

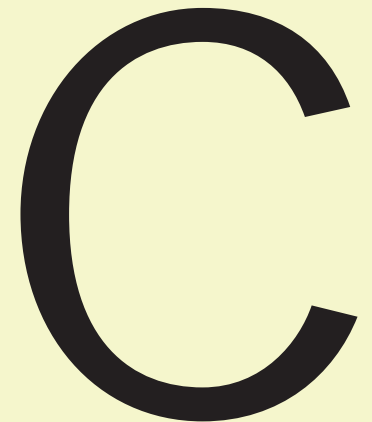
Section C

# Concept Design Option 1a:

## Bruce Site - Multiple Buildings / stand alone mental health

VERSION 05 10.03.2023

- Section A Introduction
- Section B Concept design Option 1c
- Section C Concept design Option 1a
- Section D Concept design Option 1d
- Section E Concept design Option 2
- Section F Appendices

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# C.1 Executive Summary

## Option 1a

Discussions with health professionals revealed a 'stacked' approach to mental health was not preferable, thus a stand alone facility was developed. This option removed mental health services from the complete hospital and relocated them to the northern site.

The Option 1a concept proposes to provide all the required services in two buildings on the site of the existing Calvary Public Hospital in a single stage: one main hospital building within Mary Potter Circuit and a satellite mental health facility to the north on the northern block.

The Option 1a design was developed following preliminary clinical feedback on the original Option 1c design, which advised that recovery of mental health patients would be better supported by providing a more 'human-scale' development. An initial feasibility study was undertaken, culminating in a presentation to ACT Health on 2 November 2022.

### Main building

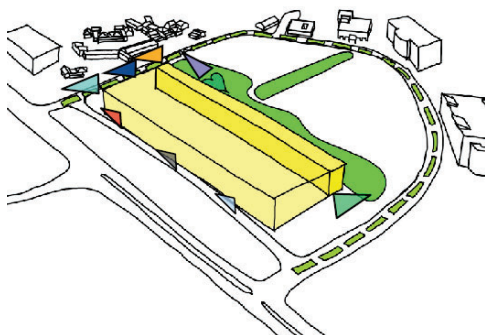
The podium of the main hospital building features:

- Emergency and ambulatory care entries to the north, and main entry to the south.
- Collocation of the emergency and imaging departments.
- Lower ground plant, with space available for basement car parking.
- Logistics vehicle access via Sylvia Curley Drive.

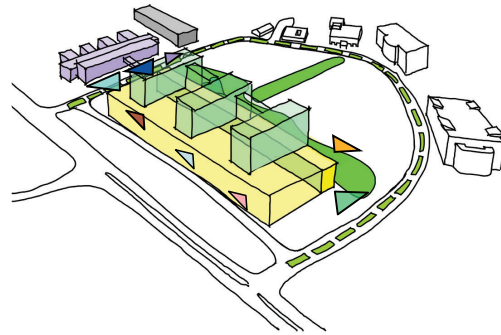
However, challenges associated with this configuration include:

- A busy north entry point, which relies on the assumption that the northern intersection with Haydon Drive can be signalised
- To facilitate staff and patient movements between the main building and mental health facility, a link bridge over Mary Potter Circuit is proposed, requiring additional lifts. A separate, underground link is also proposed to separate logistics movements between the lower levels of the buildings.
- Bulk earthwork estimates suggest approximate excess cut over fill value is 313,000 m<sup>3</sup>. The excess cut will need to be appropriately disposed off site during construction

A three-finger inpatient unit stack above the podium is proposed.



PODIUM CONFIGURATION



IPU CONFIGURATION

### Mental health building

Option 1a locates the 91 bed adult acute and older person's mental health inpatient unit in a standalone building on the northern block. The concept design proposes to provide the acute mental health beds on the ground floor and OPMHIU beds on the first floor, with access to outdoor courtyards and direct link bridge across Mary Potter Circuit to Level 2 of the main hospital building.

The site topography allows for the administration spaces to be provided on a lower level and plant on the top floor, while the central logistics departments (e.g., kitchens, linen, etc.) within the main hospital building would service the satellite building via a basement logistics tunnel.

### Site access and parking

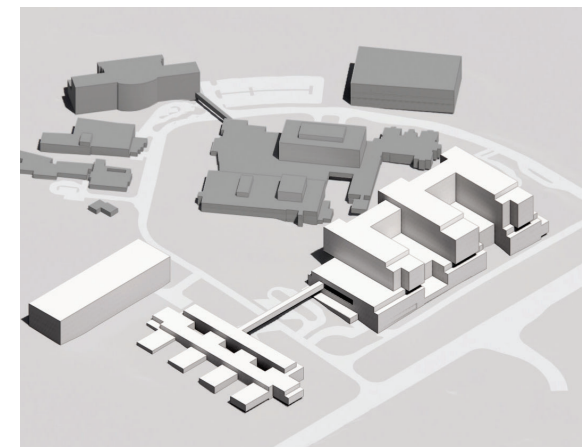
Option 1a maintains the internal road, Mary Potter Circuit, which currently provides access to both the public and private hospitals. Mary Potter Circuit intersects with a major road, Haydon Drive, at two locations to the west of the site. The southern intersection is currently signalised; however the concept design requires upgrades to signalise the northern access to facilitate emergency vehicle access.

A parking assessment advised that, based on the forecast bed numbers and staffing numbers provided by ACT Health, a total supply of at least 1,800 parking bays across the site is recommended following development. Taking into account the existing multideck carpark and other on-grade carparking near the private hospital, the concept proposes a six-storey multideck carpark. This would provide approximately 800 new spaces on the eastern edge of the northern block.

Construction of the mental health facility and the multideck carpark would require the relocation of some rehabilitation services currently provided by Canberra Health Services. This has been considered in the Cost Plan (refer to Section F).



