

ARCHITECTURAL DESIGN REPORT

LANG WALKER AO MEDICAL RESEARCH BUILDING – MACARTHUR

BVN-AR-10R XXX-003

OCTOBER 2021

PURPOSE OF THIS DOCUMENT

This report has been prepared in support of the State Significant Development Application for the new Macarthur Medical Research Centre, SSDA no. SSD-17491477. This report has been prepared by BVN Architecture Pty Ltd with input from relevant other organisations and disciplines. It is to be read in conjunction with the architectural drawings, the EIS prepared by Walker Corporation and accompanying appendices and reports.

DOCUMENT CONTROL

REVISION	DATE	DESCRIPTION
1	07/10/2021	SSDA ISSUE
2	12/10/2021	SSDA SUBMISSION
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ACRONYMS AND ABBREVIATIONS

AHFG	Australasian Health Facility Guidelines
EDB	Electrical Distribution Board
EIS	Environmental Impact Statement
EOTF	End of Trip Facilities
ESD	Environmentally Sustainable Design
FDB	Functional Design Brief
FFL	Finished Floor Level
FFE	Furniture, Fixtures and Equipment
GANSW	Government Architect NSW
HI	Health Infrastructure
ICT	Information and Communications Technology
IAMR	Ingham Institute for Applied Medical Research
KUG	Key User Group
LGA	Local Government Area
MCS	Macarthur Clinical School
MMRC	Macarthur Medical Research Centre
PWG	Partners Working Group
RFI	Request for Information
SDRP	State Design Review Panel
SID	Safety in Design
SOA	Schedule of Accommodation
SSDA	State Significant Development Application
SWSLHD	South West Sydney Local Health District
UNSW	University of NSW
VIA	Visual Impact Assessment
WSU	Western Sydney University

CONTENTS

EXECUTIVE SUMMARY

1. CONTEXT AND SITE ANALYSIS

1.1 CONTEXT	7
1.2 SITE ANALYSIS	8
1.3 SITE SURROUNDS	10
1.4 SITE FEATURES	11

2. DESIGN INTENT

2.1 DESIGNING WITH COUNTRY	13
2.2 PRECINCT MASTER PLAN	14
2.3 KEY DESIGN DRIVERS	15
2.4 MASSING OPTIONS	16
2.5 DESIGN APPROACH	17

3. BUILDING DESIGN AND URBAN RESPONSE

3.1 SITE LAYOUT	19
3.2 MASSING, HEIGHT AND SCALE	20
3.3 PLANNING	21
3.4 BUILDING ENVELOPE	26
3.5 BRIDGE CONNECTIONS	29
3.6 VISUALISATIONS	31
3.7 PUBLIC ART STRATEGY	33
3.8 SERVICING AND OPERATION	34
3.9 ENVIRONMENTAL AMENITY	35
3.10 AMENITY IMPACTS TO SURROUNDS	35

4. GOVERNMENT ARCHITECT CONSULTATION

4.1 BETTER PLACED	37
4.2 SDRP 1	38
4.3 SDRP 2	40

5. VISUAL IMPACT STUDY

5.1 VIEW 1	43
5.2 VIEW 2	44
5.3 VIEW 3	45
5.4 VIEW 4	46
5.5 VIEW 5	47

ACKNOWLEDGMENT OF COUNTRY

We acknowledge that the Macarthur Medical Research Centre will stand on Dharawal Land. We pay our respects to your Country, ancestors and the community that maintains culture from the past, in the present and into the future.

We recognise that the success of this project requires us listening to the Traditional Owners of the land and other Aboriginal and Torres Strait Islander People, working with you, and walking beside you on this journey.



EXECUTIVE SUMMARY

The Macarthur Medical Research Centre (MMRC) will facilitate world-class health research outcomes specifically targeted at the needs of the local Campbelltown/ Macarthur population.

VISION

Combining people-centred health research facilities with public engagement spaces, the MMRC will create a unique and exciting opportunity for community interaction and ownership. Located on the Campbelltown Hospital Campus, the Research Centre will be a shared facility bringing together the following partner organisations:

- Western Sydney University (WSU),
- South Western Sydney Local Health District (SWSLHD),
- Ingham Institute for Applied Medical Research (IIAMR),
- University of New South Wales (UNSW), and
- Health Infrastructure (HI).

Embedding the MMRC within the existing Hospital Campus will enable opportunities for translational research outcomes directly improving the health outcomes for the local population to be realised.

BRIEF

The design for the MMRC is informed by two key briefing documents, the Functional Design Brief (FDB), and the Research Strategy.

The Research Strategy (prepared by Capital Insight) developed the following Project Vision for the MMRC:

“Our vision is for an integrated health, research and education precinct at Campbelltown, delivering world-class research, innovation and improved health outcomes for the Macarthur region and wider community.”

To support this vision, the Research Strategy identified five core Research Themes, as well as a series of supportive, emerging and existing themes, and shared platforms. The five core Research Themes are:

- Diabetes/Obesity,
- Mental Health,
- Paediatrics and Adolescents,
- Indigenous Health, and
- Addiction Medicine.

Building on the vision, objectives and principles established in the Research Strategy, the FDB describes the functional requirements and spatial requirements for the MMRC, as well as a series of nine design principles which embed the aspirational vision of the facility. At the core of these aspirations is a commitment to improving the immediate health needs of the local community and creating a welcoming and uplifting experience for visitors and staff alike.

The design principles are:

- People-Centred Clinical Research Spaces
- Spaces that Promote Collaboration
- A Community Building
- A ‘Loose Fit’ Structure
- Unique Character and Identity
- Outside In/Inside Out
- A Sustainable Building
- A Hybrid Building
- Materials Supporting Well-being

The MMRC will include Clinical Research facilities, associated Dry Research and collaboration spaces, Shared Public spaces, and Back of House/Support spaces as required across five levels. The Site is an existing helipad located between Building D and the Macarthur Clinical School (MCS) on the Campbelltown Hospital Campus. The brief includes the requirement for physical connections to both adjacent buildings, helping to facilitate an interconnected internal pedestrian network and strengthening relationships between clinical, research and education spaces, with access to the new Clinical Services Building and Hospital Street currently under construction.

