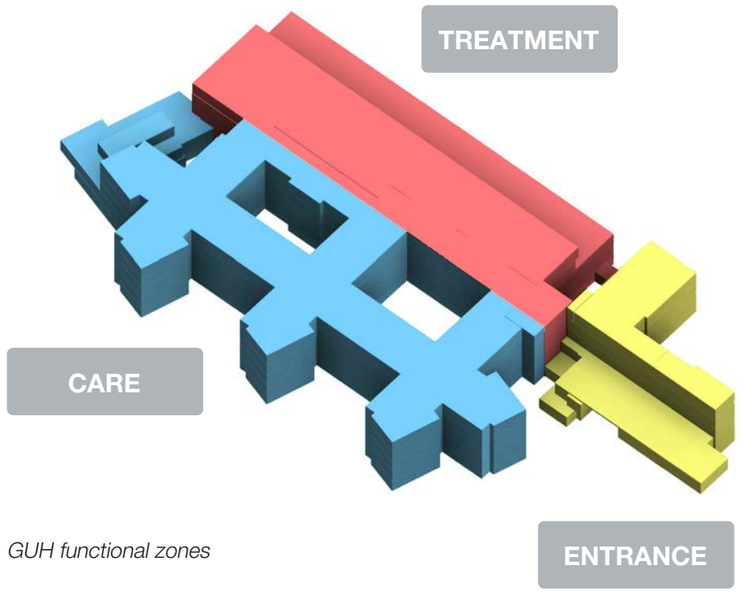
The hospital was granted outline planning permission in 2012, Reserved Matters in 2015, and opened in November 2020 to provide specialist critical care services for the most seriously ill patients in Gwent.

GUH has an 'unbundled' building typology with the Diagnostic & Treatment Block and Inpatient Units (IPU's) strategically separated to the east and west of the central services spine and stacked vertically. This enables the differing requirements of the two areas to be addressed with maximum efficiency in terms of both the structural engineering and building services strategies without compromising on the departmental arrangements.

The GUH is divided into 3 functional zones, Diagnostic and Treatment, Care and Entrance each containing multiple departments.

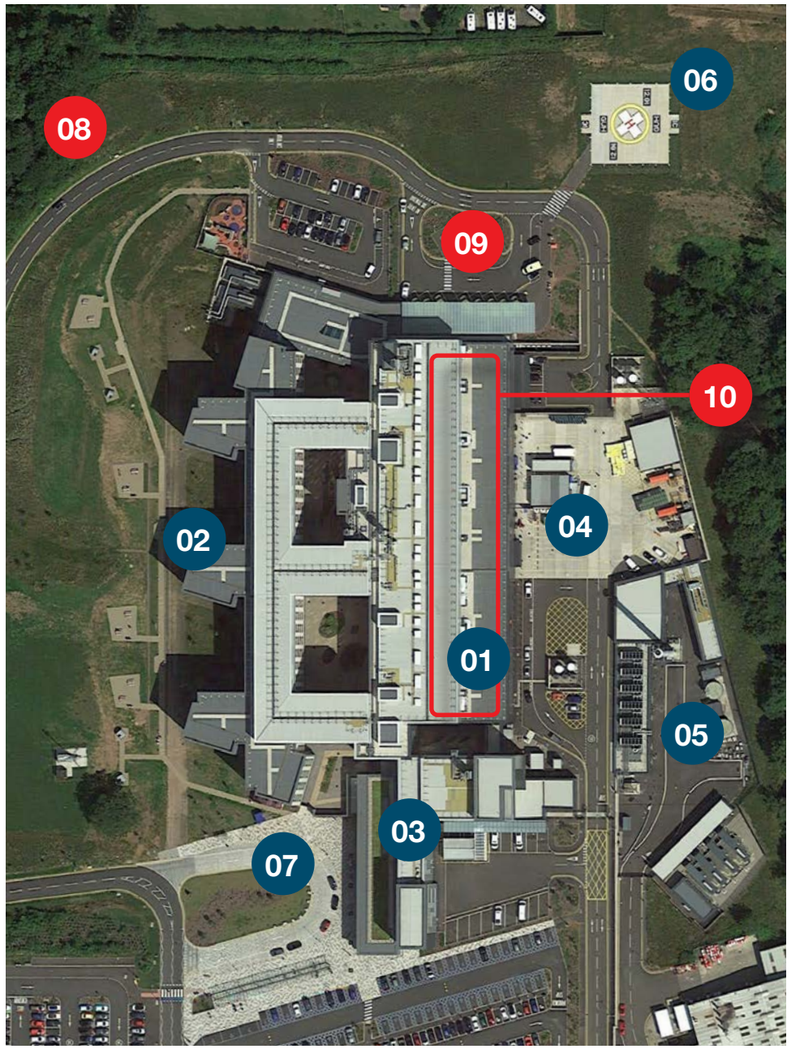
The zones are distinct in their function as well as their appearance and are sited to maximise the clinical efficiency and patient environment.

1. Treatment Zone (10): comprises technical and service areas such as Facilities Management, Emergency, Imaging and Theatres.
2. Care Zone (20): consists mainly of inpatient beds and is sited to make the most of views to the west
3. Entrance Zone (30): all public facilities have been grouped together, so the offices, education and restaurant areas can be accessed before entering the core clinical space.



GUH functional zones

2.2 Clinical context and locational requirements



01. Zone 10 diagnostic and treatment block
02. Zone 20 inpatient units
03. Zone 30 entrance block
04. Service yard (L0)
05. Energy centre
06. Helipad
07. Main entrance (L0)
08. Dedicated ED access road
09. ED + ambulance drop off area
10. Existing Emergency Department (L01)

Clinical staff have been involved in developing the position and layout of the proposed extension, which is designed around the clinical / patient flow and organised to provide the most rapid and efficient access for patients to treatment. The location has been chosen on the basis of its immediate adjacency with existing emergency treatment and the requirement for Part M compliant access between the two, and the accessibility of this for 'walk-in' adult patient and carer arrival by car. Local ED parking is essential as is separation of the pedestrian routes and parking from the ambulance arrival and patient transfer.

The location for the proposed building was first identified in the Planning Design and Access Statement accompanying the Reserved Matters application for the hospital (ref. 15/P/00097) as potential expansion space, assumed as potential Childrens Assessment Unit (CAU) temporary accommodation at that time in the event of Inpatient Expansion. The pandemic and increasing pressure on demand for emergency care has determined the priority for expansion of the Adult ED service.

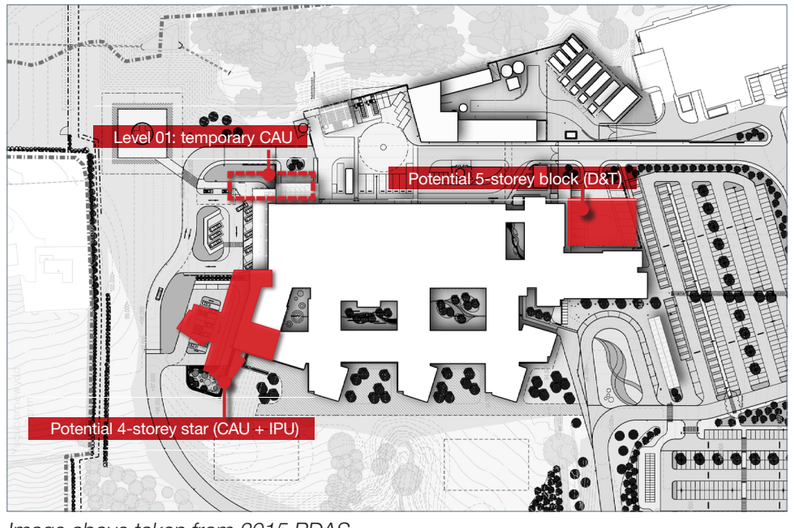


Image above taken from 2015 PDAS

The location of the proposed extension is as close as possible to existing parking associated with the ED, for which retrospective permission is being sought as part of the current planning application, while also accommodating the constraints of the ambulance access, the helipad and operational requirements for the mortuary.

An ecology habitat survey has been undertaken, and confirms that there are no significant ecological concerns or constraints associated with the proposals, subject to appropriate mitigation measures.

Location of the Proposed Extension - aerial view from east

Location of the Proposed Extension

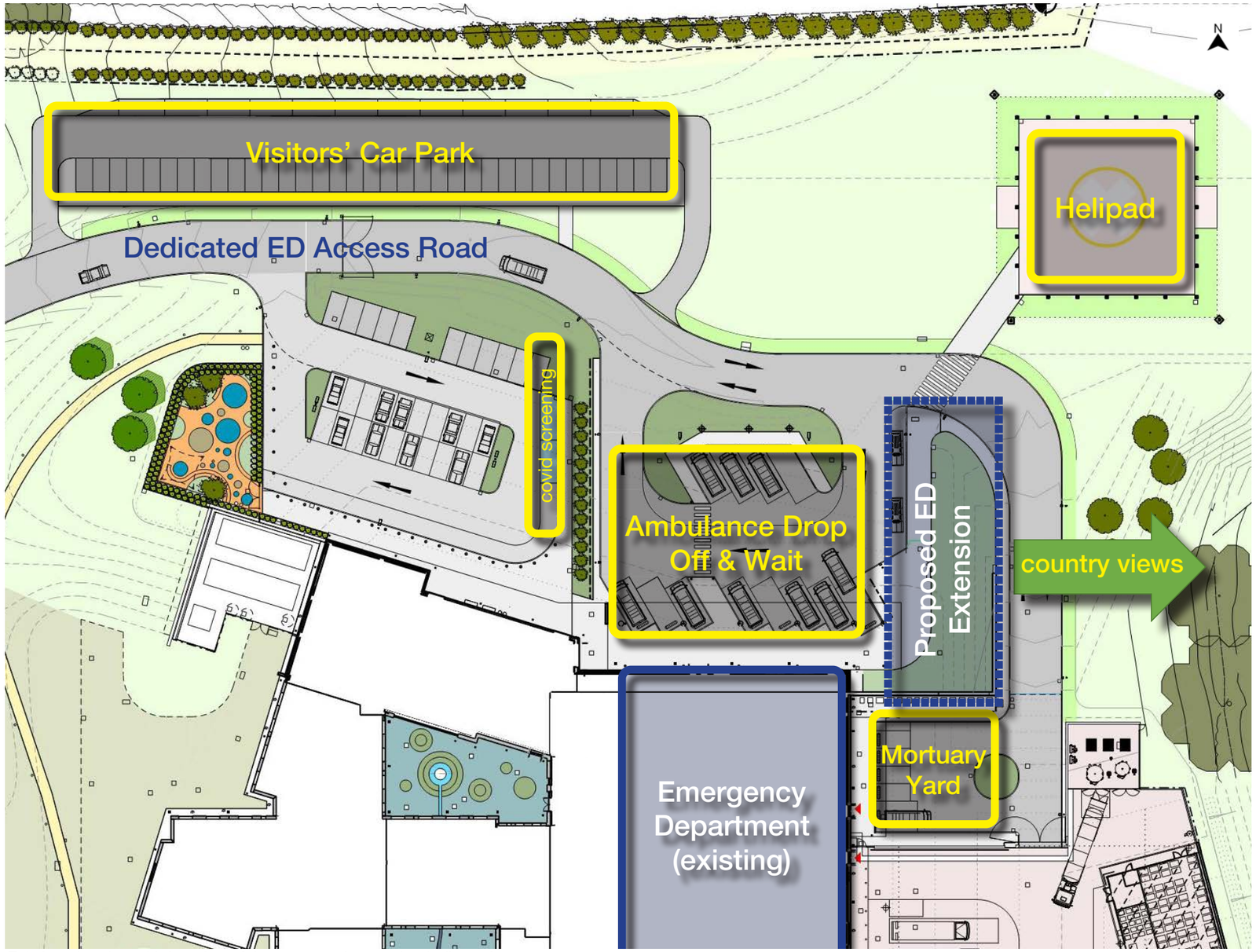
2.3 Site context and features

The site currently consists of an area of low-quality introduced shrub adjacent to the existing Emergency Department, existing ambulance and car parking, and a children's play garden; as well as the rooftop of the existing hospital.

58 of the existing car parking spaces on site (47 spaces to the north of the ED access road, and 11 spaces to the south) were not included in the original GUH consent. The current application therefore seeks retrospective permission for these spaces.

The site lies adjacent to the hospital's mortuary yard and associated access road to the south and east, and helipad and ambulance parking to the north and west.

A large number of chiller units serving the mortuary are located at the lower level, adjacent to the retaining wall which forms the southern edge of the site.



Existing site plan with location of the proposed extension indicated

2.4 Architectural Context

- The site for the proposed extension is at the northernmost end of the Diagnostic & Treatment block
- When viewed from service yard level the D&T block is a 120m long, 3 storey volume, clad in black composite panels with ribbon windows and contrasting orange /red spandrels. Set back from the long east facing facade is the two storey composite clad plantroom, separated from the lower mass by the continuous glazing of the maternity floor.
- The black composite cladding continues along the eastern façade underneath a glazed canopy
- A 4 storey strip of curtain walling indicates the stacked hospital streets which run north - south and separates the Diagnostic & Treatment block from the star shaped, precast concrete clad inpatient units.
- The single storey Children's Assessment Unit (CAU), visible in the foreground of the adjacent photo, has large areas of full height glazing to its waiting area below an extended canopy beyond which the facades are clad in silver composite panels and square window openings with coloured spandrels - referencing the elevational proportions of the Inpatient Units (IPUs).

Location of the proposed extension in the foreground with Diagnostic & Treatment Block beyond

Existing ambulance drop-off and ED entrance with CAU entrance in the foreground

Grange University Hospital: Emergency Department Extension

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03

Design Development

3.0 Design Development

The Design Team was appointed by the Health Board in late 2022 since which time the proposals have been developed via an iterative process including weekly meetings, regular drawing issues and feedback from ABUHB stakeholders.