SITE PLAN



SITE MASSING

# C.1 Executive Summary

## Option 1a

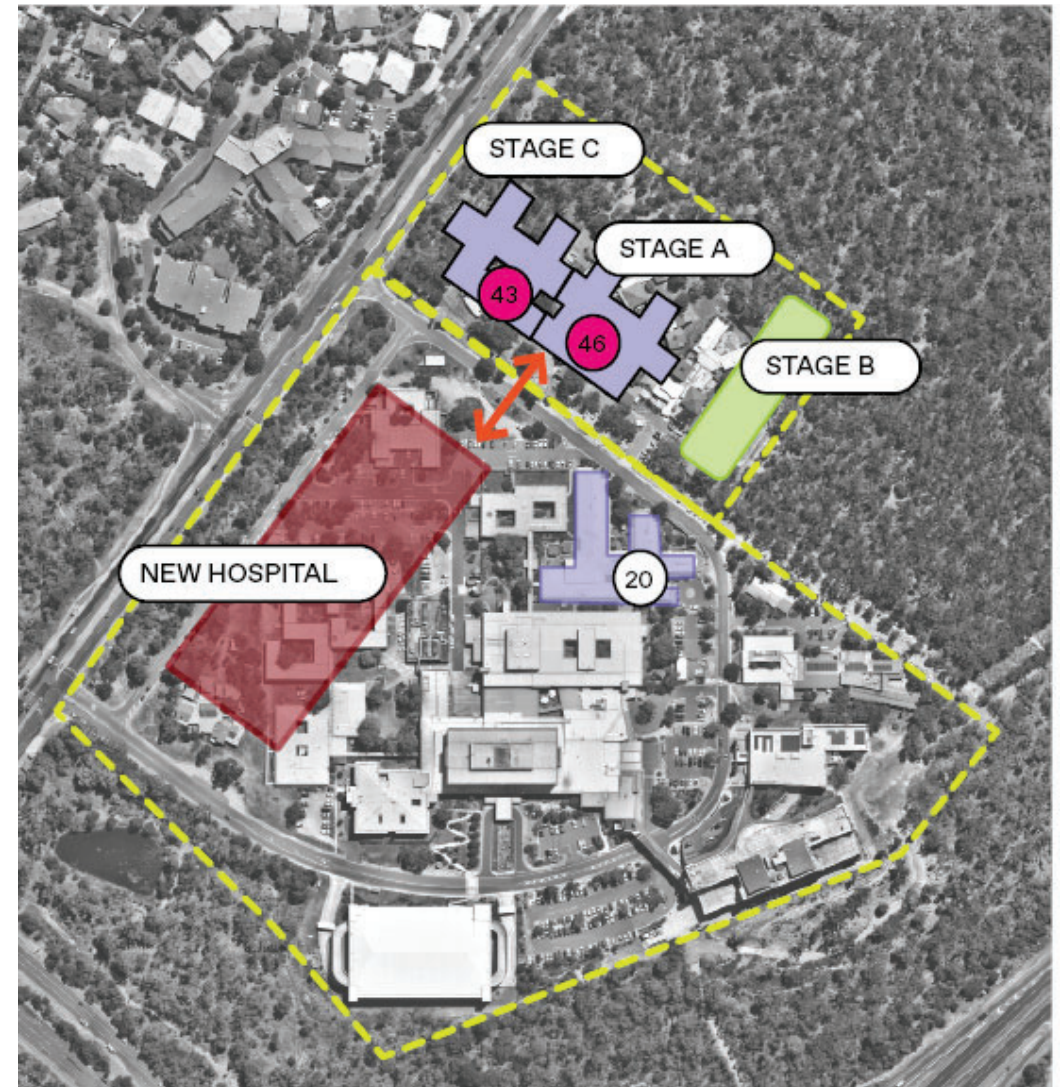
### Staging

In addition to the concept design, Option 1a investigated how the same standalone mental health facility could be provided in a staged approach. By utilising the existing beds within Arcadia House, the Secure Unit and the Keaney building, 46 of the new beds could be constructed on the northern block as Stage A, prior to construction of the main hospital and link bridge in Stage B. The remaining beds would be constructed to the west of the Stage A building as Stage C.

### Major constraints and issues

The main constraints and issues relating to this option is as follows:

- **Health planning:** Development of the Northside Clinical Services Plan is ongoing. The Schedule of Accommodation that outlines the number of beds and types of services to be provided in Option 1a will need to be revised when this is finalised, and the design updated in response.
- **Site conditions:** Site conditions, including those relating to utility, ecology and bushfire requirements, will require early engagement with the relevant stakeholders to facilitate the planning approvals process and avoid the need to make major revisions to the design at a late stage in the project.
- **Bushfire protection:** These requirements emerged as the greatest constraint and risk to the viability of this option. Due to the nature of the development, the surrounding vegetation and topography, the bushfire advice received was that a 79 m Asset Protection Zone (APZ) would need to be applied from the north-eastern boundary, and a 67 m APZ from the southern-eastern boundary. The available space remaining on the northern block is insufficient to allow for the development of a 'human-scale' mental health facility. Instead, Option 1a proposes that a relaxed APZ of 5 m from the north-eastern boundary be negotiated with the relevant stakeholders, with such a compromise likely requiring compliance with more rigorous bushfire design standards (e.g., material selection). Repositioning the new 8 -space multi-storey carpark to the eastern side of the site allows the 67 m APZ to be maintained. Construction on the northern block, including clearing of vegetation to maintain the APZ, will also impact undeveloped land mapped as high ecological constraint.
- **Traffic:** Signalisation of the northern intersection of Mary Potter Circuit and Haydon Drive will be required to facilitate site access, particularly to the Emergency Department. This may impact the wider road network and early engagement with Transport Canberra and City Services will be required.



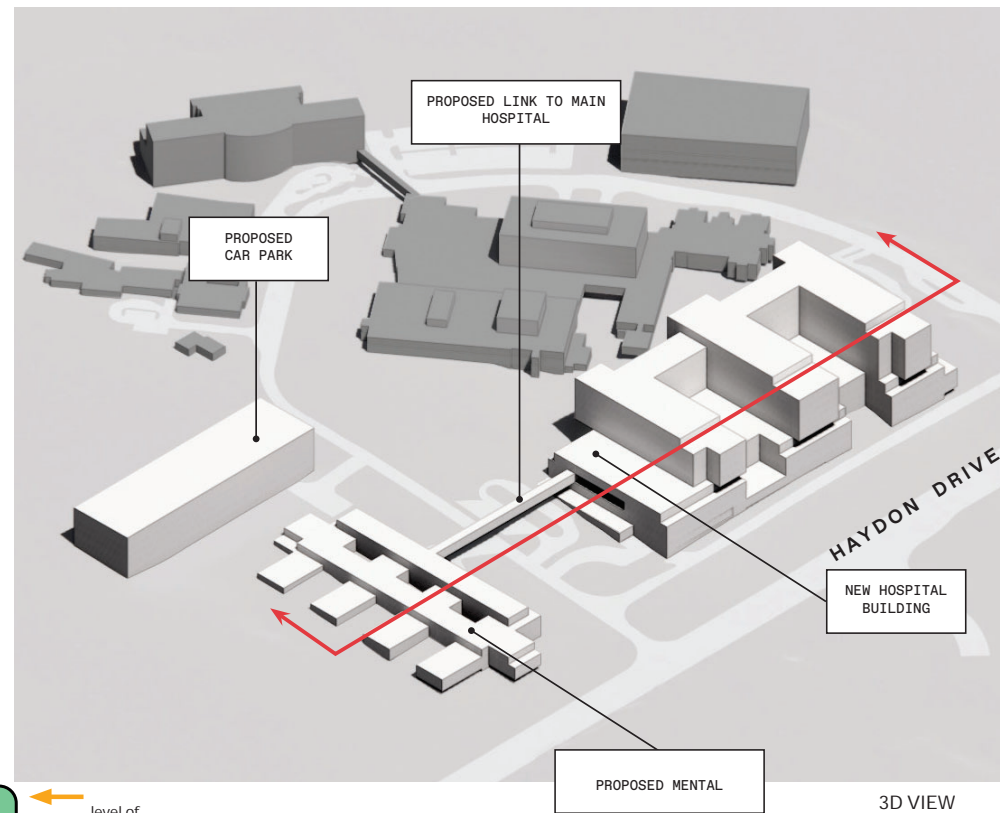
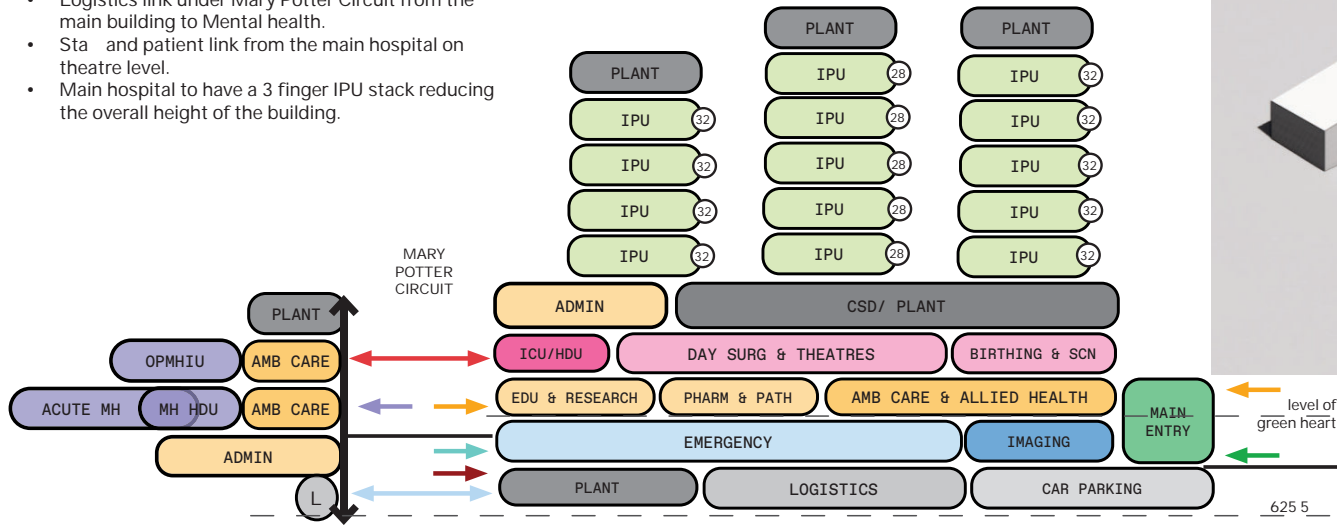
PROPOSED STAGING