A strong commitment from all partners to sharing spaces and avoiding duplication across the Campus has been a fundamental principle of the FDB. The MMRC will benefit from access a number of shared facilities including retail, end of trip and auditorium spaces.

FUNCTIONAL GROUPINGS

The MMRC will be a unique facility on the campus, with publicly accessible breakout, seminar, and waiting spaces, dedicated clinical research areas, and dry research spaces for all partner organisations to co-inhabit. Spaces within the building are organised according to five functional groupings:

- Shared Public
- Dry Research
- Clinical Research
- Research Assessment
- Logistics and Support

Reflecting the building’s core functionality, the major space allowance is given over to research-focussed areas (Dry Research, Clinical Research and Research Assessment spaces). These spaces are supported by shared formal and informal collaborative areas. Shared Public areas include public and community engagement spaces.

1. CONTEXT AND SITE ANALYSIS

1.1 CONTEXT

COUNTRY

The Site is located in Dharawal (or Tharawal) country, which extends along the coast south of Sydney past Nowra, and inland to Campbelltown and Camden.

CAMPBELLTOWN

Campbelltown is within the Macarthur region in South Western Sydney and is approximately 51 km south-west of Sydney's CBD. It is a major centre within the metropolitan area of Sydney and has a population of 163,000 with an expected growth to 273,500 by 2036 (ABS). It is home to a significant Aboriginal and Torres Strait Islander population of almost 6000 people. Sixty-two percent of residents have parents who were born overseas, and 76 languages are spoken in the area. The demographic tends to be younger, with 36% of the population under 25 years of age.

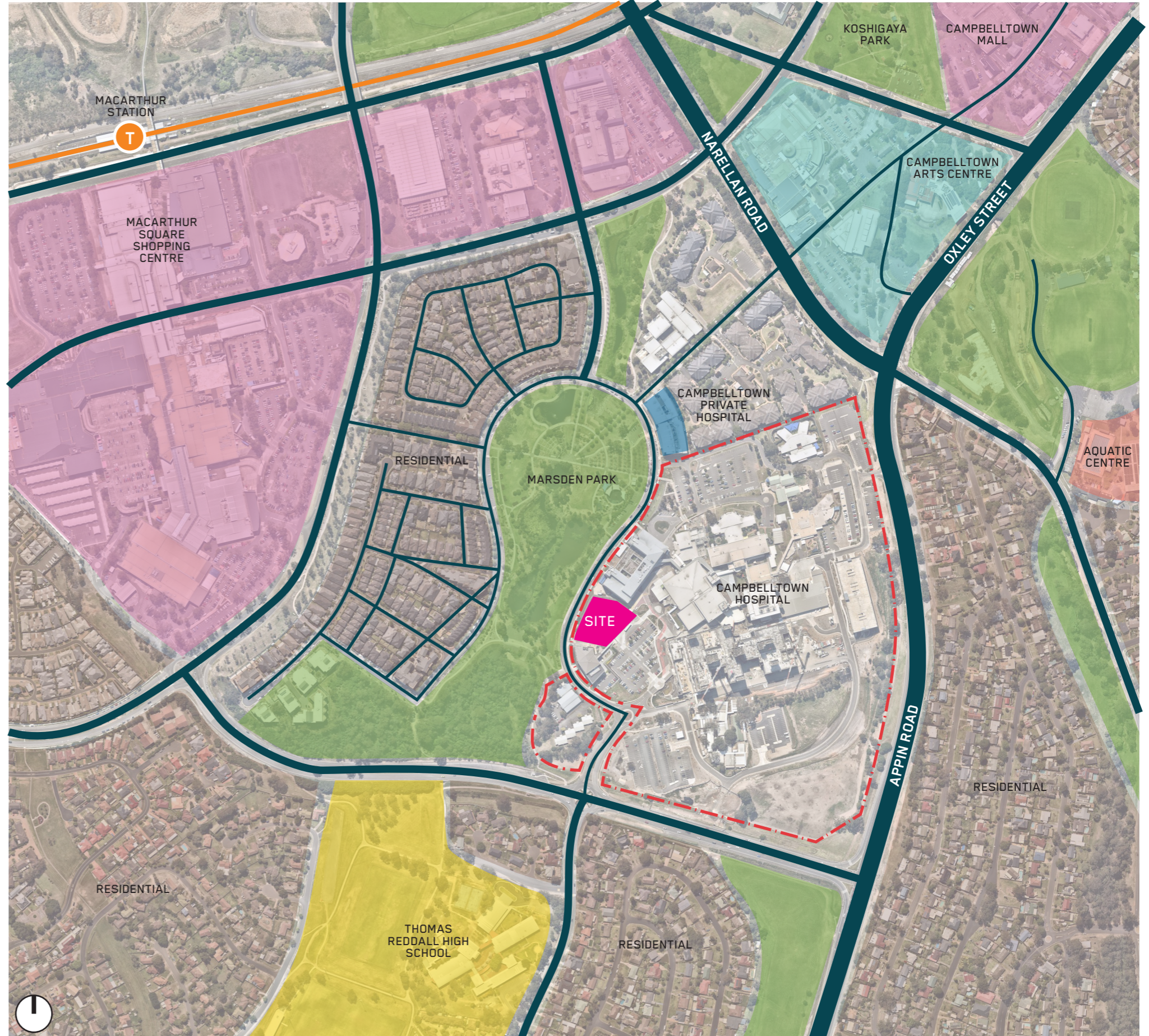
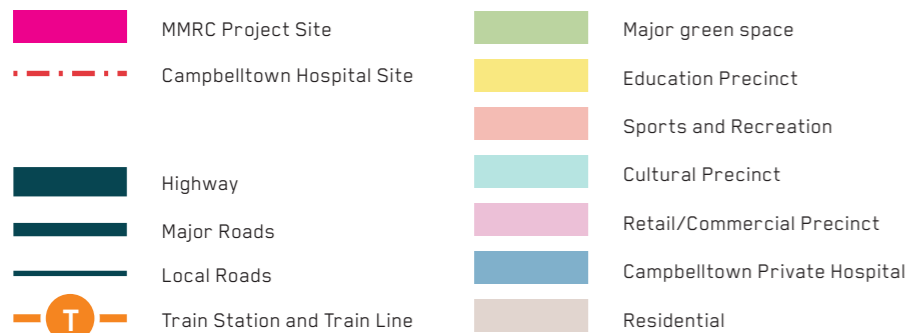
CAMPBELLTOWN HOSPITAL CAMPUS