Throughout this development process constraints and opportunities have been identified and the following design principles have been established:

- Optimise the site to deliver the maximum floor area for waiting and meet the needs of the existing numbers of walk-in patients
- Observation of the waiting area from a defensible reception, centrally located, adjacent to main entrance and with control of access between waiting and triage areas
- Whilst the height of the new building will be dictated by the structural frame and servicing requirements, the scale of the and perceived mass should respect the context of the existing building
- Ambulance drop off area to be maintained at, or near to, full capacity both during the construction phase and on completion
- The point of entry for walk-in patients should be clear and legible from the car park and approach road.
- Architectural language and materiality should respect and to respond to both the existing GUH and be appropriate for a “Front Door”.
- Safe, accessible, routes to be provided between the car park and main entrance
- Dignity /privacy to be considered for both the ambulance area and the mortuary
- Optimise access to views across the open landscape to the east
- Provide flexible and adaptable first floor office accommodation releasing space within the existing hospital for clinical use
- New models of care to be facilitated in the reconfigured internal areas
- High performance building fabric with passive solar control

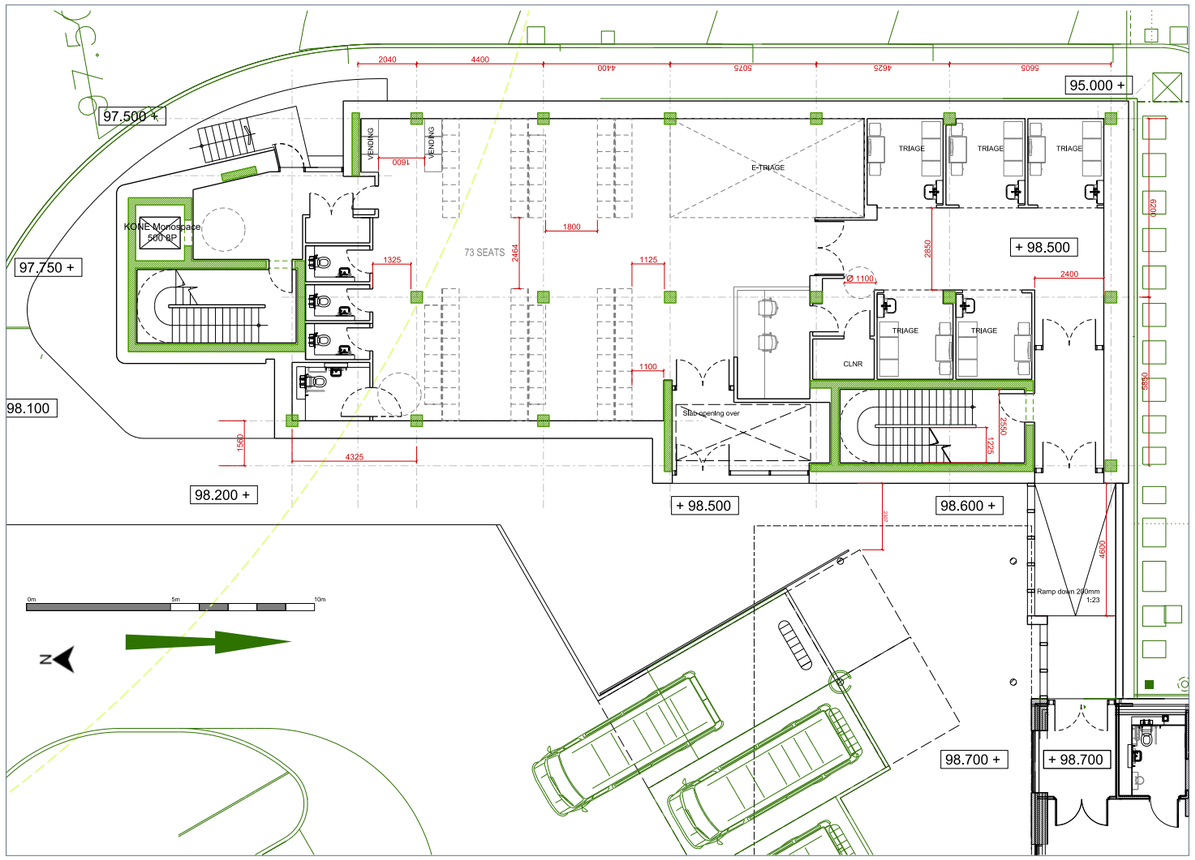
Key Dates

- October 2022: Project Inception
- January 2023: RIBA Stage 01 complete
- March 2023: RIBA Stage 02 complete
- May 2023: RIBA Stage 3 complete

Stage 01 L01 layout with entrance on the northwestern corner of the building, reception remote from triage area

Initial design studies undertaken in RIBA Stage 1 and illustrated on the previous page, proposed an entry point on the northernmost tip of the new extension, optimally located for visibility on approach from the visitor car park and access routes. However, during engagement with ABUHB stakeholders, it became apparent that the location of reception on the opposite side of the waiting area from controlled access to the triage area would not be acceptable and that the entrance should be centrally located on the western elevation.

In order to mitigate the reduced legibility of an entry in this location and dignity issues related to to proximity to ambulance unloading, an extended entrance canopy with vertical screening was incorporated into the proposed design.



RIBA Stage 02 L01 layout with entrance relocated centrally on the western elevation controlling access to the triage area

RIBA Stage 02 Visualisation indicating proposed extended canopy aiding legibility of entrance - February 2023

Final design visualisation of main entrance and canopy, with projecting entrance lobby facing the approach, screened from the adjacent ambulance bays and large format signage at high level.

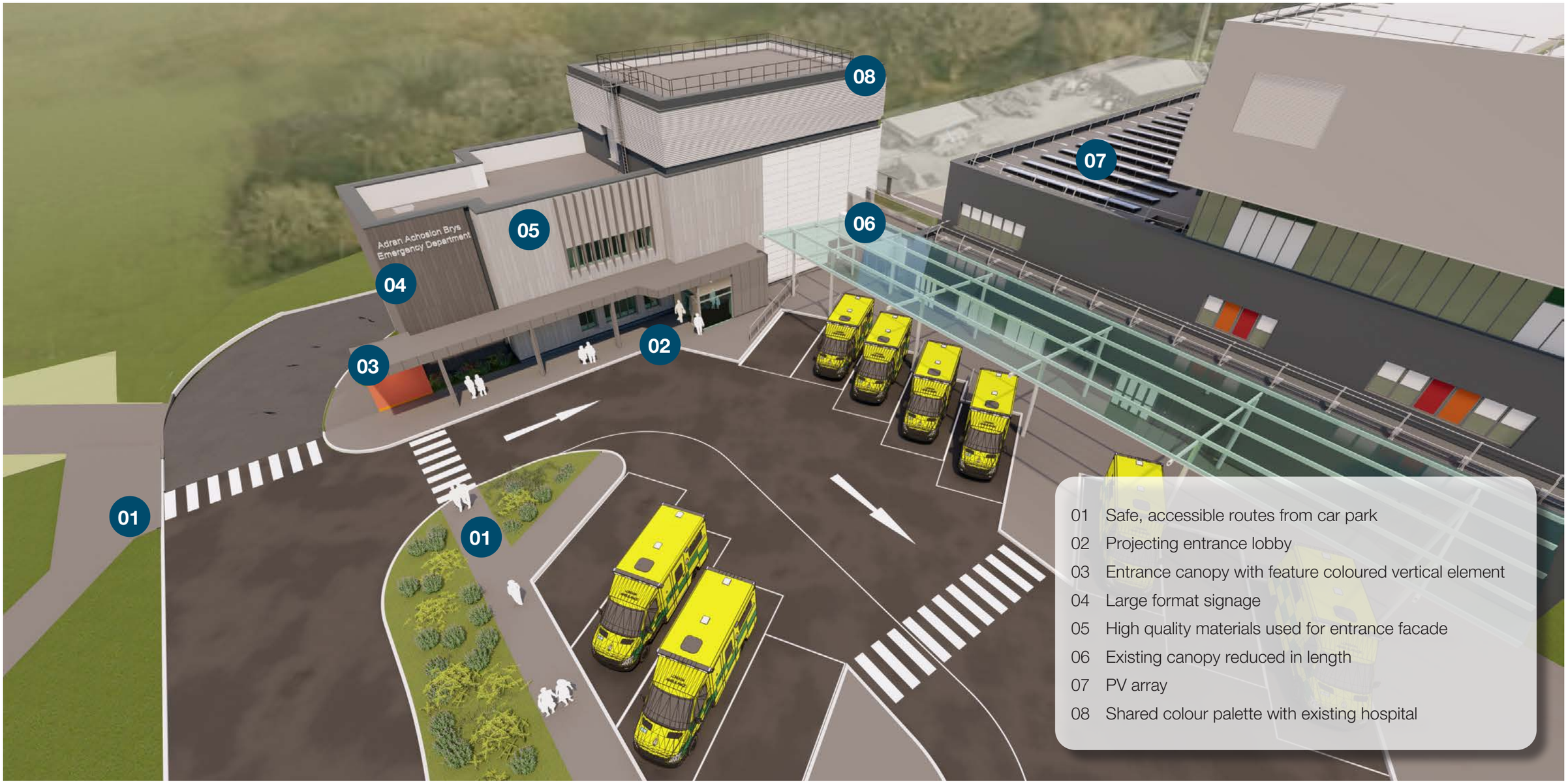
04

Proposed Design

4.0 Proposed Design

The proposed design illustrated and described within this section represents the response to the key design principles identified throughout the design development phase.

The following aspects of the proposals are outlined: amount;layout; scale; appearance; materiality and landscaping



Final design visualisation of main entrance and canopy, with projecting entrance lobby facing the approach, screened from the adjacent ambulance bays and large format signage at high level.

4.1 Amount

The proposed ED extension will provide accommodation in a new building over three floors:

- L01 provides ground level access from the pedestrian footpath from the ED parking and has a single storey corridor linking into the existing building which provides patient and staff access from the proposed Adult ED Waiting and Triage rooms to the existing Emergency Department Treatment Zones.
- L02 is the proposed upper floor providing clinical office and meeting rooms. This is a staff only floor.
- L03 fully enclosed air handling plant room with an adjacent area of flat roof

Gross Internal Floor Space: 954m²
L01 383 m²
L02 361 m²
L03 210 m² (enclosed engineering plant and stair access)

Gross External Floor Space: 1157m²
L01 475 m²
L02 435 m²
L03 247 m² (enclosed engineering plant and stair access)

Area Plans

4.2 Layout

The proposed Adult ED Wait and Triage building (hatched in red) is located immediately adjacent to the existing Emergency Department giving a direct patient and staff route from the proposed waiting and triage rooms to the emergency treatment zone. The new building is oriented towards the pedestrian route from ED car parking and organised to reflect the patient flow from waiting through triage and on to treatment.

The trolley route from the Helipad adopts a shared road crossing point with the route from the ED car park - although access is controlled during aircraft take off and landing and a temporary road closure is imposed, managed by the Health Board. The route allows for the most direct, level approach to the ED for patients arriving by car and the crossing point avoids conflict with the ambulance traffic, separating the blue light route from the visitors and patients accessing the new ‘walk in’ Adult ED Waiting and Triage entrance.

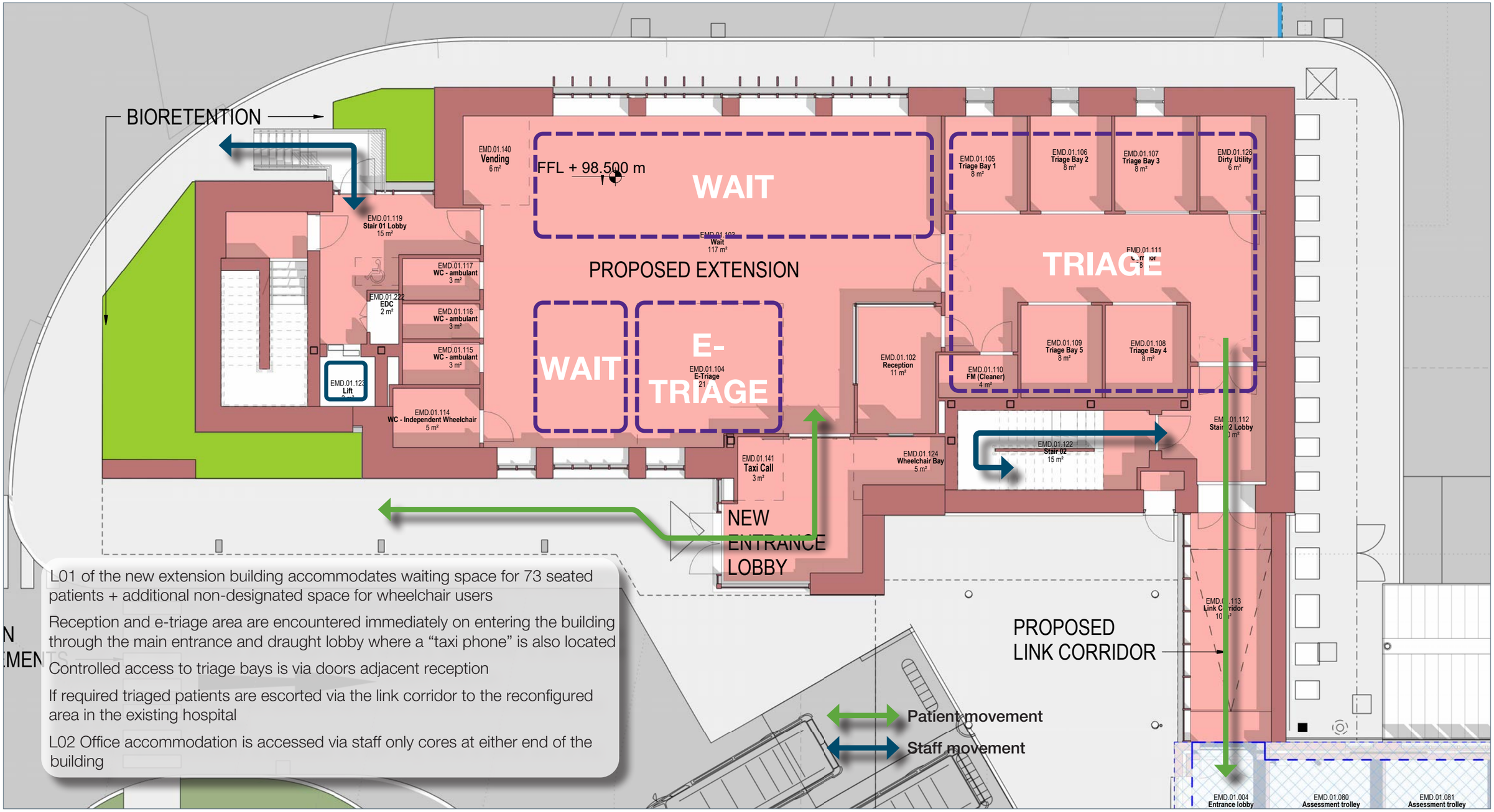
At first floor level (L02), clinical office and meeting room accommodation for the ED department is provided, offering opportunity to relocate office functions that are within the current clinical zone and thereby providing additional treatment space.