# C.4 Proposed design Selected option

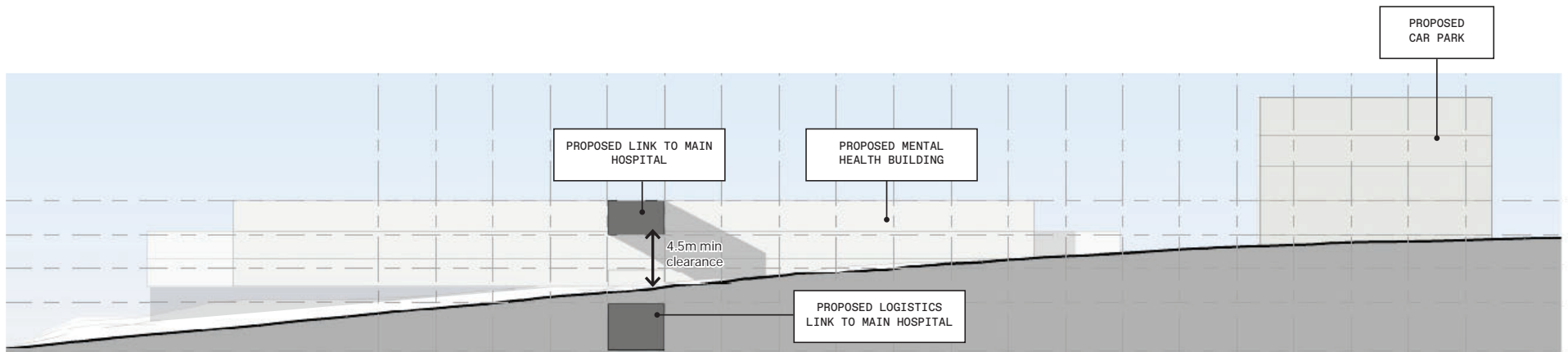
The selected mental health option has the following considerations:

- Stand alone mental health building positioned to the south eastern area of the northern block site.
- Multi-deck car park located to the north west within the APZ.
- Mental health bedrooms across 2 floors.
- Logistics link under Mary Potter Circuit from the main building to Mental health.
- Staff and patient link from the main hospital on theatre level.
- Main hospital to have a 3 finger IPU stack reducing the overall height of the building.



## BLOCK AND STACK

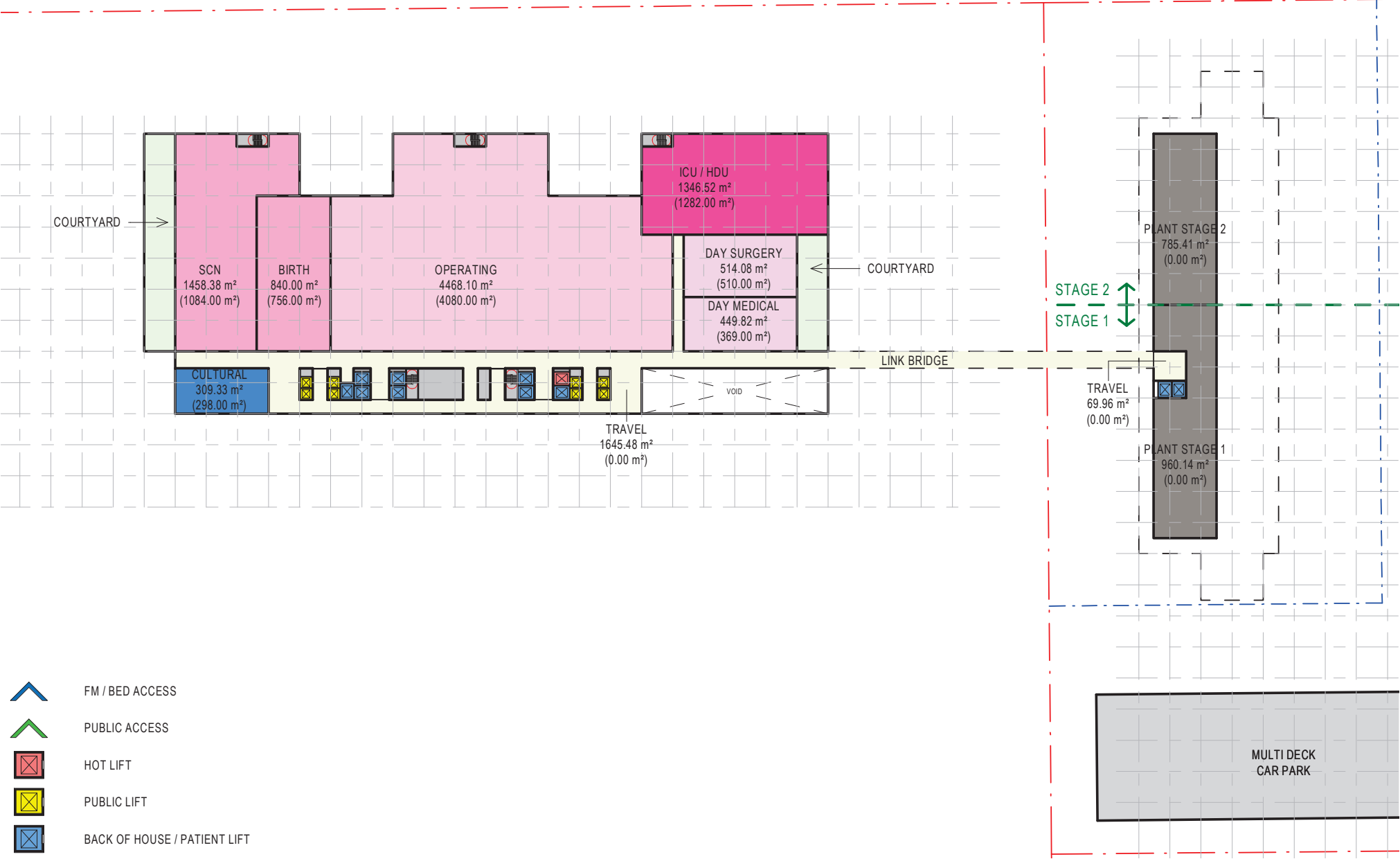
- MAIN ENTRY
- EMERGENCY
- AMBULANCE
- MENTAL HEALTH
- AMBULATORY CARE
- LOGISTICS
- AFTER HOURS
- MENTAL HEALTH
- IPU