The site for MMRC sits within the Campbelltown Hospital Campus, along Parkside Crescent in Campbelltown. Campbelltown Hospital is one of the primary medical facilities with the Local Government Area and wider Macarthur region. It falls under the South Western Sydney Local Health District. The site is zoned SP2 Infrastructure (health service facility) under the Campbelltown LEP 2015. Development control zones bounding the Campus include residential and public recreation zones. Campbelltown Private Hospital sits to the north of the Campus under Commercial Core zone.

PLANNING FRAMEWORK

The project is strongly aligned with the strategic planning framework for the site, including the 'Campbelltown 2040 Local Strategic Planning Statement (LSPS) (2020)' which identifies Campbelltown as a health and education precinct and collaboration area. Strategies include growing health and education services within the Hospital and University precinct, growing community-based health services at the Hospital, and encouraging collaboration between health and education institutions.

'Reimagining Campbelltown City Centre Master Plan (2018)' includes design initiatives, which are closely aligned with the project's principles, including promoting connections to the natural environment, encouraging public spaces, and green rooftops and walls. It identifies Parkside Crescent as a 'greenway' (a landscaped pedestrian and cycle friendly route). The Master Plan also encourages fine-grain development and cross-site permeability.



1.2 SITE ANALYSIS

1.2.1 NATURAL FEATURES

TOPOGRAPHY

The hospital campus slopes from the south-east corner to the north-west corner, with a cross fall of approximately 30 metres towards Marsden Park. The site itself slopes from east to west, with a fall of approximately 8m.

SOLAR

The site's predominant elevations are oriented to the east and west with some shading provided to the north by the adjacent Building D.

WIND

Winds from the northeast and southeast to southerly direction are predominant during the summer period. In winter, winds typically occur from a range of angles from west/southwest to north/north-west. The site's inland location means wind speeds are typically lower due to sheltering provided by the upwind terrain and distance away from prevailing coastal breezes.

GREEN SPACE

Marsden Park is a large green wetland park running adjacent to the western boundary of the site, with walking tracks, native flora and fauna species, and Birunji Creek running through.

The Campbelltown Hospital master plan includes future plans for a Village Green/ Common area, which would front the MMRC on its eastern side. The topography of the surrounding area also lends itself to views of distant hills to the east.

FLOODING

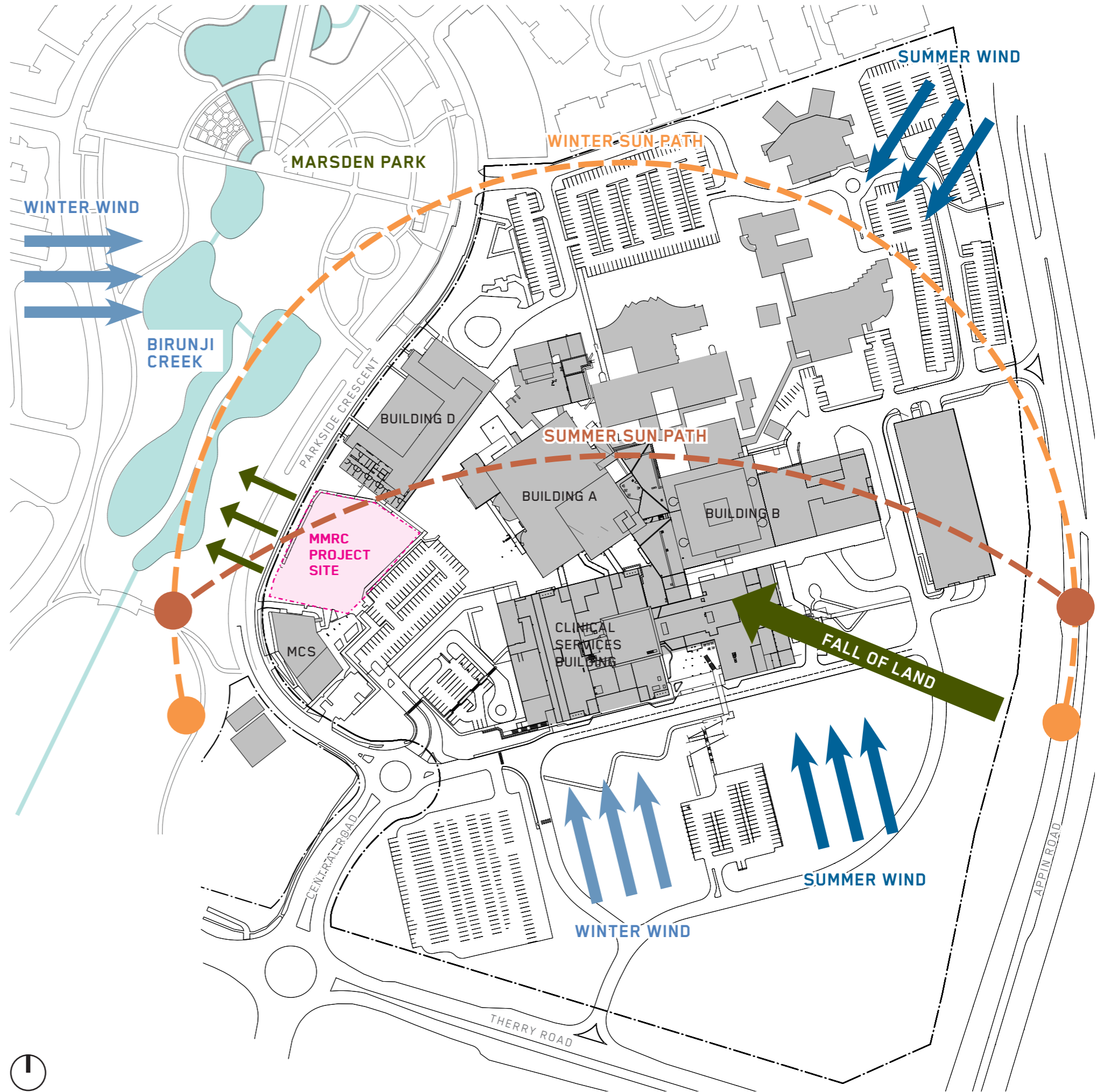
The site is in part affected by localised flooding, particularly to the south-western corner of the site. The building's lower ground 2 level has been set to account for the site's probable maximum flood levels in accordance with civil engineering advice.