Views out from the proposed patient waiting space are oriented to the distant countryside views to the east. Windows facing west are obscured to restrict views into the ambulance drop off area. To the south the existing lower ground floor Mortuary and Service yard are not overlooked from the main building, windows in the link corridor at high level and obscured.

On arrival, ‘walk-in’ patients and carers arrive at the ED reception and e-triage kiosks, provided to ease patient registration and queuing.

Minor alterations to the ambulance bay road access and the existing ambulance bay canopy will be undertaken in order to accommodate the new building. The hardstanding for a temporary MRI will be relocated to accommodate road realignment and the ambulance bay canopy will be reduced in length in order to allow the new building to be constructed. External lighting of the footpaths and road crossing will be implemented in a suitable form to meet the restrictions placed by the proximity of the helipad on lighting pole height.

The substructure for the new building has been designed to avoid removal of the existing retaining wall to the south which bounds the lower- ground floor Mortuary Access and supports a large number of condensers which serve the mortuary cold storage. The design approach also minimises the impact on the day to day hospital operations. A temporary construction logistics compound will be formed on the opposite side of the mortuary access road to provide the necessary site set-up, welfare and storage.



L01 of the new extension building accommodates waiting space for 73 seated patients + additional non-designated space for wheelchair users

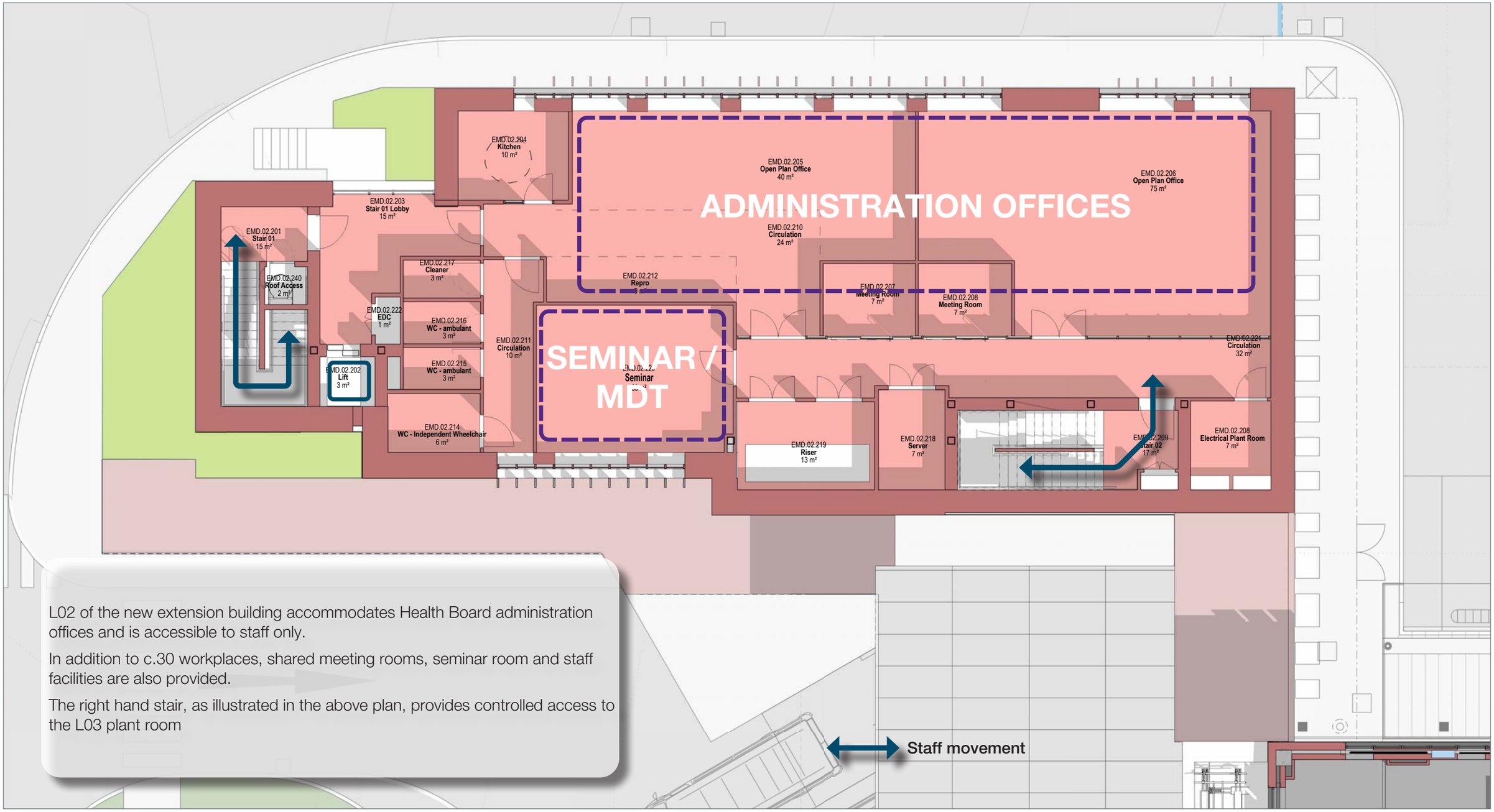
Reception and e-triage area are encountered immediately on entering the building through the main entrance and draught lobby where a “taxi phone” is also located

Controlled access to triage bays is via doors adjacent reception

If required triaged patients are escorted via the link corridor to the reconfigured area in the existing hospital

L02 Office accommodation is accessed via staff only cores at either end of the building

LEVEL 01: New Build

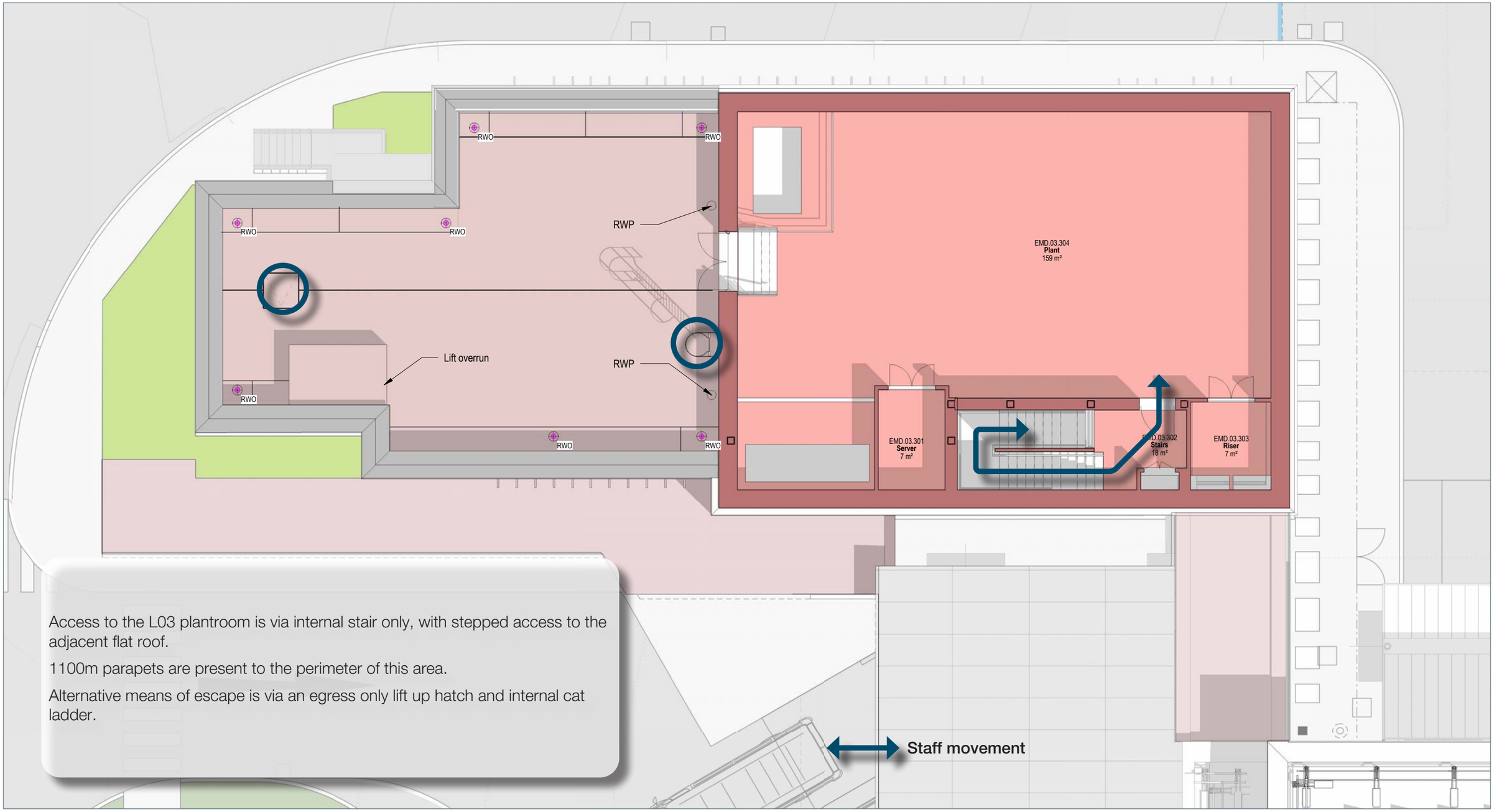


L02 of the new extension building accommodates Health Board administration offices and is accessible to staff only.

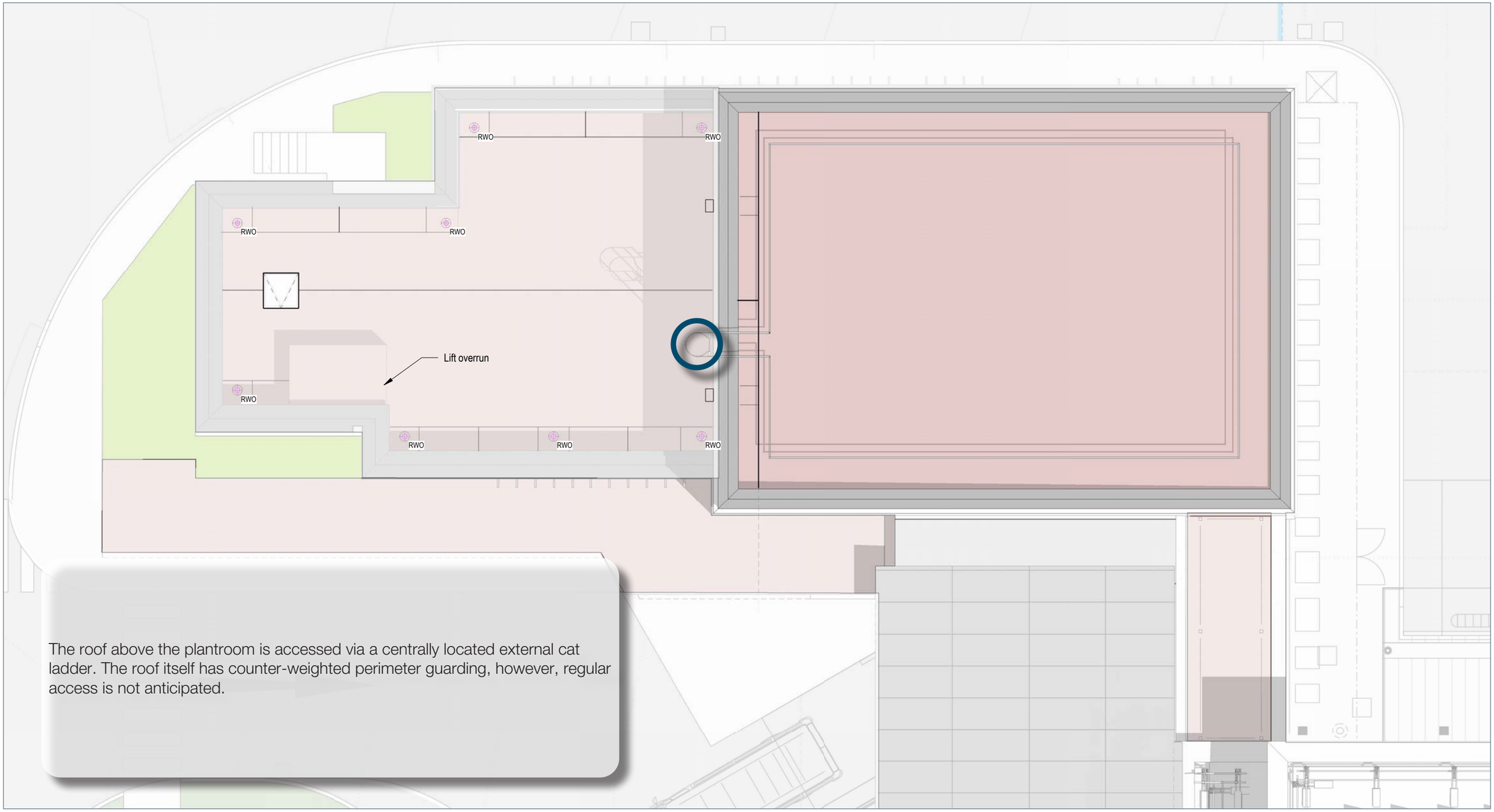
In addition to c.30 workplaces, shared meeting rooms, seminar room and staff facilities are also provided.