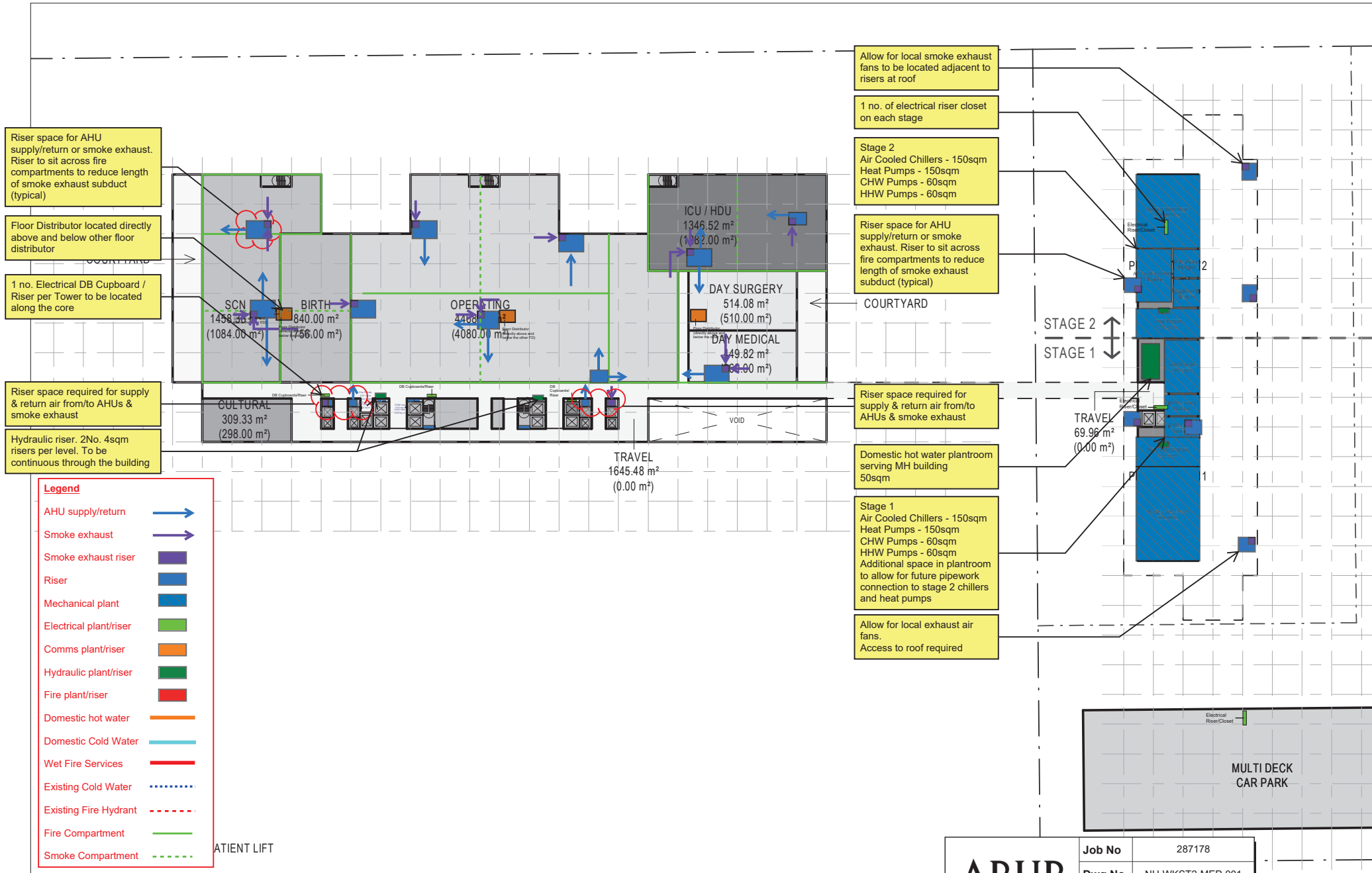


SECTIONAL VIEW TO NORTHERN BLOCK SITE FROM MARY POTTER CIRCUIT

# C.4 Proposed design

## Level 2 plan

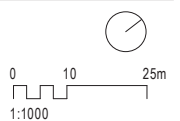


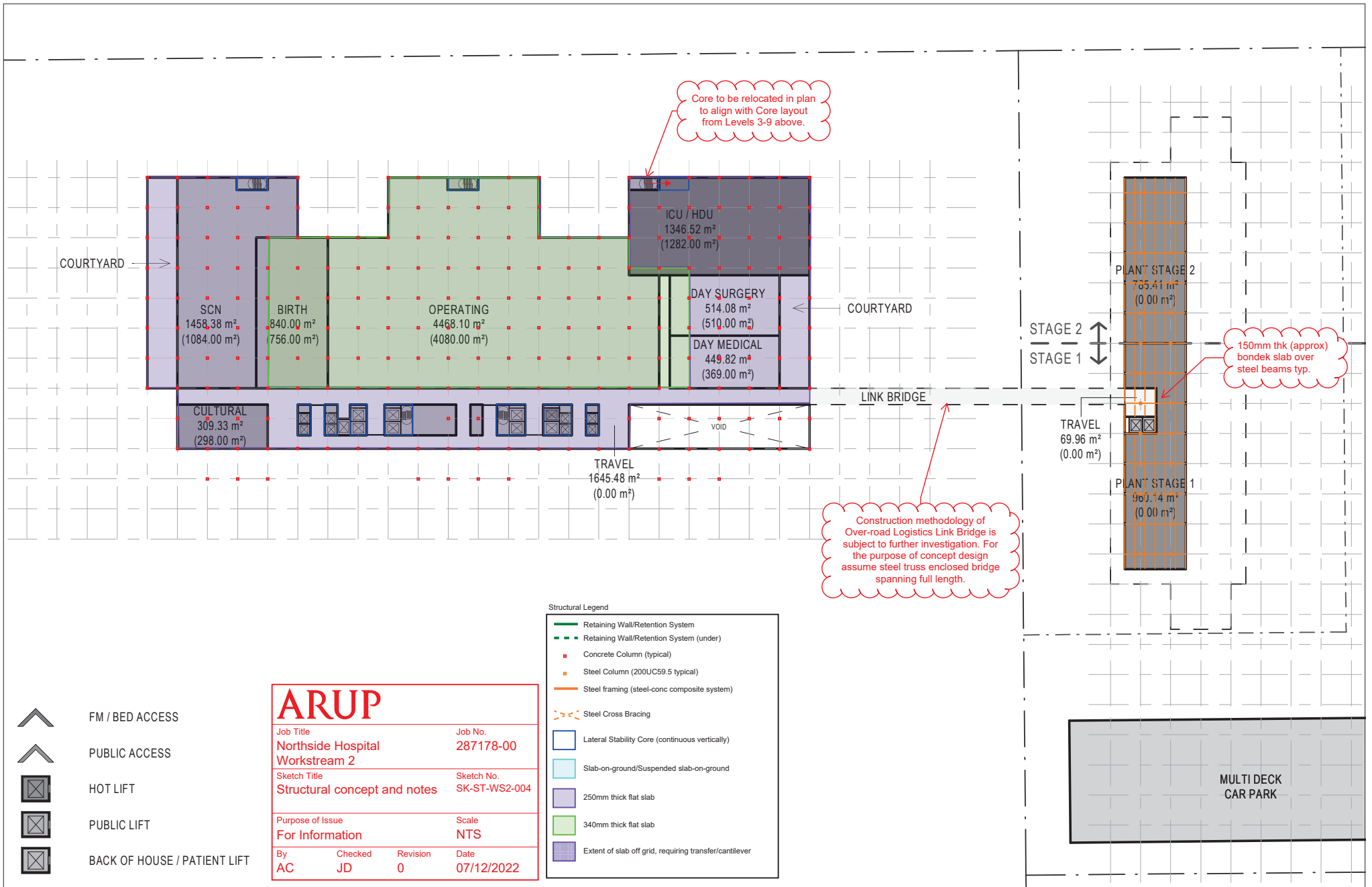


LV02 PLAN

BVN

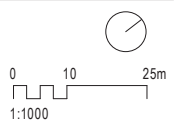
<b>ARUP</b>		Job No	287178
		Dwg No	NH-WKST2-MEP-001
		Date	23/12/2022
Job Title	Northside Hospital Technical Advisor		
Dwg Title	Workstream 2 - MEP Markup v2		





LV02 PLAN

BVN



**REQUEST FOR TENDER NO. 21568-RFT-004**



**NORTHSIDE HOSPITAL PROJECT – DESIGN CONSULTANT  
FOR ENABLING WORKS  
ON BEHALF  
ACT HEALTH DIRECTORATE**

EMAIL: [TENDERSACT@ACT.GOV.AU](mailto:TENDERSACT@ACT.GOV.AU)

ISSUE DATE: 27 Sep 2023

CLOSING DATE: 13 Oct 2023

CLOSING TIME: 2:00PM CANBERRA TIME

IMPORTANT NOTICE:

TENDERS MUST BE LODGED ELECTRONICALLY THROUGH THE TENDERS ACT WEBSITE

out of scope

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## Scope of work for the project at next stage

Below outlines the works that needs to be carried out at incoming detail design satge;