Refer to the Flood Impact Assessment for further information.

BUSHFIRE

A Bushfire Assessment Report has been completed, which deems bushfire risk to the development as is minimal with a small area of remnant Bushfire Prone Land to the south west of the site (beyond 100m).

Refer to the Bushfire Assessment Report for further information.



1.2.2 ACCESS TO SITE

PUBLIC TRANSPORT

The site is located between Campbelltown and Macarthur train stations, the closest being Macarthur, which is within walking distance approximately 1.2km north west of the site. Campbelltown station is approximately 2.1km north of the site.

Both train stations offer bus services directly to the Hospital campus, stopping at the main entry to the new Clinical Services Building, due for completion in late 2023.

VEHICULAR ACCESS

The site is serviced by and in close proximity to key road links including the M5 South Western Motorway off Appin Road.

Main access to the site will continue via Central Road which links south to Therry Road, and also Parkside Crescent. Other entries into the Hospital campus exist off Appin Road, from Parkside Crescent at the north, and directly off Therry Road.

Numerous car parks are located across the hospital campus including dedicated areas for public and staff. On-street parking is available on Parkside Crescent.

BICYCLE FACILITIES

On and off road cycleways services the site primarily from the main roads, and also from Marsden Park. Campbelltown City Council also outlines plans for new proposed cycleways in the Campbelltown LGA Cycleway Plan (April 2019).

End of trip facilities are provided within the both MCS and the new Clinical Services Building.

PEDESTRIAN

Primary access into the hospital building network is through Building D at Level 00. A new "Hospital Street" circulation spine was developed as part of the Campbelltown Hospital Redevelopment works, which connects a majority of the hospital buildings and departments across the campus. On completion, the southern end of the spine will provide a new main entry into the hospital. Future hospital works are planned to include an additional northern entry into this spine.

The immediate MMRC site can be accessed from both Parkside Crescent at the west, and from the existing car park at the east, which sits approximately 7m higher in elevation.

Part of the MMRC works includes extending this link from Building D into MMRC and also through to the MCS, which will maximise the connectivity of MMRC to the surrounding buildings on the hospital campus.