The right hand stair, as illustrated in the above plan, provides controlled access to the L03 plant room

LEVEL 02: New Build

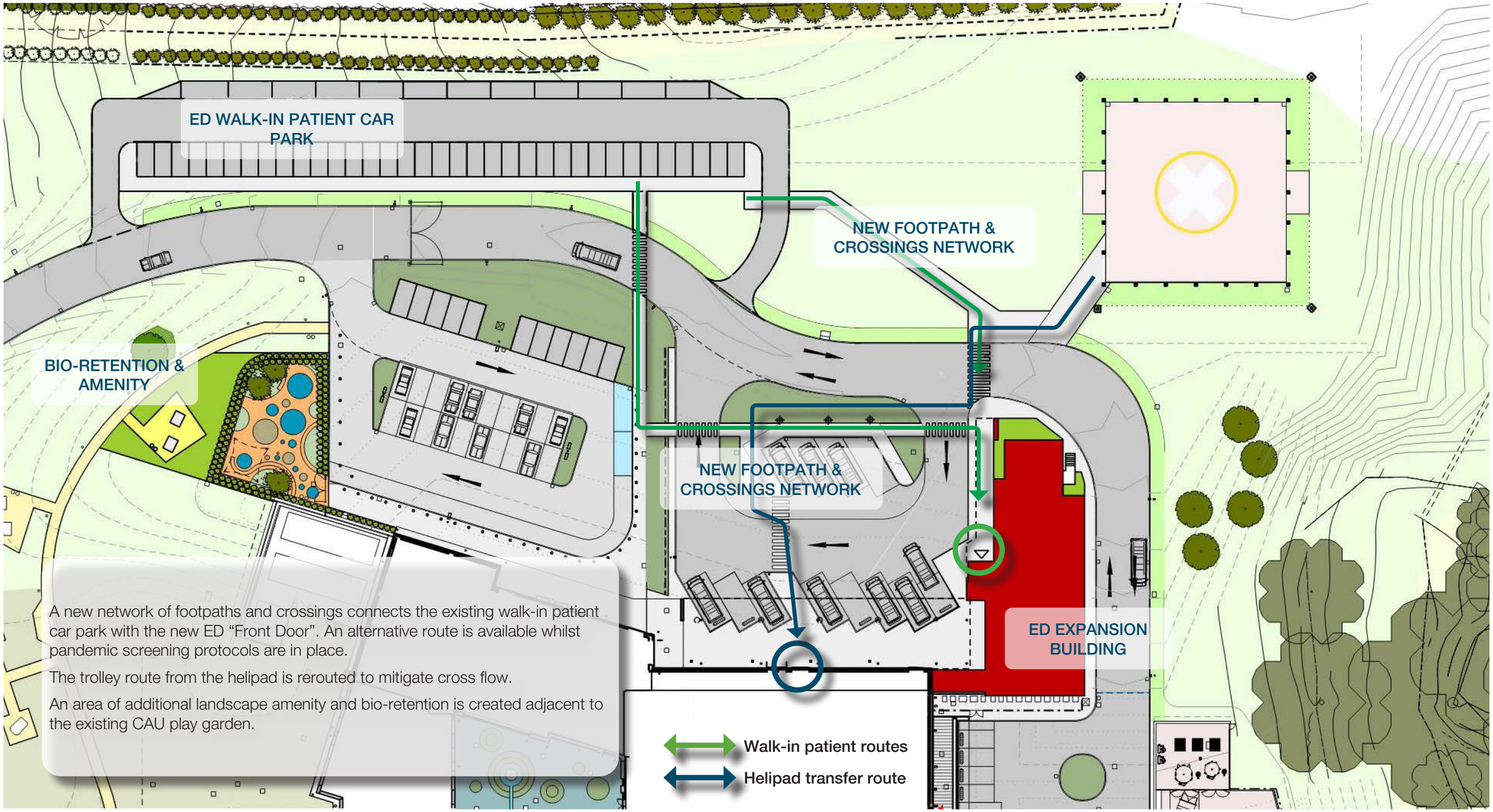


LEVEL 03: New Build



The roof above the plantroom is accessed via a centrally located external cat ladder. The roof itself has counter-weighted perimeter guarding, however, regular access is not anticipated.

ROOF PLAN: New Build



PROPOSED SITE PLAN

4.3 Scale

The new extension is two storeys high, with a partial third storey comprising a fully enclosed plant room. Floor to floor heights are 4.265m and dictated by the need for engineering services distribution associated with the Health Board's clinical requirements.

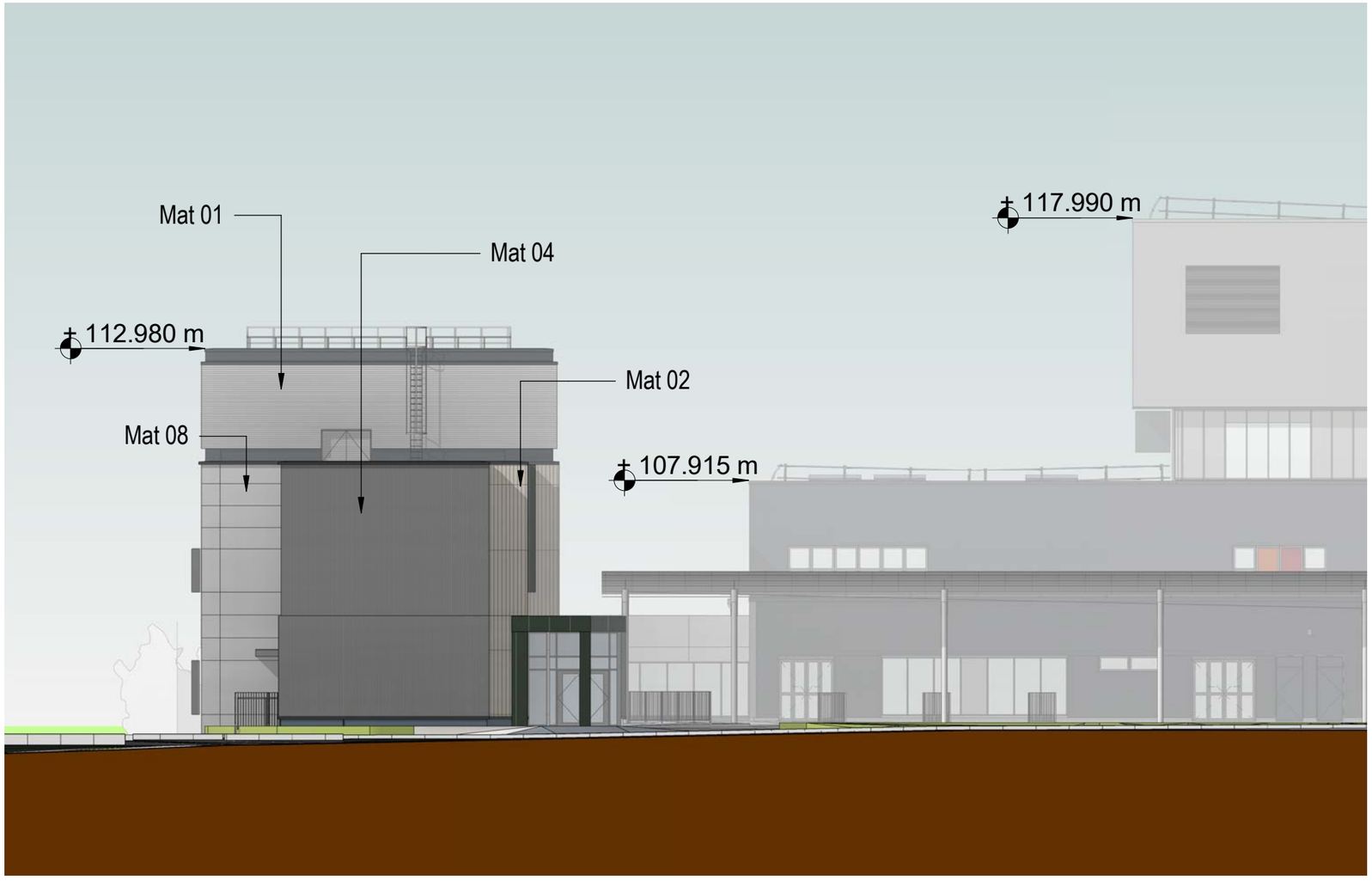
The two storey element, viewed from the western approach, is 10.130m high (AOD 108.630), 0.715m higher than the adjacent Diagnostic and Treatment block of the existing hospital (AOD 107.915), the plantroom rises to 14.480m (AOD 112.980), significantly lower than the highest part of the existing hospital (AOD 117.990). As the mortuary access road wraps around the building to the north and east the ground slopes quickly and as a consequence, when viewed from the south the new building is 4.010m higher.

The footprint of the building is constrained by the existing roads/ footpaths and the retaining wall to the mortuary service area to the south - the available floor space has been maximised within this available site in order to achieve the Health Board's requirement to gain as much space as possible for Adult ED Waiting and Triage.

The L01 storey height meets the minimum recommended ceiling height of 2.7m for healthcare buildings and the floor to floor height allows for a 750mm ceiling void to accommodate the ducts / sprinklers / lighting etc. and a zone for the ceiling system

L02 will provide both open plan and enclosed offices, plus meeting rooms, and would benefit from a 2.7m ceiling within the open plan office area. The L03 engineering plantroom height is dictated by the enclosed air handling units and the plant enclosure has been set back to the south of the proposed building in order to be set against the backdrop of the existing hospital buildings, reducing the height of the new building at its northern end.

Level Access to the new Adult ED Building's entrance places L01 finished floor level at 98.500 to avoid steps or ramps from the existing external pedestrian routes. This is 200mm lower than the existing hospital L01 First Floor Level with the difference being resolved internally within the linking corridor between the new building and existing hospital.



In the distant views into the site the proposed building is seen against the backdrop of the existing hospital and is lower than the existing building's sky line. The architecture follows the principles set by the existing hospital building - expressed roof level engineering plantroom enclosure above the accommodation levels.

A canopied pedestrian route for ED walk-in patients extends along the west facade of the proposed building in order to define the route to the ED walk in entrance and provide weather protection and screening of the ambulance bays. The canopy also signals the pedestrian access when viewed from the ED Car Park - reinforcing the location of the walk in entrance to provide orientation for ED patients/visitors. In addition, this lower horizontal element serves to reduce the perceived scale of the building at the point of entry, reinforced by the use of small format cladding panels.

Colours and materials are selected to echo the existing building's treatment, with detail and material interest provided at the pedestrian level, while also reducing the perception of a single mass with the existing hospital. Large scale signage and vertical fins above the entrance canopy aid wayfinding when viewed from distance.

4.4 Appearance

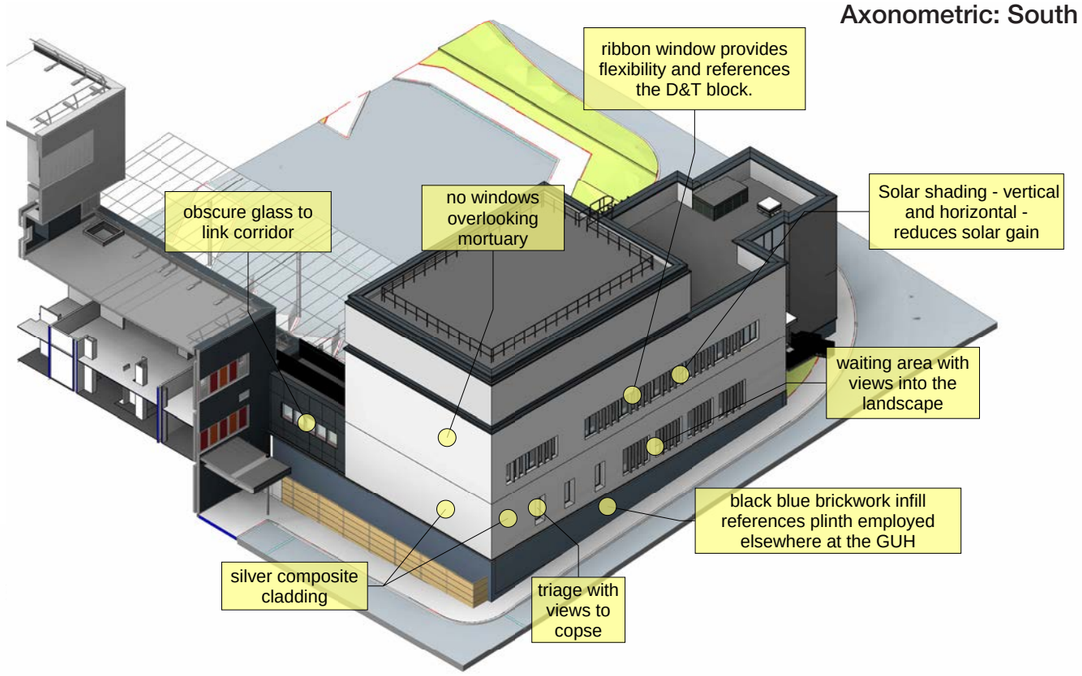
Whilst the form of the building responds to its internal functional content, other factors such as the existing site context and materiality have all influenced the appearance of the building.

Legibility of the entrance, dignity for patients arriving by ambulance, optimising views to the Monmouthsire hills, flexibility and solar control have all been considered.