Item	Description
<b>1. Enabling Works</b>	Enabling works necessary to prepare the site for development, including: <ul style="list-style-type: none"><li>• Relocation of communications rooms and information technology (IT) networks.</li><li>• Demolition of existing buildings located within the footprint of the new, including child care centre and residences.</li><li>• Planning for staged demolition of facilities on the Northern Block.</li><li>• Provision of temporary access to the existing loading area, substains and bulk oxygen.</li><li>• Utility diversions.</li><li>• Site remediation.</li><li>• Temporary car park solution.</li></ul>
<b>2. Main works</b>	The proposed main works includes: <ul style="list-style-type: none"><li>• Main Hospital Building</li><li>• Stand-alone Mental Health Facility</li><li>• Bulk earthworks.</li><li>• Other construction works for the development, including roads, paths and paving, carparking, retaining walls, boundary walls and fences, outbuildings and covered ways, tunnels and linkways,</li><li>• landscaping and conservation works, and any special provisions.</li><li>• Commissioning and setting to work of the buildings</li></ul>
<b>3. Car Parking</b>	<ul style="list-style-type: none"><li>• 7-level 800 space multi deck car park.</li></ul>
<b>4. Childcare</b>	<ul style="list-style-type: none"><li>• 1,705sqm childcare centre.</li></ul>
<b>5. Amenities</b>	<ul style="list-style-type: none"><li>• Overnight rooms/junior medical officer lounge, end of trip facilities and family accommodation.</li><li>• Administrative space, cultural spaces, education space and clinical research space.</li></ul>
<b>6. Environmentally sustainable development (ESD) considerations</b>	ESD initiatives to achieve a minimum 5 Star Green Star rating (or equivalent) performance level, including: <ul style="list-style-type: none"><li>• All-electric Hospital Building</li><li>• Rooftop photovoltaic solar</li><li>• Electric vehicle charging enabled</li></ul>
<b>7. Existing buildings</b>	<ul style="list-style-type: none"><li>• Decanting and decommissioning of existing main North Canberra Hospital Buildings</li></ul>
<b>8. Rehabilitation Services Relocation</b>	<ul style="list-style-type: none"><li>• Demolition, decanting and relocation of the existing Rehabilitation Services on the northern block</li></ul>
<b>9. Birthing Centre Feasibility</b>	<ul style="list-style-type: none"><li>• A feasibility study for a new six-bed standalone birthing centre located on Northside Hospital Campus.</li></ul>

## 2.2 Statement of Requirements

See Attachment 1 – Statement of Requirements

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Section 03

**Birthing Centre review**

**03**

# Birthing Centre Options

## **4 Options:**

1. Stand Alone
2. Stand Adjacent (with link to theatres)
3. Stand alongside with own Entry
4. Stand alongside on Maternity floor

# 1. Stand Alone

# Previous Study: Stand Alone

## Stand Alone Option not preferred due to distance and associated risk

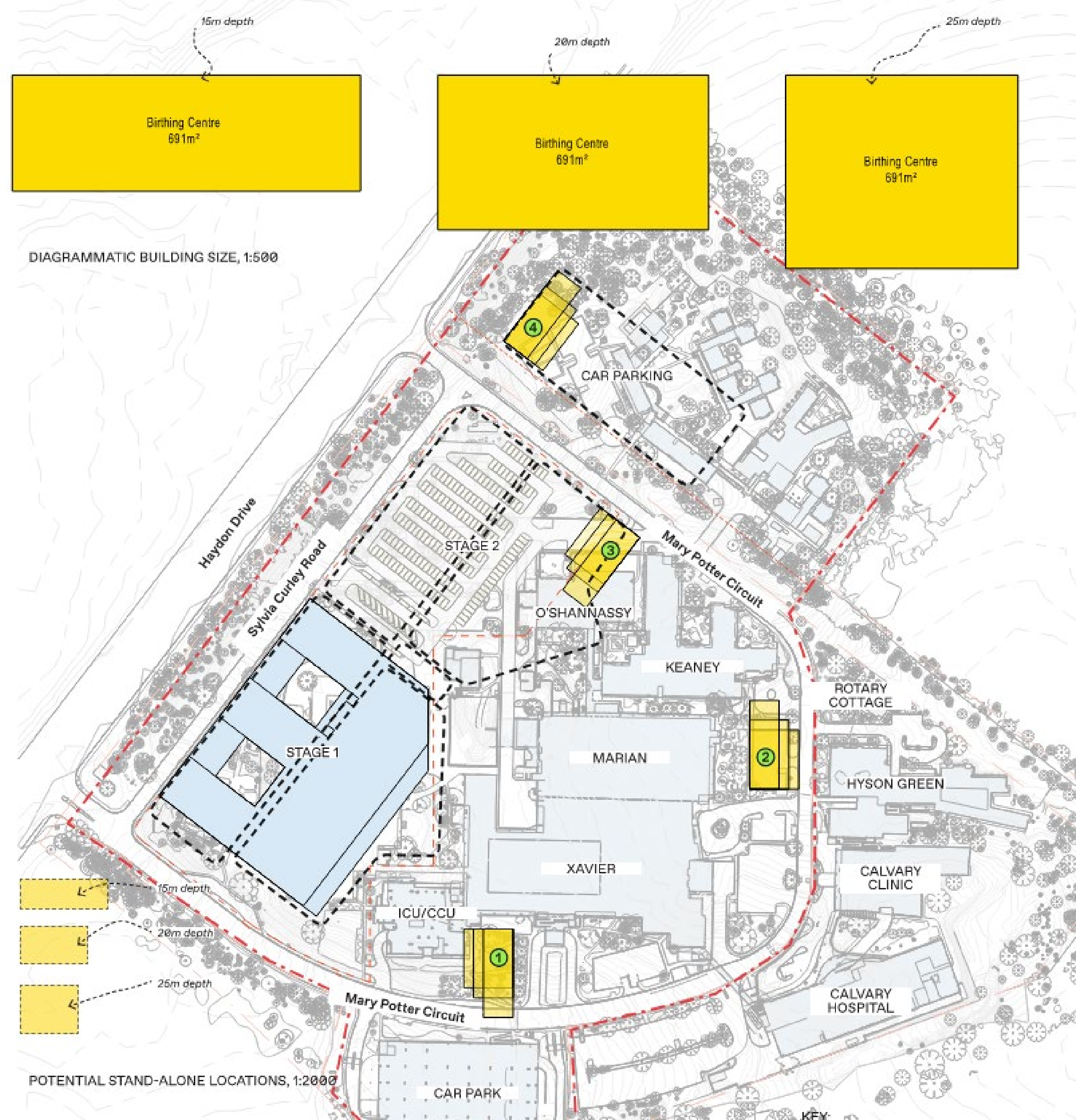
A PREVIOUS STUDY LOOKED AT POTENTIAL LOCATIONS FOR THE BIRTHING CENTRE AS A STAND-ALONE UNIT. THESE LOCATIONS ARE SHOWN RIGHT.

THESE WERE DISCOUNTED DUE TO THE REQUIREMENT FOR AMBULANCE TRANSFERS IF THERE ARE EMERGENCIES WITHIN THE CENTRE.

- ① XAVIER BUILDING, ADJACENT MAIN ENTRY
- ② MARIAN BUILDING, ADJACENT MAIN ENTRY
- ③ O'SHANNASSY BUILDING, SITE OF
- ④ NORTHERN BLOCK, WEST, SITE OF THE COTTAGE (CAMHS)

THIS DOCUMENT INVESTIGATES POTENTIAL LOCATIONS AS A STAND-ADJACENT FACILITY. THIS SHOULD HAVE EASE OF CONNECTION TO THEATRES IF/WHEN REQUIRED. KEY REQUIREMENTS ARE:

- ① SEPARATE IDENTITY, "OWN ADDRESS"
- ② OWN, INDEPENDENT, DROP-OFF ADJACENT
- ③ SEPARATE EXTERNAL SPACE/GARDEN
- ④ CONNECTION TO THEATRES
- ⑤ CALM, NON-CLINICAL, ATMOSPHERE
- ⑥ WORKS WITH PROPOSED STAGE 1 & MASTERPLAN



## 2. Stand Adjacent (with link to theatres)

# Birthing Centre: Stand Adjacent

THERE ARE A FEW LOCATIONS WHERE THE BUILT-FORM AND MASTERPLAN COULD BE ADAPTED TO INCLUDE A BUILDING STANDING ADJACENT TO THE MAIN HOSPITAL.