PEDESTRIAN

●●●●● Key existing arrival routes to Hospital campus

← Key existing precinct connections

▲ Key existing pedestrian entries

PUBLIC TRANSPORT

T Train station

B Bus stop

BICYCLES

— Existing cycle routes

- - - Council-proposed cycle routes

● Bike parking/EOTF

VEHICLES

▲ Existing vehicular entries

CP Car park – Public

CP Car park – Staff

OPERATIONS

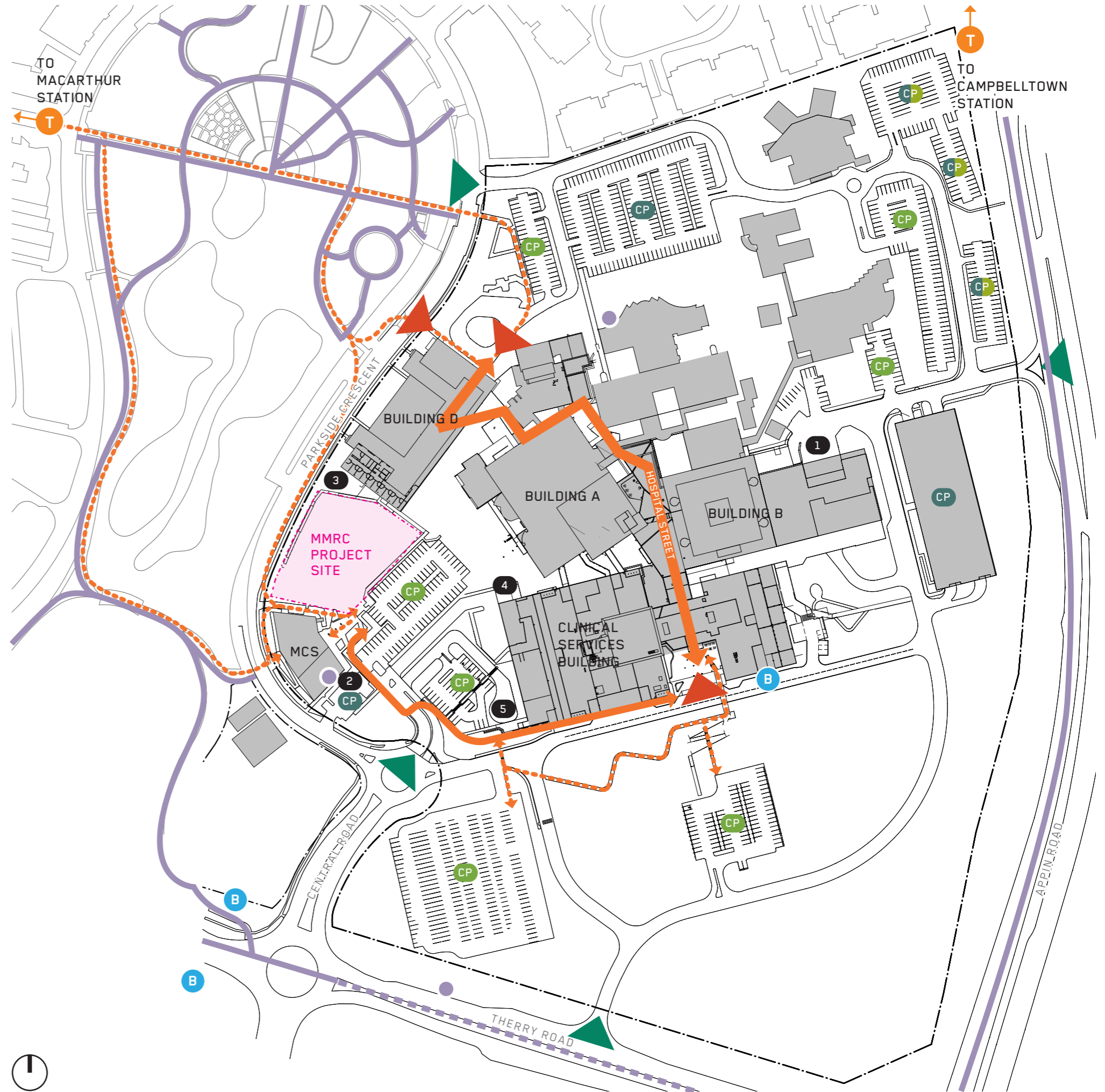
1 Central hospital loading dock

2 MCS delivery bay

3 Building D service bay

4 Ambulance bay

5 Emergency Department



1.3 SITE SURROUNDS



1 MARSDEN PARK



2 CAMPBELLTOWN HOSPITAL BUILDING D



3 MACARTHUR CLINICAL SCHOOL (MCS)



4 CAR PARK / FUTURE VILLAGE GREEN



5 NEW CLINICAL SERVICES BUILDING (UNDER CONSTRUCTION)

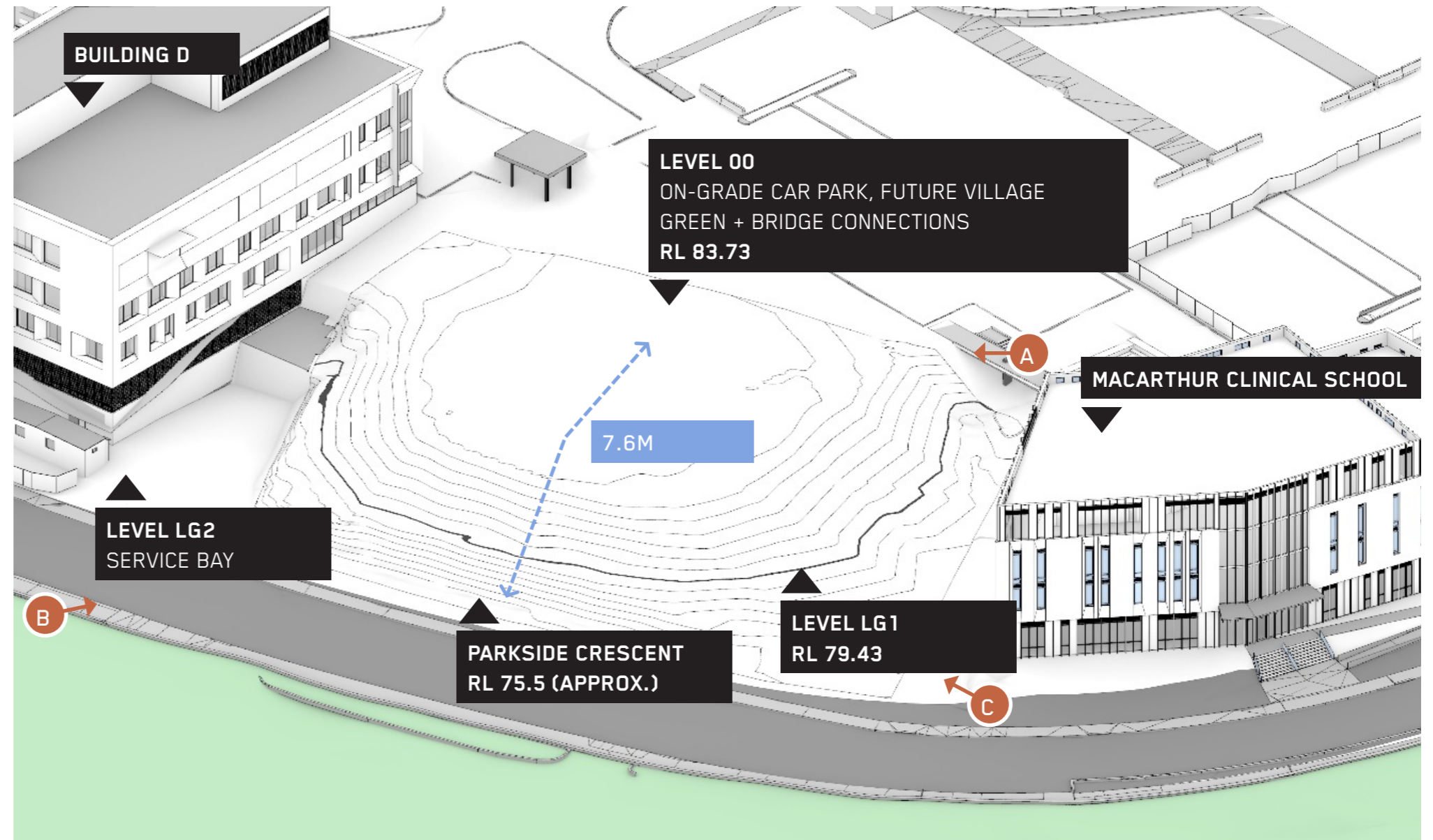


1.4 SITE FEATURES

The MMRC Site has a prominently western frontage towards Parkside Crescent and Marsden Park. The Site is locally elevated to accommodate the existing helipad, which is being relocated to the new Clinical Services Building currently under construction as part of the Hospital redevelopment works.

At the north, the Site is bounded by Hospital Building D and its associated service bay fronting Parkside Crescent. To the south, the Site is bounded by the Macarthur Clinical School (MCS). MCS has a number of support entries fronting a shared walkway that runs between it and the MMRC Site, with opportunities for MMRC to connect into.

There is level difference of approximately 7.6m between the Parkside Crescent level to the west (approximate Relative Level (RL)+75.500) and the eastern edge of the site (approximately RL +83.730). This upper level at RL+83.730 forms a continuous link between the MMRC, both adjacent buildings (Building D and MCS) and beyond to the broader hospital. This level is approximately 1.6m above the existing car park edge to the east.



A View of Site from MCS towards Building D



B View of Site from Parkside Crescent towards MCS



C View of Site from Parkside Crescent/MCS towards Building D

2. DESIGN INTENT

2.1 DESIGNING WITH COUNTRY

2.1.1 FRAMEWORK

"Understanding Country means we stop reading landscape as being empty and start to see that parts of the land have been ritualised and have meaning beyond what we can see."

– Kevin O'Brien, BVN Principal

BVN's Designing with Country work guides the way we think about projects that engage with Aboriginal and Torres Strait Islander contexts. These contexts vary from direct engagement on community projects to contributions to mainstream projects, and provides industry leadership. At the core of all these contexts is a need to understand the Aboriginal and Torres Strait Islander concept of Country.

In thinking about Country, there is a logic for movement located in the idea of a track, logic for occupation emanating from the idea of a camp, and logic for events found in the idea of ritual. Acknowledging that a site belongs to a specific Country on a particular part of this continent enables us to draw inspiration, ideas, and opportunities directly from that place and the people who belong to it.