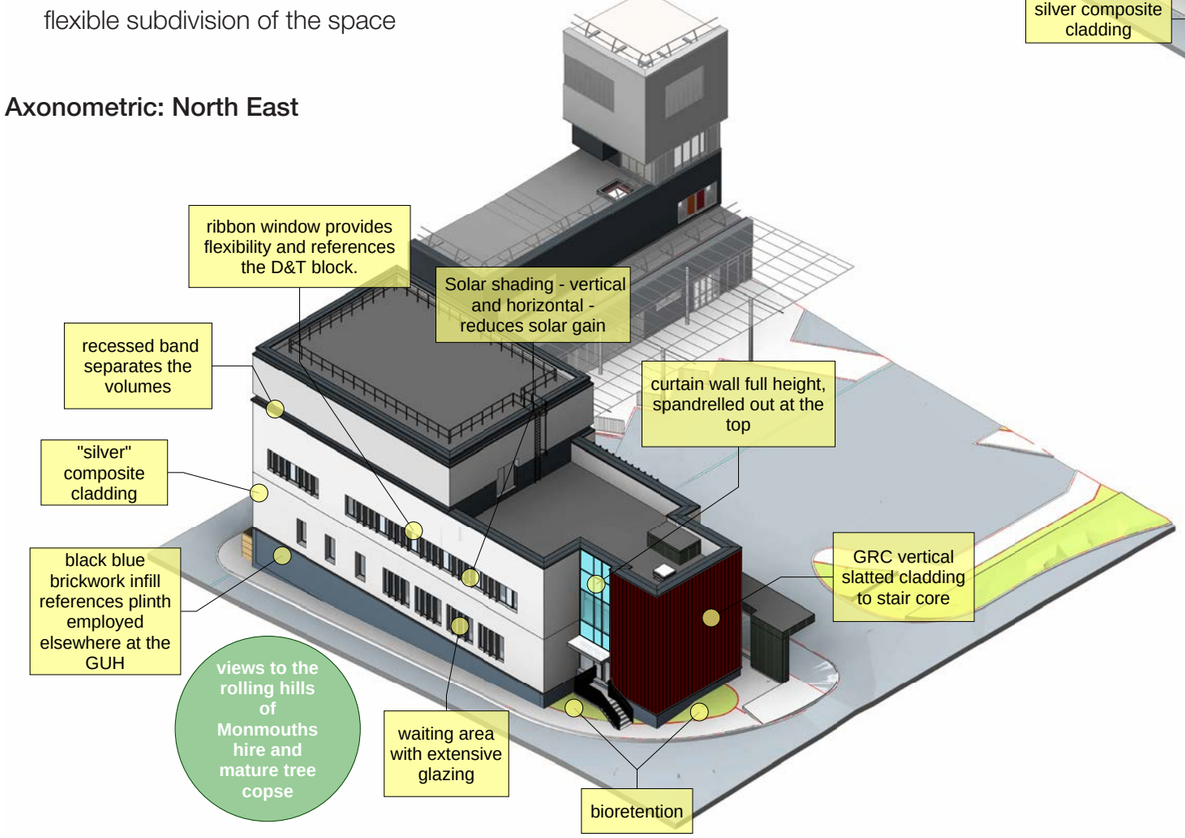
Design Principles:

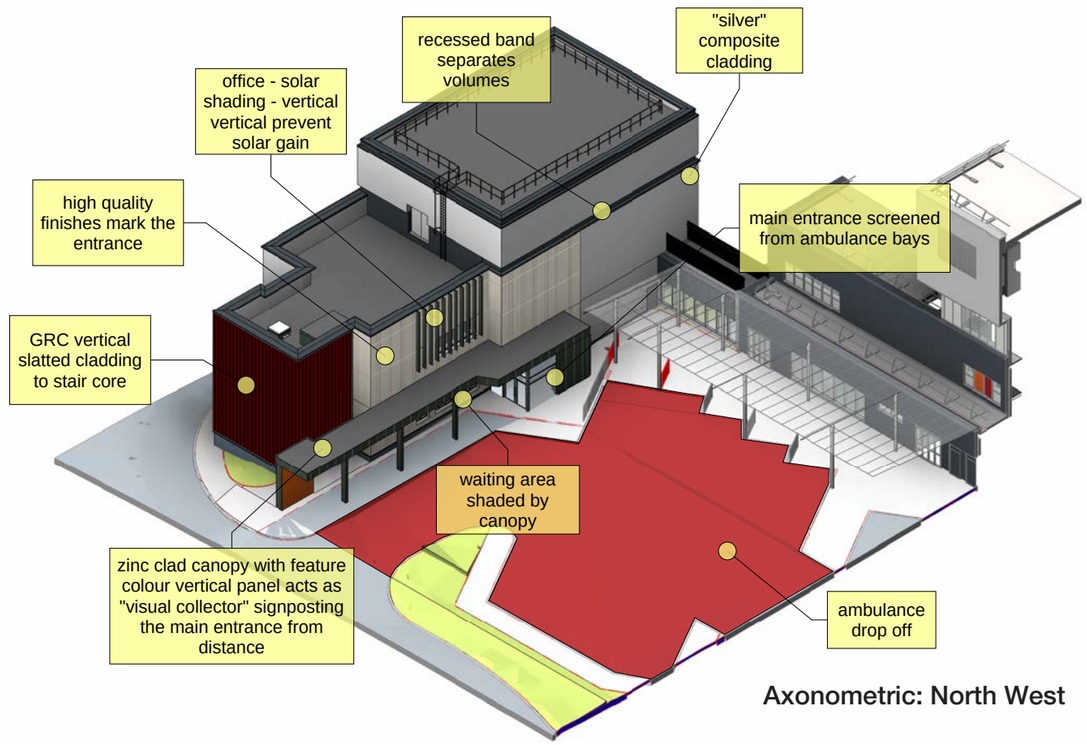
- Building mass to be broken down into separate volumes referencing the Diagnostic & Treatment block
- Entrance canopy humanises the scale at the point of entry and extends the length of the building. Its distinct materiality further signposts the entrance ,aiding legibility when viewed from the visitor car park.
- Ambulance bays screened from entrance lobby maintaining dignity for patients transferring to the ED
- Ribbon windows to the L02 office accommodation allow for flexible subdivision of the space

Axonometric: South East



Axonometric: North East





Axonometric: North West

The choice of materials is influenced by the external wall finishes and textures of the existing building's cladding and window systems.

High quality finishes have been selected for the entrance facade, mirroring the palette employed at the entrance of the GUH where horizontally laid GRC planks are juxtaposed with the pre-patinated copper clad sanctuary and zinc fascias set against a metallic panelled background.

A zinc clad canopy extends from the fully glazed entrance lobby with a feature colour vertical panel and soffit, referencing the interior design and wayfinding strategy, drawing the eye of patients approaching by car and on foot.

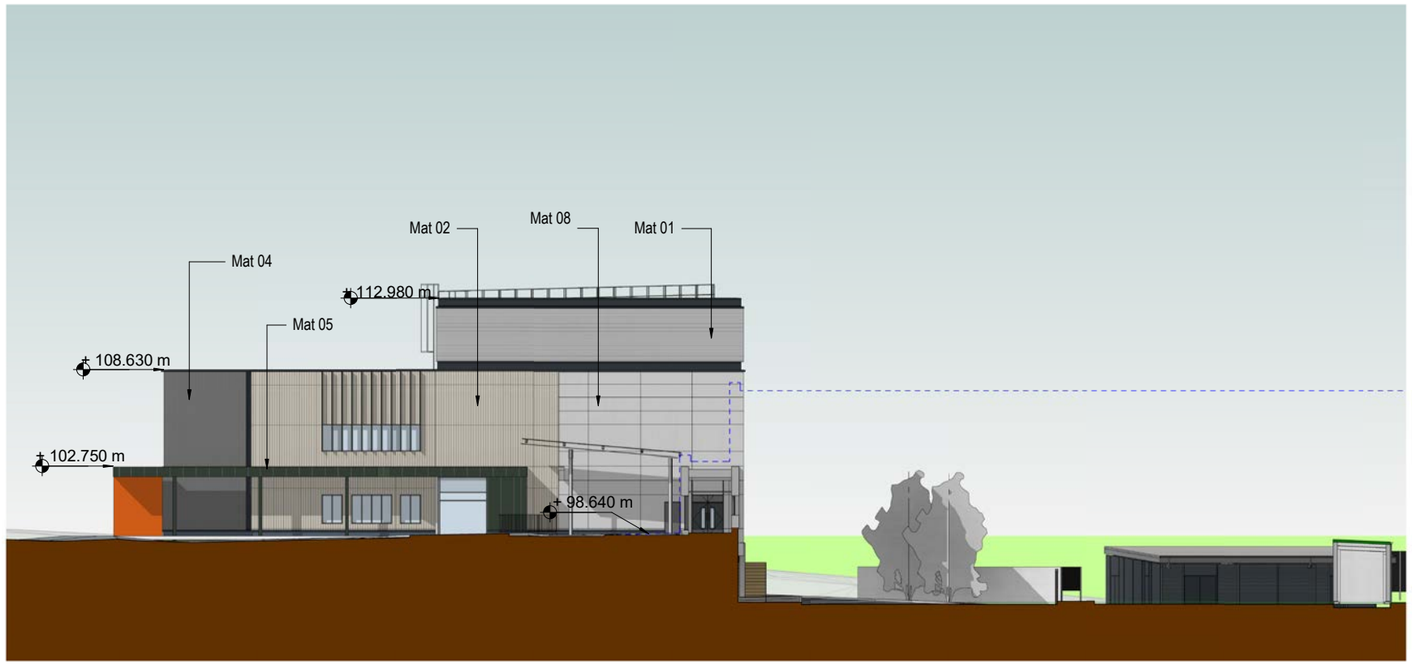
Vertically laid GRC plans clad the northern stair core with large format, backlit, signage at high level. Lighter coloured GRC is used both above and below the canopy with zinc clad solar control fins to the first floor office windows adding further visual interest.

The east facing facade has a higher proportion of glazing taking full advantage of the long distance views to the Monmouthshire countryside and shorter views into the wooded valley on the opposite side of the mortuary access road. The ground floor is raised up which allows glazing in both the triage rooms and waiting area to be almost full height without compromising privacy.

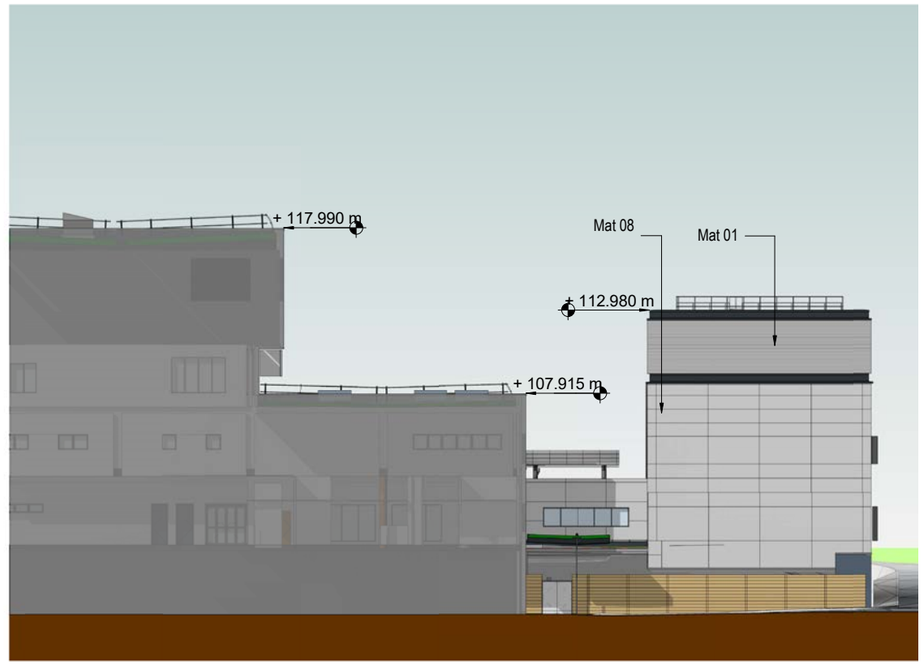
Windows are deeply recessed with vertical fins providing passive solar control. The ribbon arrangement at L02 provides flexibility for subdivision of the office space and future reconfiguration.

The vertical GRC planks wrap around the stair ore, separated from the main facade by a vertical strip of curtain wall. The main facade itself is economically clad in silver metallic composite panels. The lighter colour has been purposely chosen to contrast with D&T facade to avoid further lengthening the elevation when viewed from distance in the winter months.

4.5 Materiality



West Elevation - Proposed



South Elevation -Proposed

MAT01: Performance Louvres:

MAT02: GRC rainscreen cladding

MAT03: Curtain Wall System:

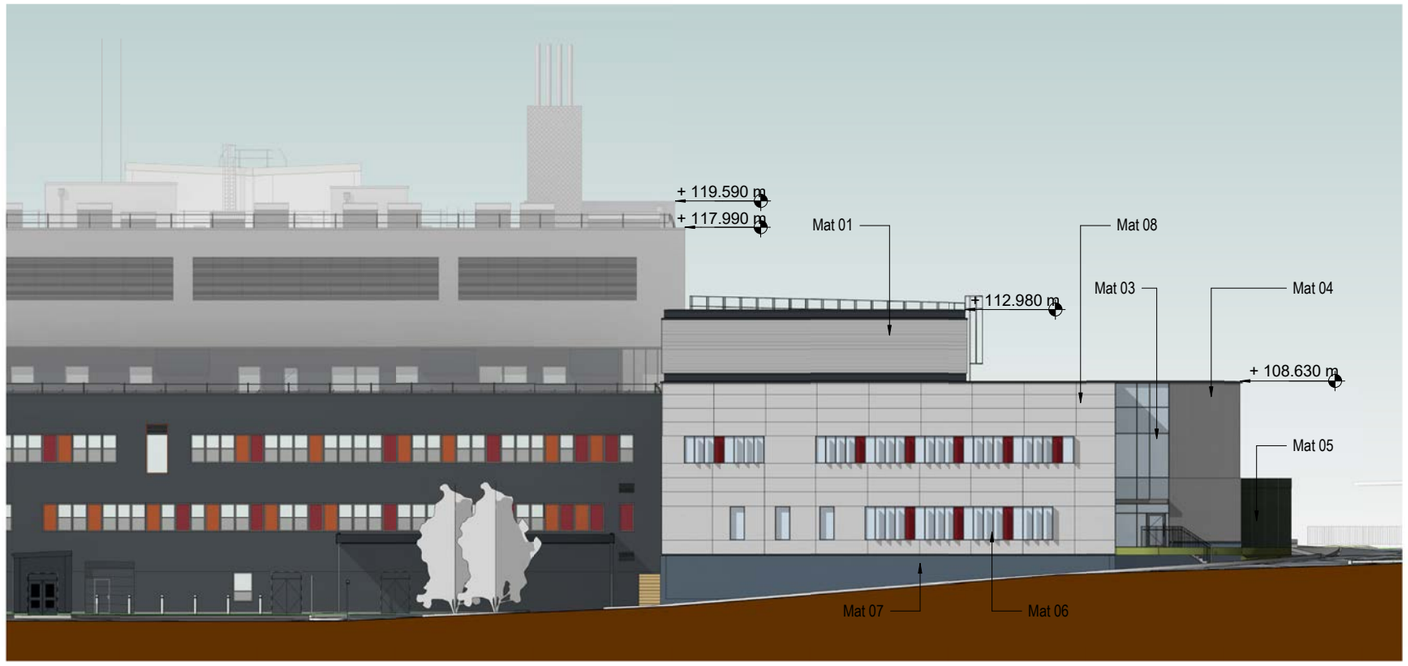
MAT 04: GRC rainscreen cladding

MAT05: - Zinc Coated Aluminium

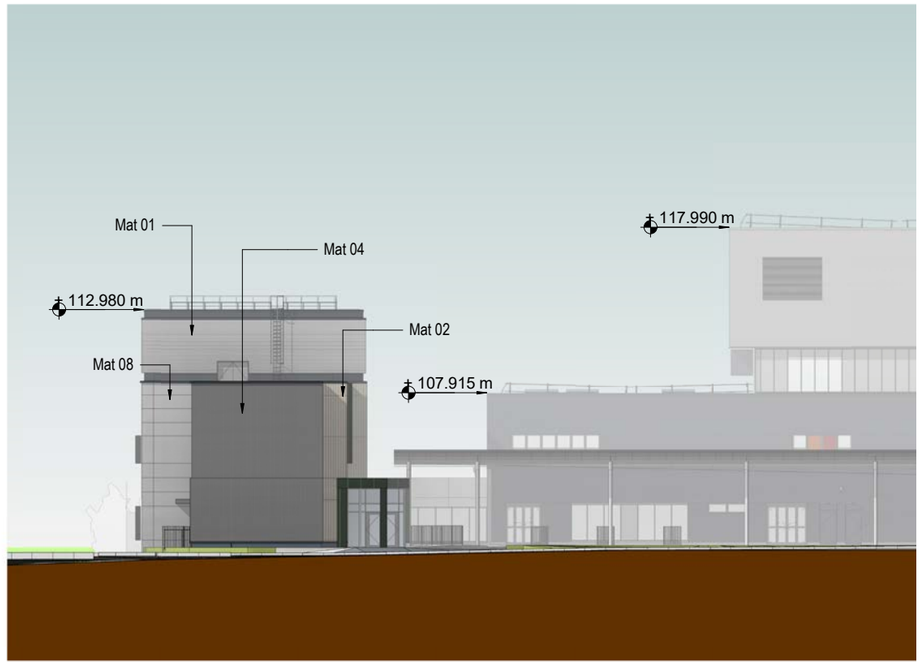
MAT06: Hybrid aluminium timber window system with vertical aluminium control fin

MAT07: Staffordshire Blue Brick

MAT08: Mineral wool core composite panel with pale grey metallic finish



East Elevation - Proposed



North Elevation - Proposed

MAT01: Performance Louvres:

MAT02: GRC rainscreen cladding

MAT03: Curtain Wall System:

MAT 04: GRC rainscreen cladding

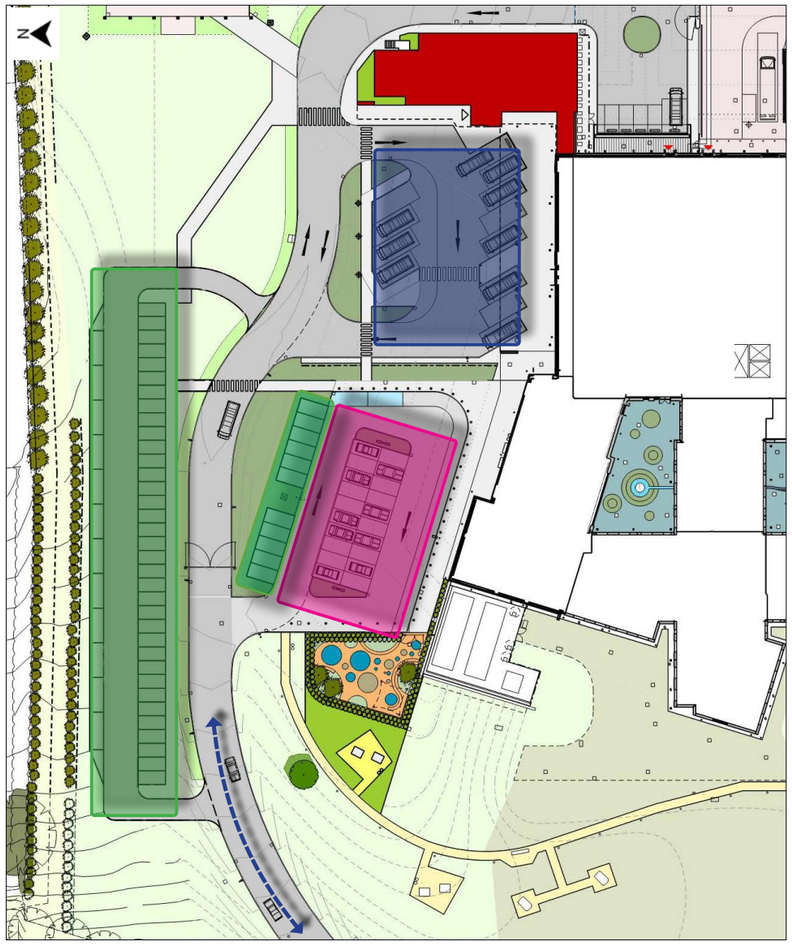
MAT05: - Zinc Coated Aluminium

MAT06: Hybrid aluminium timber window system with vertical aluminium control fin

MAT07: Staffordshire Blue Brick

MAT08: Mineral wool core composite panel with pale grey metallic finish

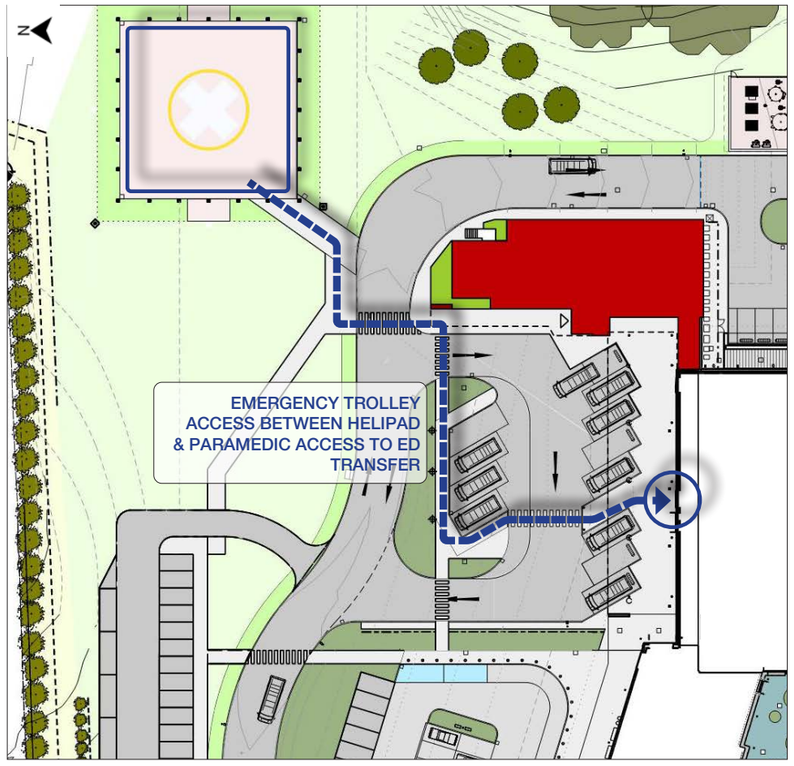
4.6 Access and Parking



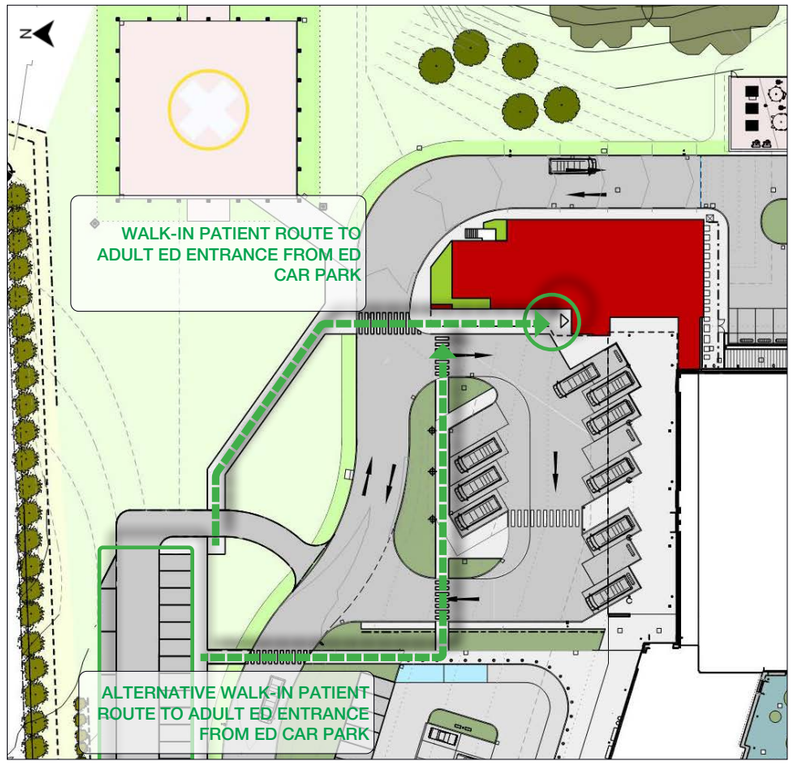
In order to prevent instances of ad-hoc parking, in December 2021 the Health Board constructed 58 new parking spaces to the north of the site (indicated in **green**). These have successfully accommodated demand arising from walk-in cases presenting to the ED, and is proposed to be retained as part of the scheme. These spaces are not currently subject to planning consent, and therefore restrospective planning permission is sought as part of the current proposals.

The proposals retain existing vehicular access to the site along the ED's dedicated access road, and all existing ambulance parking bays (indicated in **blue**).

Existing patient and staff car parking to the west of the ambulance bays will also be retained (indicated in **pink**).

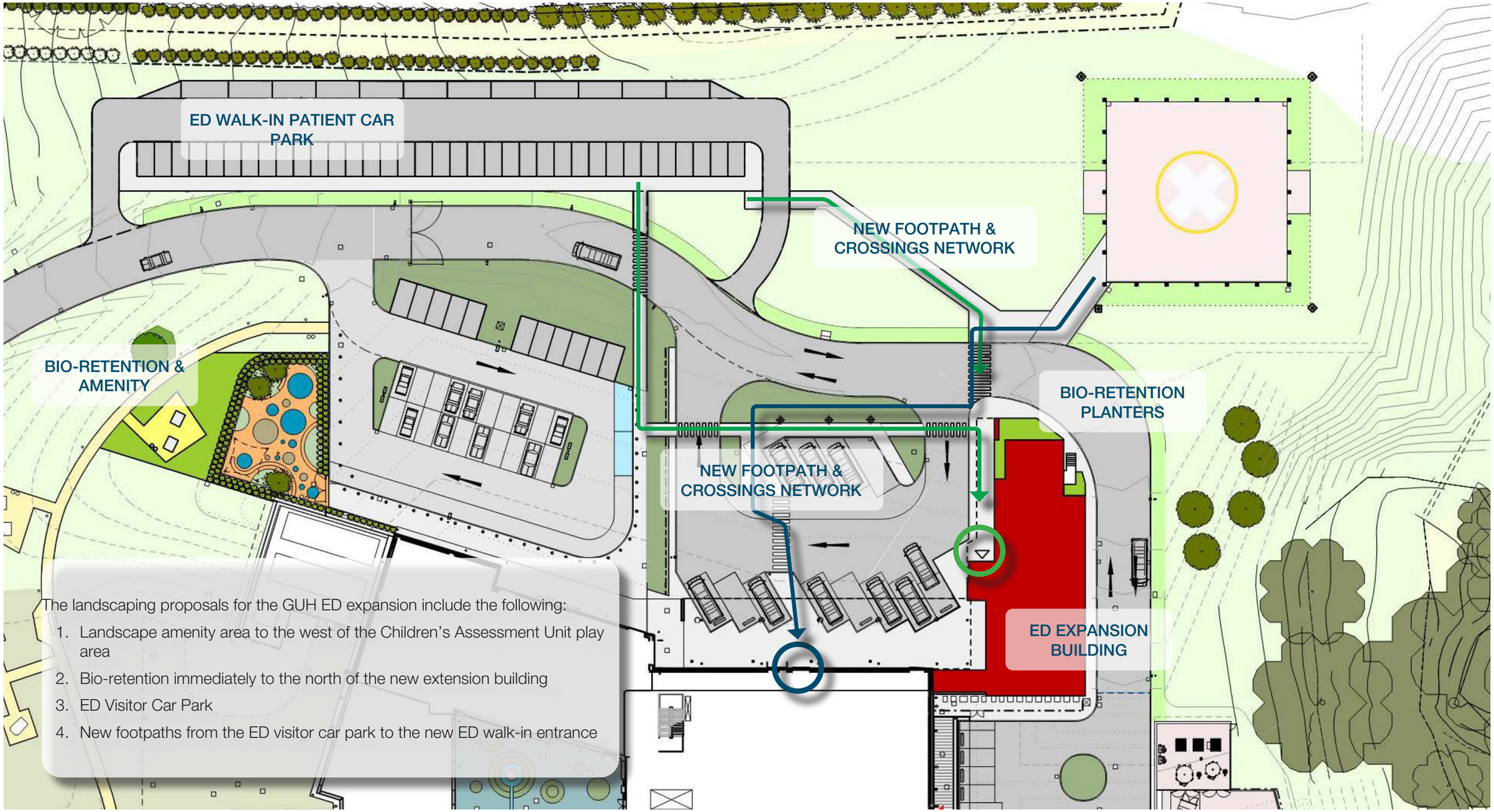


The emergency trolley access route from the Helipad to the Paramedic Transfer entrance is re-routed as illustrated below with new road crossing and modified paths. (Footpaths and road use is temporarily suspended during aircraft take off and landing).



The Walk-In Patient route to Adult ED Entrance from ED Car Park is via a new footway extending from the car park to the road crossing beyond the ambulance bays. This route allows a clear view of the canopied walkway leading to the Adult ED reception.