THESE INCLUDE:

- ① ADJACENT PROPOSED ED DROP-OFF
- ② ADJACENT EXISTING PLANT
- ③ WITHIN THE STAGE 2 FOOTPRINT
- ④ REPURPOSING EXISTING ICU/CCU



## Birthing Centre: Stand Adjacent

The Birthing Centre as Stand Adjacent Building is significantly smaller in scale than the Stage 1 Building.

A connection to theatres would require the Birthing Centre to be raised from the natural ground level.



# Birthing Centre: Stand Adjacent

1

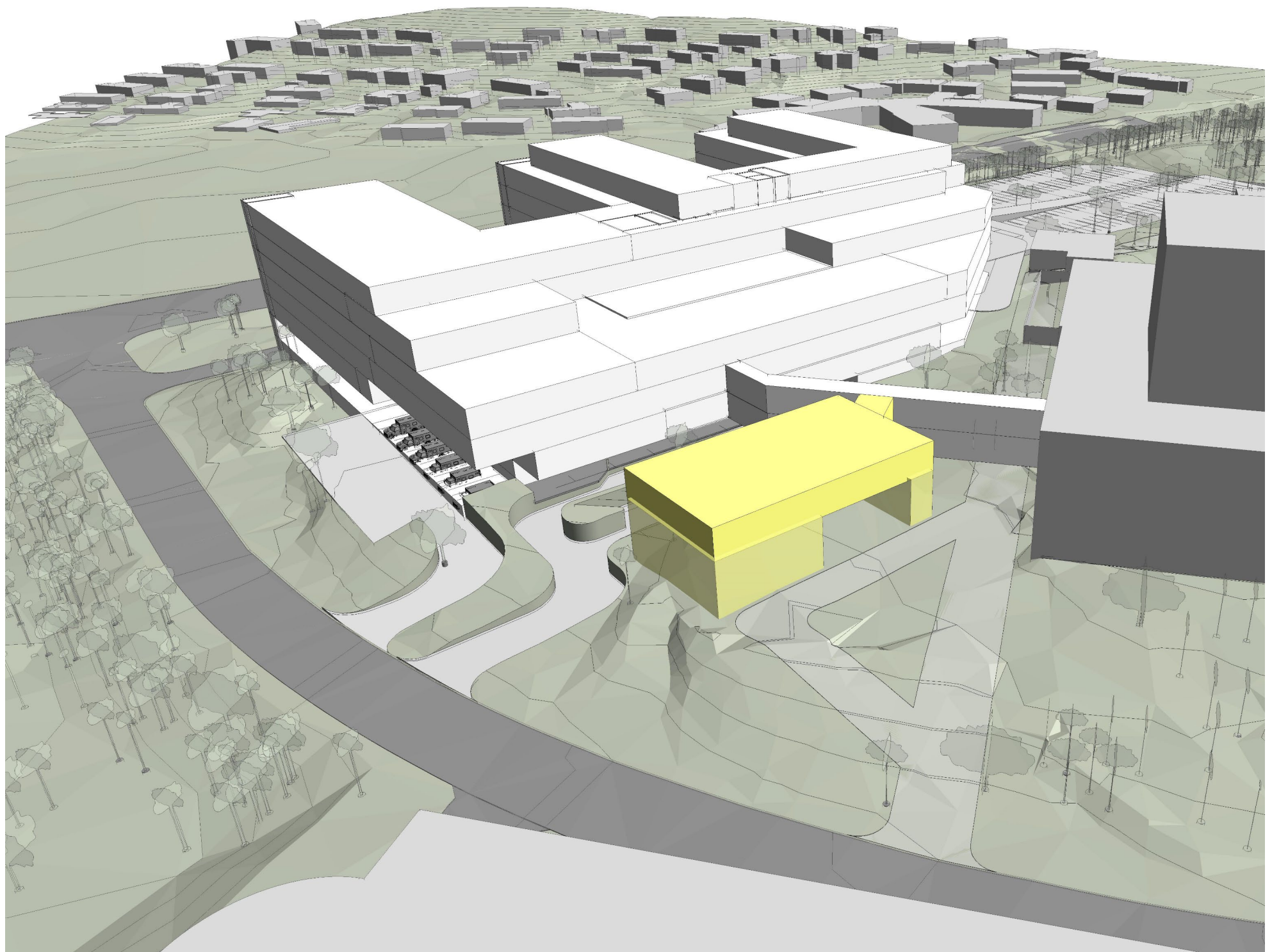
Adjacent ED drop-off.

There is enough space for separate birthing drop-off (as shown).

The layout is reliant on demolition of existing ICU, therefore would be a Stage 2 option.



- Ⓞ SEPARATE IDENTITY  
Could appear entirely independent from adjacent hospital building, though the scale difference will create hierarchy issues.
- Ⓞ DROP-OFF  
Separate drop-off with no re-work of ED drop-off created at Stage 1.
- Ⓞ EXTERNAL SPACE/GARDEN  
Possibility of adjacent on-grade garden/outdoor spaces, though these will be overshadowed by surrounding built form.
- Ⓞ CONNECTION TO THEATRES  
Direct connection into hospital possible, only from from roof level over via proposed link bridge.
- Ⓞ CALM ATMOSPHERE  
Adjacency to ED entry and drop-off, and proximity to ambulance bay and Mary Potter Circuit.
- Ⓞ WORKS WITH STAGE 1 & MASTERPLAN  
Location less overshadowed by Stage 1 and works with future masterplan.