Engagement with the stakeholders thus far has focused on requirements of Indigenous research stream. Key feedback to inform the design strategy at broader level include:

- Ensuring the MMRC is inviting and welcoming for indigenous patients who come into the building.
- Emphasis on the MMRC providing a safe space for indigenous patients including those who are neuro-diverse or may have mental health needs.
- Use local language in the building.
- Integrate indigenous public art into the building.

Engagement with Indigenous Elders as part of the Designing with Country framework will continue as part of Design Development (noting that current restrictions have limited opportunities for in-person engagement during Schematic Design). The approach to Designing with Country will follow the process- formulation of framework; investigation of opportunities; defining propositions.

FRAMEWORK

- Sets out the context of the project site in relation to the Aboriginal Country it belongs to.
- Uncovers the site's geology, hydrology, flora and fauna, and Aboriginal occupation (past and present).
- Renders clearly what the site belongs to in terms of Country, and in turn Country reveals the Prompts for consideration in the second phase.

OPPORTUNITIES LENS

- Looks at design through the concepts of Spatial Settings, Country Palettes, and Caring for Country.
- Informs the urban design, architectural and landscape architecture approaches and provides guidance to way finding, archaeology, engineering and heritage.

PROPOSITIONS

- Defines specific propositions for the project in collaboration with the consultant team
- Lays down an accessibly narrative and direction for the project drawn from the associated opportunities lens

Our approach to Designing with Country is grounded in an understanding that there are many layers of influence that can affect the outcome of a project.

The first layer is Country and acknowledges and engages with Aboriginal concepts of place and culture.

The second layer is Infrastructure and draws upon the colonial origins of economic networks and associated hard infrastructure that has come to enable the city today.

The third layer is Community and, by way of inclusion, acknowledges the multi-cultural history and vibrancy of the locale.

The fourth layer is the project and is an aggregate condition of all things previous that have come to inform the way we can occupy the built environment, activate cultural opportunities, and imagine a better way of living.

Technology is the fifth layer and requires an ongoing awareness of its ever-changing development to be able to genuinely harness the possibilities of the future.

The Global layer is very much about international benchmarking and understanding the ultimate ambition and vision of the project.