4.7 Landscaping

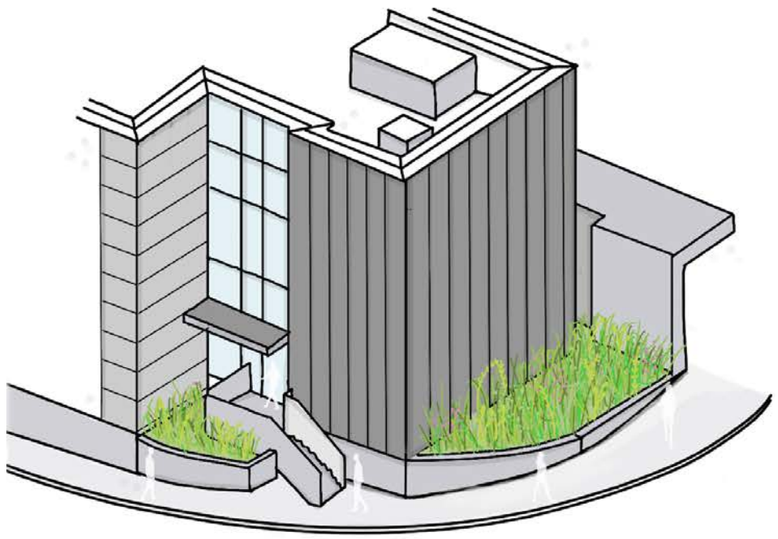


PROPOSED SITE PLAN

1. Landscape amenity and bio-diverse planting

As the proposed development has a construction area of greater than 100m^2, Welsh Government requires that a surface water drainage must be designed and built in accordance with mandatory standards and approved by the Sustainable Drainage Approval Body (SAB). Pre-application advice was sought and a meeting held with SAB representatives on 31st January 2023. It was agreed in this meeting, and subsequently confirmed in writing, that owing to the proximity of the helipad and operational requirements of the hospital the Amenity (S4) and Bio-diversity (S5) could be “offset” - ie located away from the proposed site and offering environmental enhancement as part of the wider GUH site.

The chosen location, to the west of the existing children’s playground, is linked into the existing footpath network from which a number of amenity areas are already accessed. The proposals include an area of resin bound gravel with seating provided. Bio-diverse planting beds are proposed on the edges of the paved area linked into the surface water drainage system.



01. Existing children’s play area accessed from Children’s Assessment Unit
02. Planting
03. Outdoor seating area, resin bound gravel
04. Bio-retention

2. Bio-retention Planters

The WG Statutory Standards for Sustainable Drainage Systems requires that surface water runoff should be “treated as a resource and managed in a way that minimises negative impact of development on flood risk” (S1). Priority Level 1 is that surface water should be collected for use - however rainwater harvesting is not compatible with the clinical environment of a hospital. The second priority level is the runoff should be infiltrated into the ground and bio-retention raised beds are proposed adjacent to the proposed extension as shown in the figure above. The planters will be brick clad and visually integrated with the plinth of the new extension building.

3. ED Visitor Car Park

As discussed above, 58 of the existing car parking spaces on site were constructed in 2021 under emergency Covid regulations and retrospective planning permission is sought as part of the current application. The roadways are finished in impermeable asphalt which directs surface water into the parking bays which are finished in permeable block paviors. A planted swale has been created at the western edge of the car park, for which permission is also sought.

4. Footpaths and Hard Landscape

A new network of asphalt surfaced paths is proposed connecting the ED visitor Car Park to the relocated ED front door.

05

Landscape & Visual Impact Assessment

5.0 Landscape & Visual Impact Assessment

The Grange University Hospital sits within a wider context of open countryside and agricultural land, including designated Special Landscape Area C2/2 ‘South Eastern Lowlands’ which lies directly to the east of the application site. The SLA is designated for its high quality landscape and rolling agricultural lowland landscape, and is protected from any development that would harm the individual and distinctive features of the area.

The proposed extension has been designed with this context in mind and, as detailed in Section 4 of this Design and Access Statement, it sits below the skyline of the existing building and follows the same design principles in order to express subservience and minimise impacts on views. This approach has developed through an iterative process whereby the effects of the emerging proposals on the neighbouring landscape and views have been assessed and the design refined to reflect this.

The following Landscape and Visual Impact Assessment (LVIA) identifies the likely effects of the proposals on the existing landscape surrounding the site. The assessment was carried out according to best practice guidance as described in the Guidelines for Landscape and Visual Impact Assessment (GLVIA, 2013) as published by the Landscape Institute and Institute of Environmental Management and Assessment. As the proposals are not considered to be Environmental Impact Assessment (EIA) development, the assessment adopts a simplified methodology and also considers the Statement of Clarification 4 for Non-EIA Landscape and Visual Impact Appraisal (2015) – which states that the same principles and processes can be adopted for non-EIA development, but in this situation there is no requirement to establish whether the effects arising are significant or not.

The planning policy and guidance of relevance, which has been considered during preparation of this LVIA, is discussed in the accompanying Planning Statement.

5.1 Assessment methodology

Scoping and baseline

The scope of the LVIA has been determined through desktop study and site visits in order to identify sensitive receptors which could be affected by the proposals. Baseline data was collated to analyse local landscape character, and to describe and define the views. This process, in combination with a review of relevant policy and guidance has enabled the identification of landscape and visual sensitivities and particular interests requiring special consideration.

Landscape

A desktop study of the site and surrounding area has been undertaken using the TCBC Designation of Special Landscape Areas report (May, 2011) in order to identify the prevailing landscape character, with particular reference to designated SLA C2/2. This has been supplemented with desktop study of undesignated areas via Google Earth, site photography, and site visits. While naturally there is potential for the landscape to be affected by new development, due to the nature of the proposals which consist of an extension building within the existing GUH campus, the impacts on the landscape are limited. As such, for the purposes of this assessment the landscape analysis will be considered as part of the views assessment.

Views

The Zone of Visual Influence that was identified during landscape and visual impact assessment of the main GUH hospital building has been used to determine the area within which the proposals are likely to be visible.

A series of views from within the ZVI have been identified and their baseline condition described in relation to the characteristic of the viewing location, including the following factors:

- Viewing location and distance from the site;
- Nature of the surrounds (open, vegetated, urban etc.);
- The nature, composition and visual characteristics of the existing view i.e. skyline, scale, proportion, focal points, enclosure etc.;
- Use characteristics of the viewing location i.e. frequency, accessibility and nature of use; and
- The value of the view in understanding and appreciating the local context.

The baseline assessment in the next section provides further detail on identification of the ZVI, and the selection of views.

Visualisation method

A photomontage of the proposed extension building has been inserted into views photography, to provide an indication of the scheme's visibility and potential effects. The parts of the proposals occluded by built elements will not be shown.

Assessment method

The likely visual effects of the proposed development, as indicated in each visualisation, is assessed along with the magnitude and attribute of those effects. This takes into account the likely sensitivity of the view, which is dependent on the importance of the viewpoint, the value and quality of the view, and the nature and expectation of the viewer.

The tables below set out how sensitivity, magnitude and attribute of effect will be defined.

Limitations

The field study and photographic appraisal was undertaken in May and June 2023 at a time when vegetation was in full leaf. As such, in winter months when deciduous species have lost their foliage, the visibility of the proposals would increase. Given that the assessment of the views is minor adverse to minor beneficial, winter views would not be considered to significantly alter the assessment of effects.

1. Sensitivity of landscape and visual receptors

Sensitivity	Description
High	The landscape or view will be enjoyed by a large number of recreational users and visitors, possibly there for the sole purpose of enjoying the view or public amenity; and includes significant elements of high quality visual interest.
Medium	The landscape or view will be experienced by people travelling through and will be either intentional or incidental, with some amenity value.
Low	The landscape or view will be incidental to the viewer, who in most cases will be in motion and experience the view in a non-recreational way

2. Magnitude of change

Magnitude	Description
Major	The proposals are an immediately apparent feature and dominate the view.
Moderate	The proposals are a visible and recognisable feature and are generally distinguishable from the existing baseline characteristics.
Minor	The proposals result in a perceptible change in the landscape or view while maintaining its overall quality.
Negligible	The proposals are barely discernible and maintain overall character and quality of the landscape or view.
None	The proposals are not visible and result in no effect.

3. Attribute of effect

	Sensitivity of receptor/receiving environment		
Magnitude of change	**High**	**Medium**	**Low**
Major	Major	Moderate to major	Minor to moderate
Moderate	Moderate to major	Moderate	Minor
Minor	Minor to moderate	Minor	Minor
Negligible	Negligible	Negligible	Negligible

5.2 Baseline assessment

Site and surrounding area

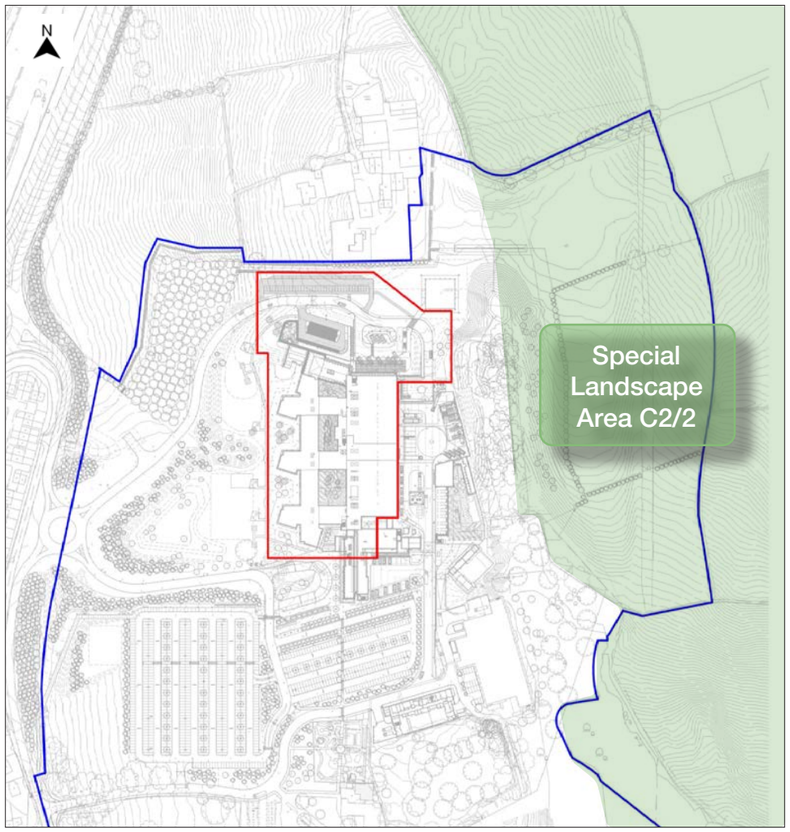
The application site is located adjacent to the existing GUH Emergency Department, to the north of the wider complex of hospital buildings. It includes a series of internal access roads and car parking, an area of low-quality planting, and a portion of the existing hospital roof.

While the hospital itself comprises a significant quantum of built development, it sits within a wider context of open countryside and agricultural land, including designated Special Landscape Area C2/2 'South Eastern Lowlands' which lies directly to the west. The SLA is designated for its high quality landscape and rolling agricultural lowland landscape, which forms a quiet, secluded area to the east of Cwmbran. The TCBC Designation of Special Landscape Areas report (May 2011) states that the landscape is typified by a patchwork of small to medium sized fields bounded by hedgerows with hedgerow trees, and interspersed with woodland blocks, and notes that there is ongoing pressure for development particularly around Llanfrechfa Hospital.

The landscaping strategy adopted for GUH was cognisant of the adjacent SLA and, while unavoidably resulting in some visual impact, sought to reduce the visibility of the hospital by utilising adjacent woodland, and implementing additional landscaping and planting. In conjunction with the outline planning permission for GUH granted in 2012, in 2013 planning consent (ref. 13/P/00479) was granted in order to reprofile the eastern fields via the relocation of soil from the hospital site, allowing the hospital to be constructed at a lower level and providing a further screening effect.

The application site already benefits from these screening measures, sitting adjacent to the eastern fields and an area of woodlands along Sirhowy Brook.

To the west, the application site and wider hospital campus lie adjacent to the A4042 (Turnpike Road), and beyond this the settlement of Cwmbran; however the existing hospital buildings and intervening vegetation serve to screen the application site from views from the west, and south.



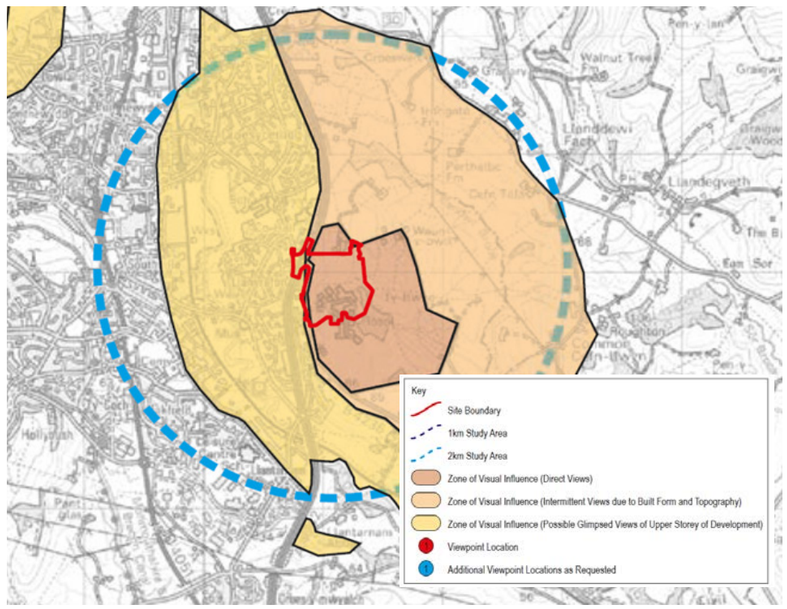
Special Landscape Area C2/2: South Eastern Lowlands

Scope of study area

The scope of the study area has been determined with reference to the characteristics of the site and surrounding context described above, and the likely visibility of the proposals. The Zone of Visual Influence Study undertaken in support of the initial outline planning application for GUH indicates that direct views of the proposals will be limited to those from the east, from within SLA C2/2. Existing hospital buildings and a dense area of woodland to the west of the emergency access road will further screen the proposals from the west and south and therefore the area to the east has been identified as the key area for visual receptors.