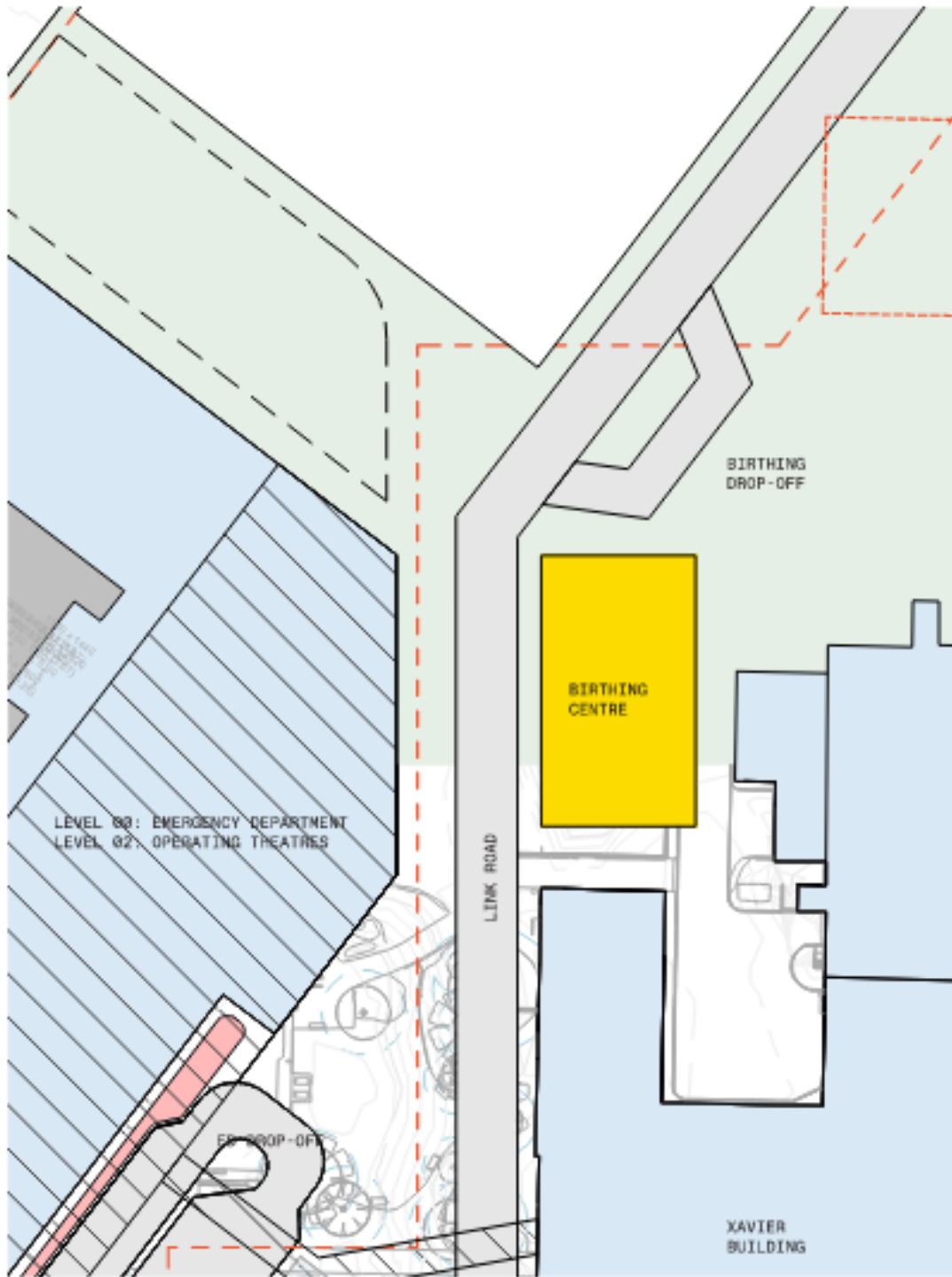


# Birthing Centre: Stand Adjacent

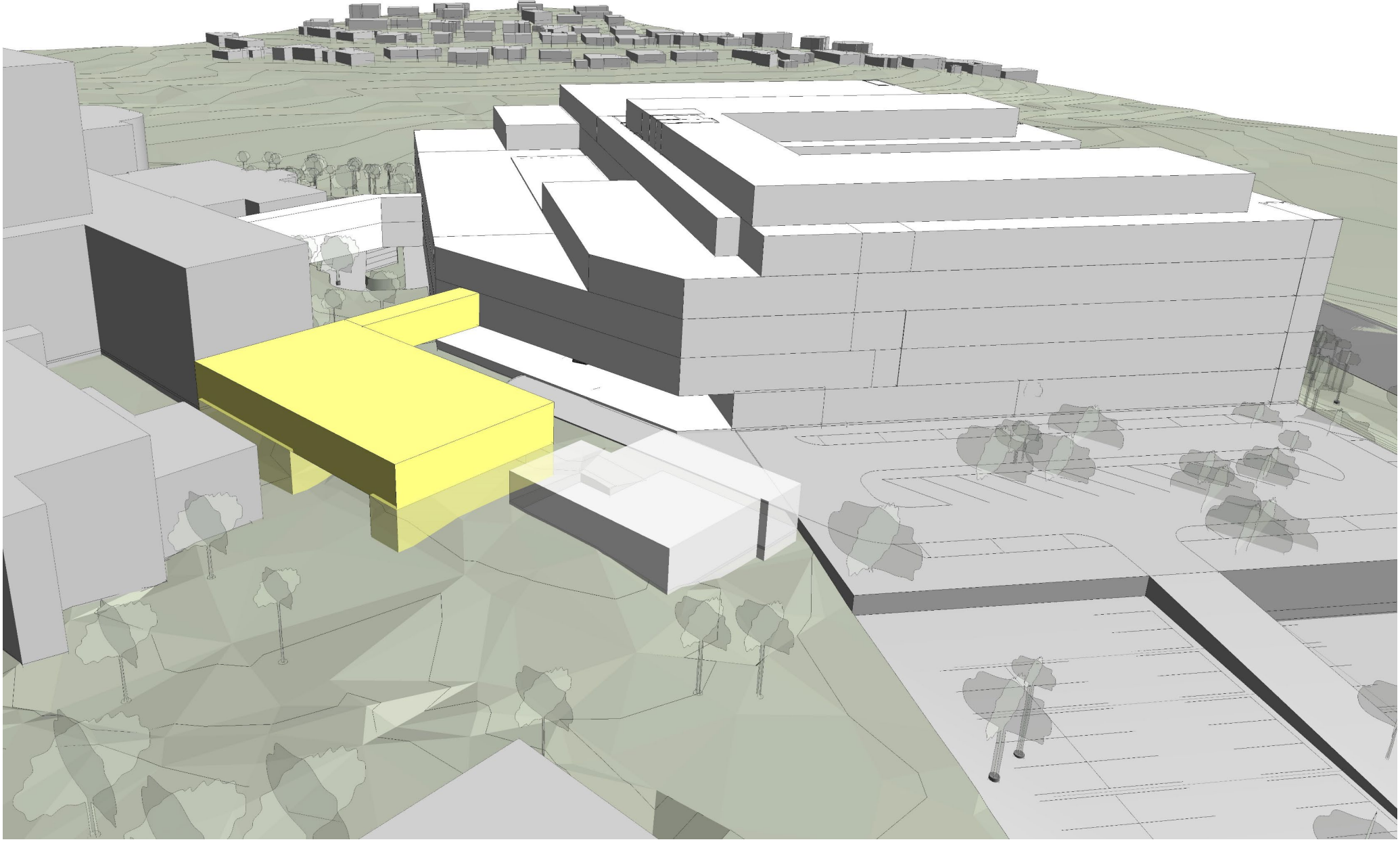
2

Adjacent existing plant.

There is potentially enough space for separate birthing drop-off (as shown) but not for external garden space. This option may also cause issues with access to existing Xavier loading area.



- Ⓢ SEPARATE IDENTITY**  
Is entirely independent from adjacent hospital building, though the scale difference will create hierarchy issues.
- Ⓢ DROP-OFF**  
Separate drop-off may work (or share with main entry drop-off). No re-work of ED drop-off created at Stage 1.
- Ⓢ EXTERNAL SPACE/GARDEN**  
Possibility of adjacent on-grade garden/outdoor spaces, though these would have to be post-Xavier demolition.
- Ⓢ CONNECTION TO THEATRES**  
No direct connection into hospital possible. An additional new link bridge would be required.
- Ⓢ CALM ATMOSPHERE**  
Adjacency to main entry and existing access road. Could be mitigated through Stage 2 design and landscaping on completion of demolition works.
- Ⓢ WORKS WITH STAGE 1 & MASTERPLAN**  
Location less overshadowed by Stage 1 though creates a new built-form in the middle of the proposed green space in the master plan, lessening the connection to the rest of the hospital campus.



# Birthing Centre: Stand Adjacent

3

Within the Stage 2 footprint.

Entry from Link Road or main entry 'plaza'.

Possibility for use of main entry drop-off or dedicated drop-off.

The layout could impact Stage 2 works.



Ⓢ SEPARATE IDENTITY  
Could appear independent or integrated with independent entry, adjacency to Stage 2 works could create scale issue.