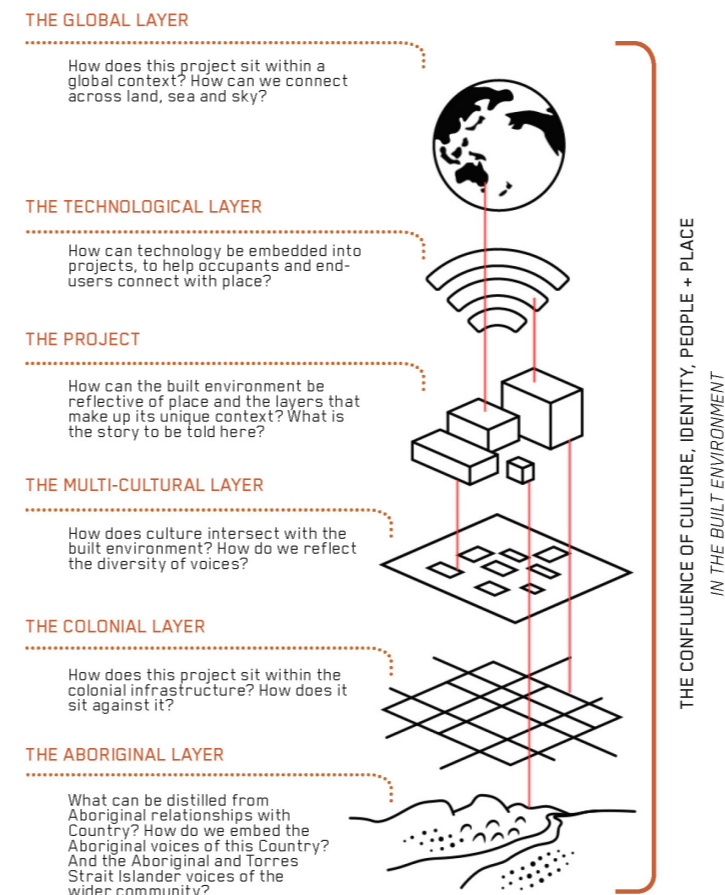
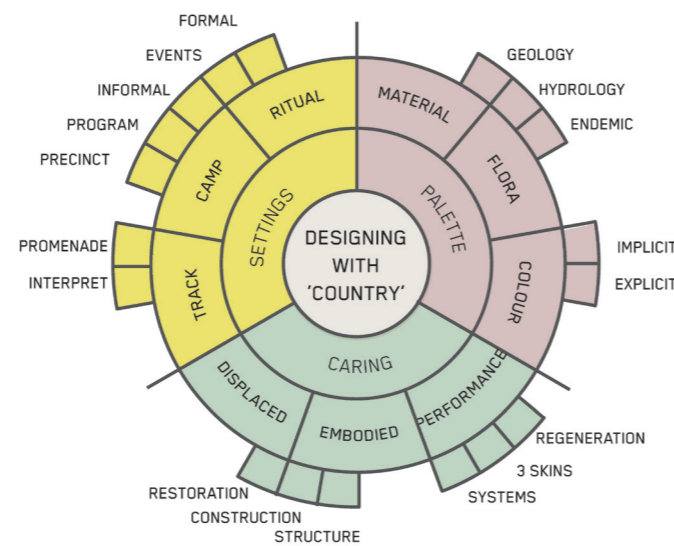
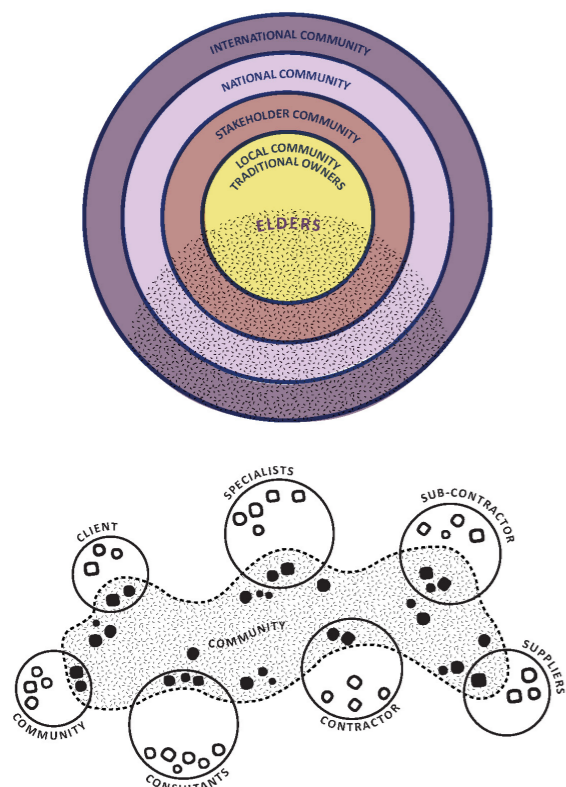
OUR VOICE, OUR PLACE

The design of the MMRC supports the principles outlined in Campbelltown City Council's "Our Voice Our Place". External landscaped areas include a variety of seating areas allowing groups of various sizes to gather, a children's play space, and a yarning circle.

Inside, publicly accessible spaces are dispersed across all levels, providing a variety of settings for members of the local community to gather. These include a stepped amphitheatre and seminar rooms to support larger groups and formal community events. A variety of diverse informal waiting and breakout settings provide a range opportunities for informal community engagement.

Multiple entry points, expansive glazing and operable façades are designed to create a welcoming and intuitive experience and a seamless, inviting transition from outside in.

Opportunities to incorporate artworks within the building and the landscape will be explored further during Design Development.



2.2 PRECINCT MASTER PLAN

The MMRC will connect into the overall master plan for Campbelltown Hospital, by linking into Macarthur Clinical School (MCS) to the south, and Building D to the north, completing the public route across the hospital buildings. A through site link on the MMRC site will also enhance the permeability of the Hospital campus from Parkside Crescent through to the existing car park and future Village Green space. A landscaped zone fronting the eastern main entry of the building is proposed, which will function as the beginnings of the Village Green, with opportunities to extend this Village Green further into the Hospital campus, in alignment with the Hospital's overall master plan.

A future stage of the Hospital Redevelopment also envisages the removal of a number of Hospital buildings located at the north, which will make way for a new northern entry into the central 'Hospital Street' spine for improved permeability.