Due to the scale of the proposals, including in comparison to the much larger hospital building, and the eastern fieldworks previously undertaken, the assessment area has also been limited to a radius of 1km from the application site. It is considered that effects on longer range views, in which the proposed extension is unlikely to be readily discernible or visible as a separate entity from the main hospital building, will be negligible.

As such, the assessment will consider views which are to the east of the application site, within a distance of 1km. Given the above, this is considered to be sufficient to understand the effects of the proposals on important and/or designated receptors from which the proposals are likely to be visible.



Zone of Visual Influence extracted from 2012 EIA submitted with outline planning application 12/P/00348

Views

On the basis of the study area identified, the following two views have been selected for assessment below. These are both located on footpaths or public rights of way, and therefore represent accessible viewpoints within the study area.

- View 1 – Public footpath near Ty-Llwyd c. 250m from the application site
- View 2 – Public footpath c. 150m from the application site

5.3 Assessment of effects

View 1 – Public footpath near Ty-Llwyd c. 250m from the application site

Existing

Proposed

The foreground of this view comprises a pasture field, and hedgerow incorporating a steep bank created as part of the GUH eastern field earthworks. discussed above. This is terminated by a block of woodland, and beyond this the eastern elevation of the existing GUH building, including the flue associated with the Energy Centre to the mid-left of the view, which is the tallest point on the skyline. Above the hospital building, and to the right of the view, there are views of distant hills.

Given the presence of the substantial existing hospital building, but acknowledging the undeveloped nature of the field in the foreground and long-distance views that remain, the view is considered to have a medium sensitivity to change.

The proposed view demonstrates that the extension will be partly screened by the existing block of woodland, particularly in the summer months. Through incorporation of a step down in height in comparison to the existing hospital building, the proposals break down the building mass to appear integrated with their context and mediate well between the hospital complex and its surrounds (including smaller scale farm development that sits just beyond the right-hand extent of the view). This is further aided by the proposed approach to materiality which references that of the main hospital but uses a lighter colour to avoid the effect of lengthening the elevation. The proposed solar panels would not be readily discernible in the view.

This is considered to represent a minor magnitude of impact, and a minor beneficial effect overall.

View 2 – Public footpath c. 150m from the application site

Existing

Proposed

The foreground of View 2 comprises a field, which incorporates a steep upwards bank created as part of the eastern field earthworks associated with the construction of GUH, discussed above. This effectively screens ground-level hard infrastructure to the north of the application site, and the view is terminated by the GUH buildings in the middle ground. These form the dominant element of the view, with the Treatment and Care blocks most prominent.

Given the dominance of the hospital, but acknowledging the undeveloped and open nature of the foreground, this view is considered to have a medium to low sensitivity to change.

The proposed view demonstrates that the extension will read as a small-scale addition which sits within the wider complex of buildings and associated infrastructure. The incorporation of similar materials and finishes to the existing hospital, and echoing the use of expressed roof level plantroom enclosures, will further aid integration into the existing context. While the extension will extend the area of built development closer to the viewer, this will be mitigated in part by the inclusion of biodiverse planting in front of the extension when viewed from this angle.

As per View 1, the proposed solar panels would not be readily discernible in the view.

Overall, this is considered to result in a negligible to minor magnitude of change, and therefore a negligible to minor adverse effect.

5.4 Conclusion

The LVIA undertaken indicates that the proposals will have a minor beneficial to minor adverse effect on the surrounding landscape. Due to the location of the site, and scale of the proposed building, effects will be limited to short-range views from the east.

The proposed extension sits within the existing hospital campus and is surrounded by built development in the form of hospital buildings or hardstanding associated with access roads and the helipad. The limited number of minor adverse effects identified have been minimised through the proposed design of the new extension which will utilise high quality materials that integrate with the existing hospital building, while providing a point of difference in order to avoid the appearance of extending the main block of the hospital. Overall, the proposals are considered a high quality response to their context which strikes an effective balance between meeting the Health Board's critical clinical requirements, and minimising adverse landscape and visual effects.


Adran Achosion Brys
Emergency Department

06

Appendices

6.1 Helipad Report

The footprint of the new building extension is outside the helicopter flight path but within the 65m -50m downwash zone; the area likely to be affected by downwash from the S92 aircraft can be assumed to extend up to 50m from the edges of the main rotors.

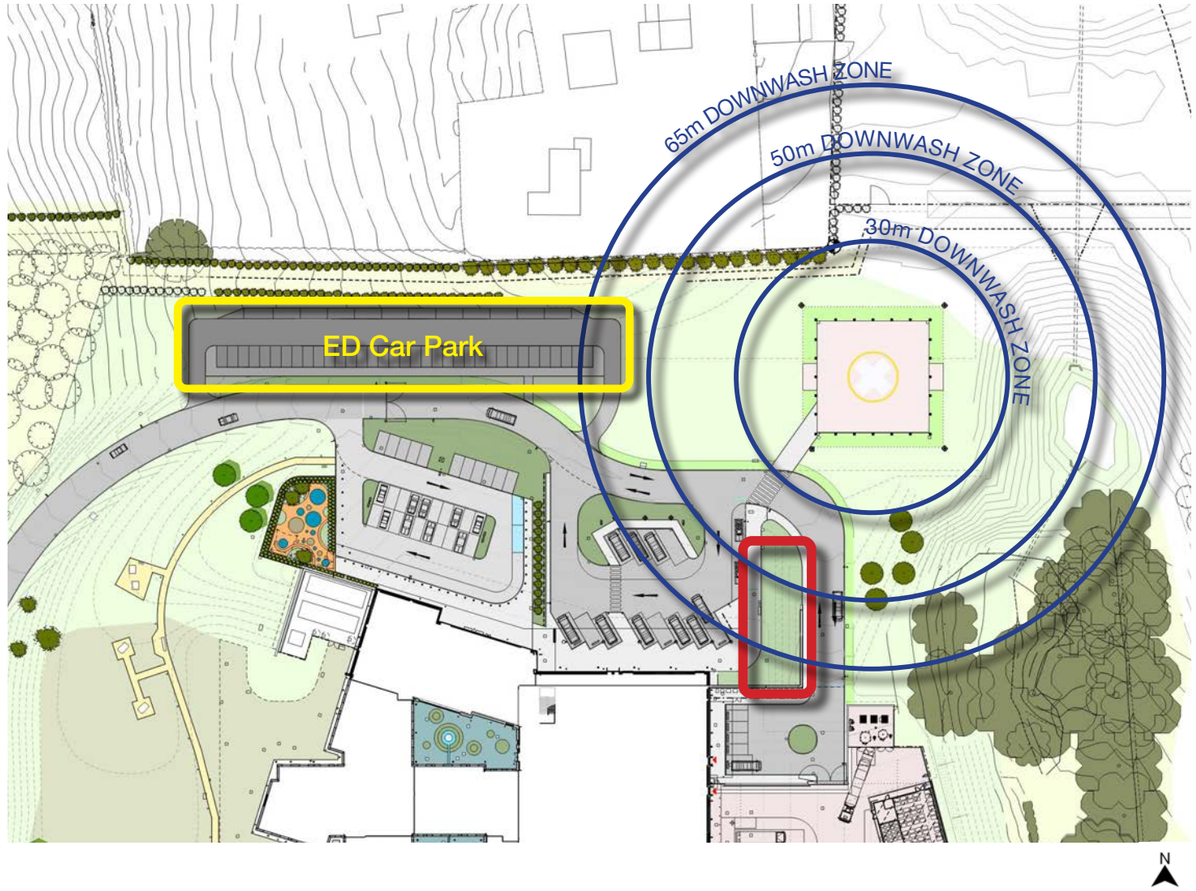
The effect diminishes rapidly from about ten metres from the rotors to become indistinguishable from the ambient wind at 50m.

Regarding aircraft type S92, being that much heavier than the air ambulance types, the helipad report recommends that the area in front of the hospital within 50m of the helipad be carefully secured prior to the arrival/departure of an S92 (doors and windows shut, people and vehicles cleared from the zone, loose articles removed or secured as necessary).

The down wash effects from the smaller, lighter air ambulance helicopter types will extend out from the rotor edges to a maximum distance of 30m and are unlikely to cause significant disturbance to normal activities close to and around the hospital entrance and environs. The Health Board will implement a standard operating procedure (SOP) which deals with doors and windows and clearing pedestrians.

Whilst pedestrian and vehicle movements are suspended during aircraft landing and take off, the location of the Adult ED entrance doors are positioned outside the 50m radius and therefore not at risk of disturbance.

The ED car park layout includes an embankment along the edge closest to the helipad which offers protection against any lose debris disturbed at ground level.



Obstacles 30 feet high / 9.15m are permitted within the OLS area at a distance of 80m measured from the helipad centre.

The maximum permitted obstacle heights within this area/distance must remain below a slope joining the point of origin with the top of a 30 ft/ 9.15m obstacle. From here continuing rearwards to a distance of 135m, measured from the helipad centre, an obstacle 100 ft. above helipad surface level is permitted within the OLS area.

Babcock, who operate the Air Ambulance Service, have undertaken a review of the proposals and have concluded as follows:

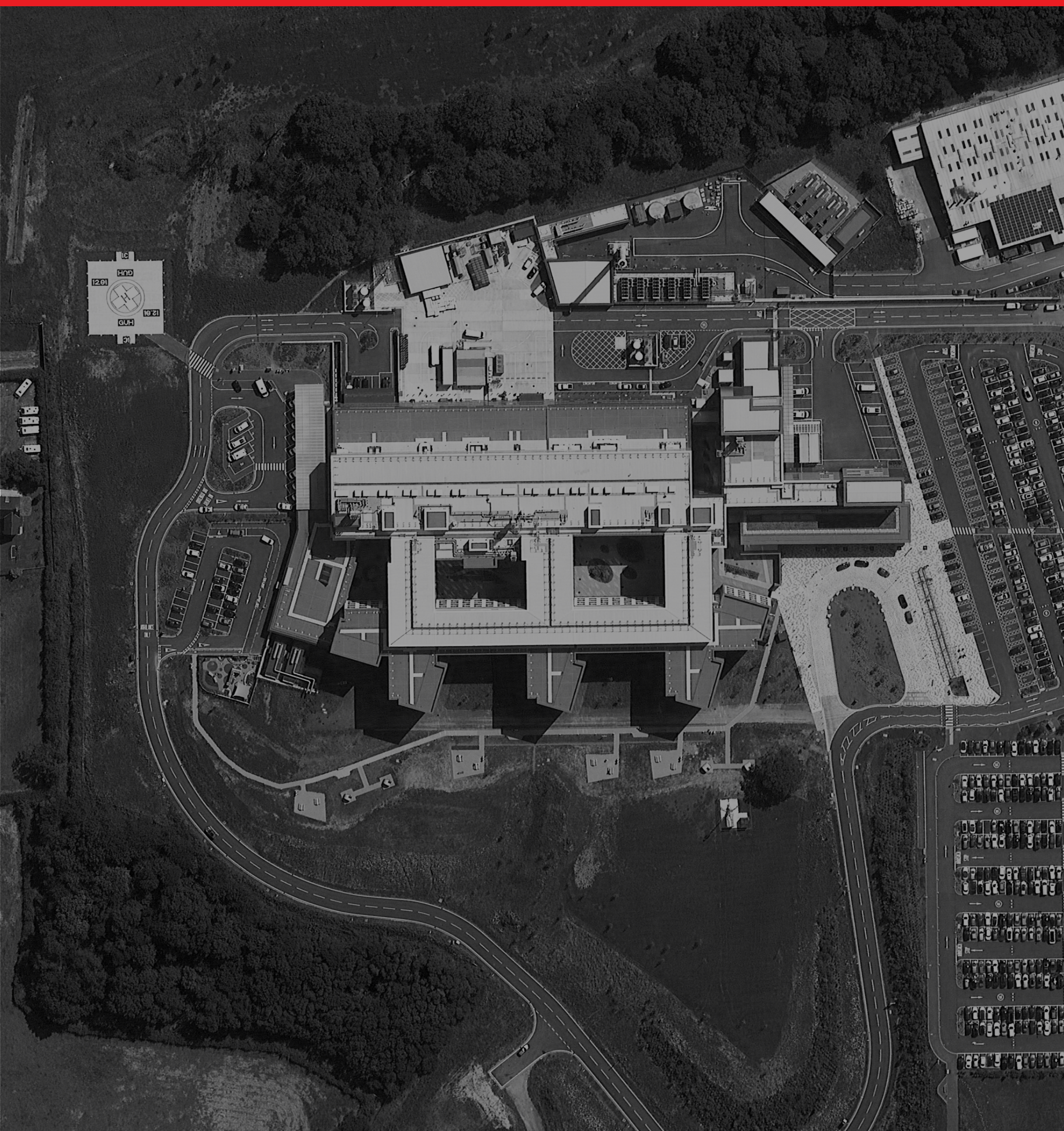
"From current ICAO guidance at the distances we are looking at we would expect <60km/h outwash from the AW189 (Coastguard) and <40km/h from the H145 when they initially lift from the pad. This will likely increase to more like 80/60km/h if the aircraft are pulling power on a rearwards departure. I believe SAR use a vertical profile at GUH which would negate that somewhat but the high power output will still up the downwash a bit. ICAO suggest that anything over 30km/h may affect "body stability" especially of vulnerable persons.

No major objections in terms of the building itself being an obstacle. Suggest corners of the building being lit to help pilots situational awareness especially in terms of identifying members of the public nearby."

The CAA has also reviewed the proposals and confirmed:

"The extension does not appear to have any impact on the published take-off climb / approach surfaces for the heliport and is located outside the 50m downwash zone for SAR helicopters, although in an ideal situation Bristow would look for the full 65m –where CAP 1264 quotes 50-65m. However, as already recognised the intensity of downwash does fall away significantly out to an overall distance 3 x rotor diameters (51.50m). If the SAR operator is comfortable, considering also the operational checks and balances being proposed to mitigate the effects of any downwash, then CAA would have no objection either."

BDP.


GUH
GUH