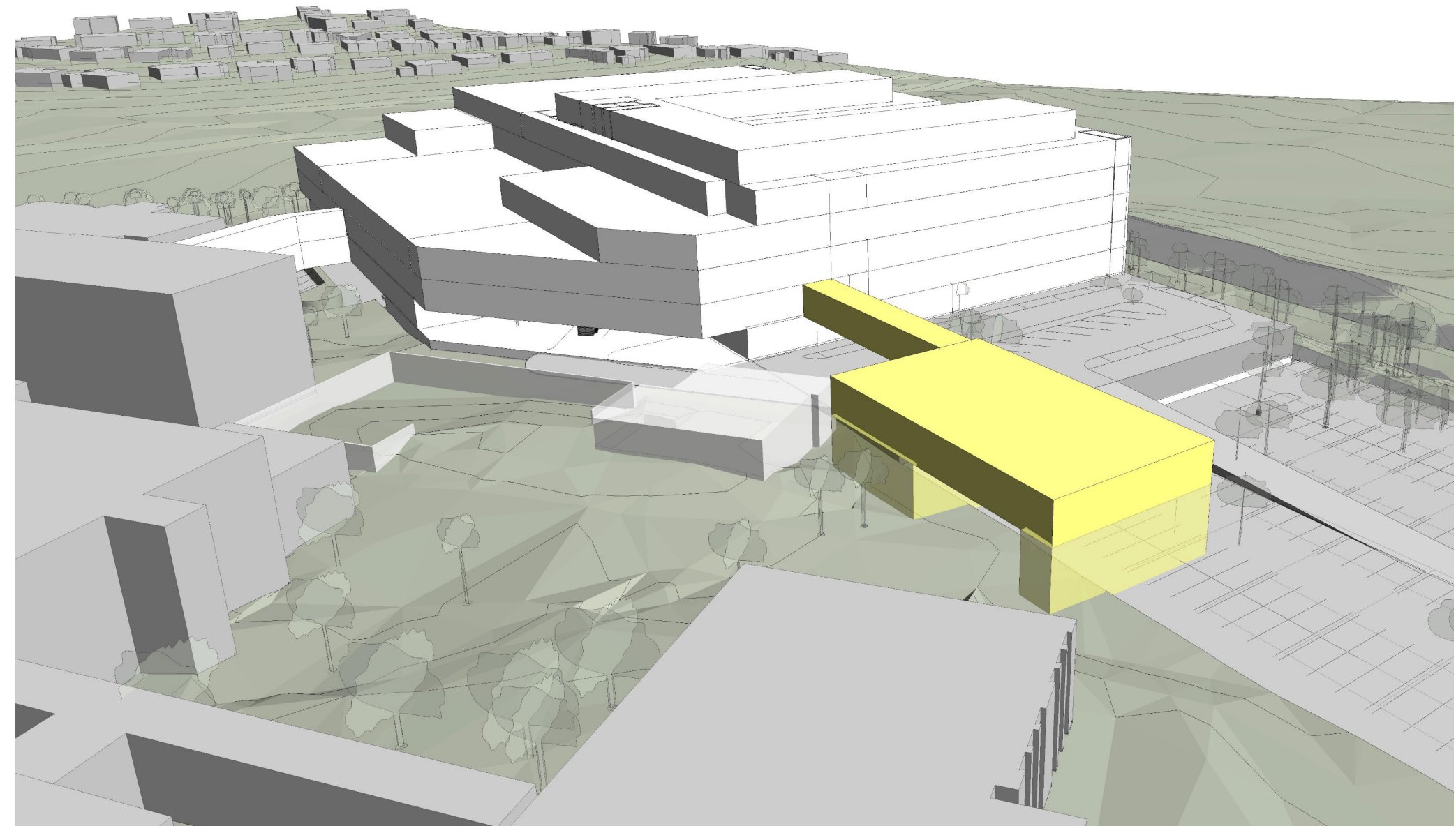
Ⓢ DROP-OFF  
Drop-off could be at main entry, or dedicated drop-off.

Ⓢ EXTERNAL SPACE/GARDEN  
Possibility of adjacent on-grade garden/ outdoor spaces, these would have to be designed with Stage 2 works and may be overshadowed by adjoining building.

Ⓢ CONNECTION TO THEATRES  
Internal connection into hospital possible, with a longer distance to theatres. Route would be as part of Stage 2 design. Only available access at this time would be via an additional new link bridge.

Ⓢ CALM ATMOSPHERE  
Adjacency to main entry and drop-off, quieter than other locations. Unknown future adjacencies as part of Stage 2 works.

Ⓢ WORKS WITH STAGE 1 & MASTERPLAN  
Location would be best delivered as part of Stage 2 works otherwise would impact future master planned work stages.



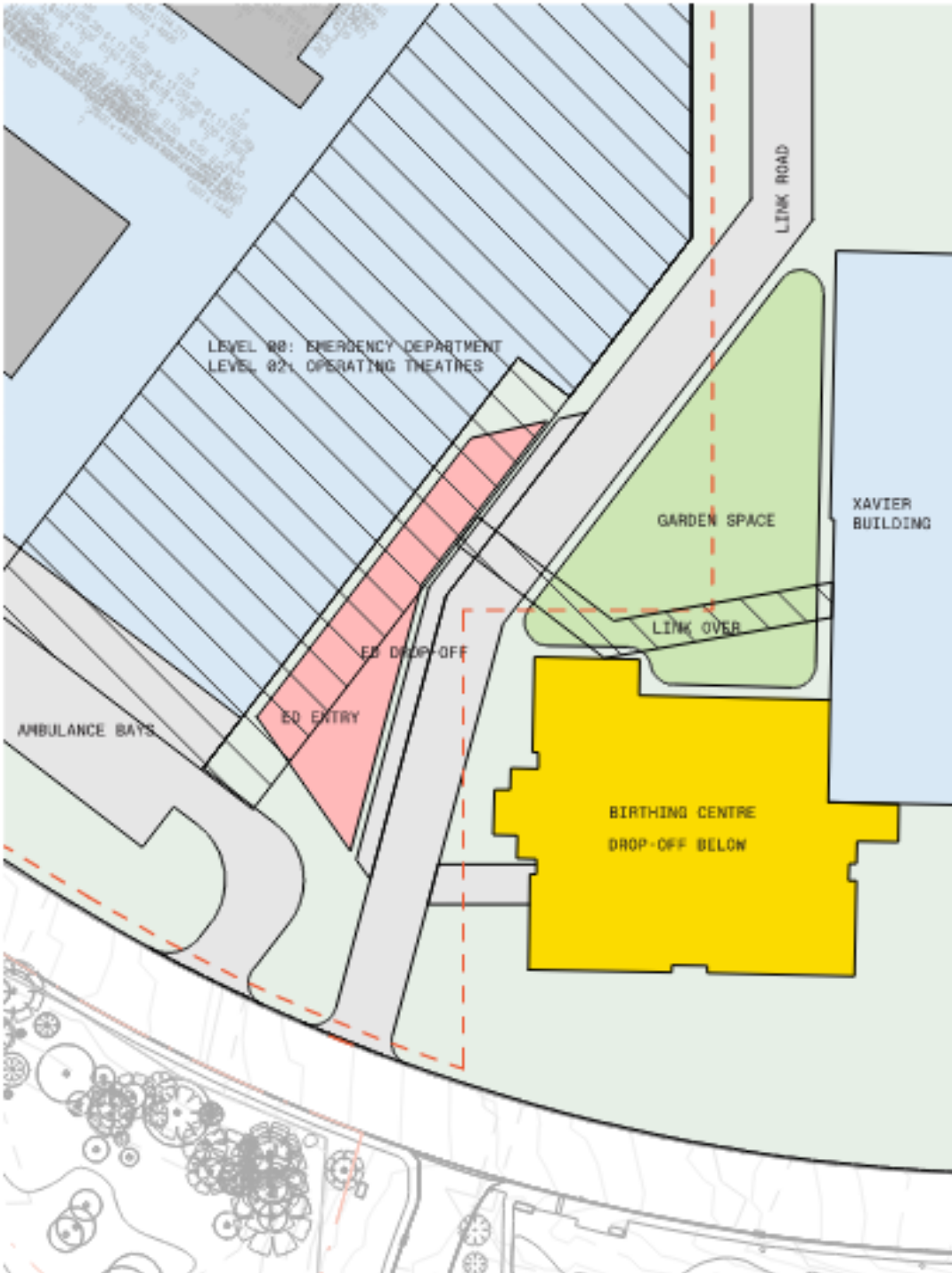
# Birthing Centre: Stand Adjacent

4

Repurposing existing ICU/CCU.

Would create independent entry route from new Link Road or main entry 'plaza', with use of existing parking below as Birthing Centre drop-off.

Would have to occur post-Stage 1 works, and size of centre larger than brief.



- Ⓞ **SEPARATE IDENTITY**  
 Would appear independent with independent entry, with scale difference lessened by larger scale of existing building.
- Ⓞ **DROP-OFF**  
 Drop-off could be at main entry, or dedicated drop-off. Requires complete re-working of ED drop-off
- Ⓞ **EXTERNAL SPACE/GARDEN**  
 Possibility of adjacent on-grade garden/ outdoor spaces, these would be below the level of the Birthing Centre.
- Ⓞ **CONNECTION TO THEATRES**  
 Internal connection into hospital possible via bridge link.
- Ⓞ **CALM ATMOSPHERE**  
 Adjacency to ED may compromise location.
- Ⓞ **WORKS WITH STAGE 1 & MASTERPLAN**  
 Location would be best delivered post Stage 1 and interferes with proposed route of link road and potential future master plan.