- Project Site
- ← New/proposed precinct connections

- PEDESTRIAN**
- ⋯ Key existing arrival routes to Hospital campus
 - ← Key existing precinct connections
 - ▲ Key existing pedestrian entries

- PUBLIC TRANSPORT**
- T Train station
 - B Bus stop

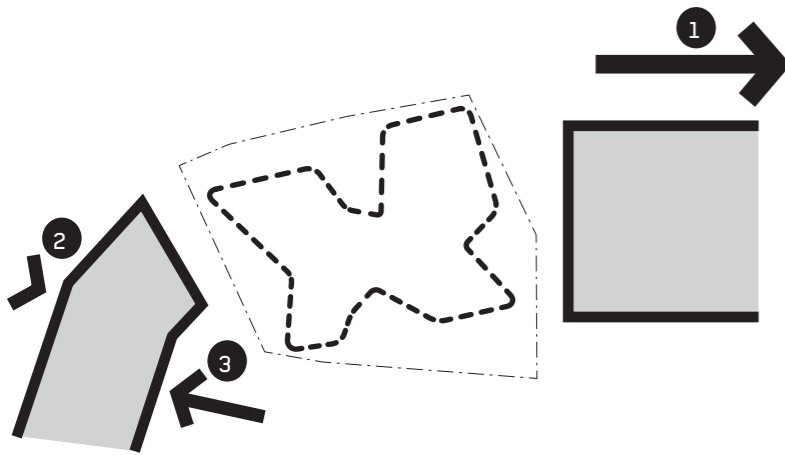
- BICYCLES**
- Existing cycle routes
 - Council-proposed cycle routes
 - Bike parking/EOTF

- VEHICLES**
- ▲ Existing vehicular entries
 - CP Car park – Public
 - CP Car park – Staff
- OPERATIONS**
- 1 Central hospital loading dock
 - 2 MCS delivery bay
 - 3 Building D service bay
 - 4 Ambulance bay
 - 5 Emergency Department



2.3 KEY DESIGN DRIVERS

Three key design drivers have been developed in response to the site context and Functional Design Brief. They inform the spatial organisation, massing, and building envelope of the MMRC.



POROUS ENVELOPE

Both the Macarthur Clinical School and Building D present relatively imposing façades with minimal visual transparency and limited opportunities for public access.

The MMRC site presents an exciting opportunity to create a building envelope which encourages through-site movement and a welcoming, intuitive and engaging presence on the campus by breaking down this monumentality and encouraging physical and visual porosity from all sides.

PARKSIDE CRESCENT

Whilst Building D provides a major pedestrian entry into the Campus, the entry is located over 100 metres from the MMRC site. The MCS entry from Parkside Crescent lacks scale, and is not generally accessible to the public.

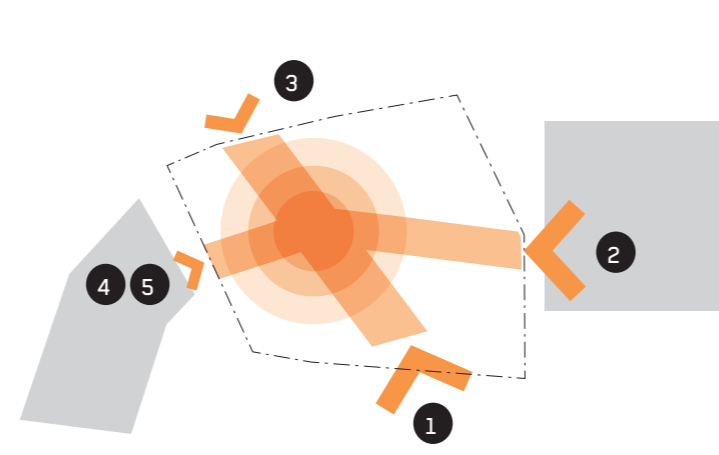
VILLAGE GREEN

On the east side of the MMRC site, fronting the future Village Green, there are no public entries into the hospital from Building D, Building A, or the future Clinical Services Building.

The MMRC main entry connects to the existing car park, providing staff and student access via a single pedestrian bridge.

LEGEND

1. Building D entry
2. MCS entry (staff and students)
3. MCS entry (staff and students)



CAMPUS CONNECTOR

The MMRC is envisaged as a nexus on the Campus providing opportunities for multiple entries from adjacent buildings, the Village Green, and from Parkside Crescent. This builds on the existing master plan, continuing the internal campus pedestrian route at Level 00 through Building D via a bridge into the MMRC, through the new building, and via a second bridge and into the MCS, completing the campus network of covered access.

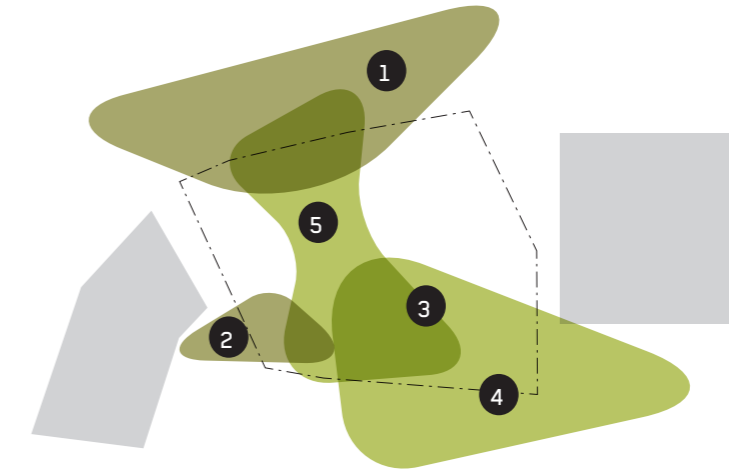
Externally, the MMRC fronts the future Village Green and links into a pedestrian route around the car park edge which ultimately provides access to the future Campus main entry via the Clinical Services Building. In addition, a Campus entry at Parkside Crescent is proposed, enhancing campus permeability by creating a key missing through site link and encouraging access to Marsden Park.

A further external entry is proposed at Lower Ground 1, providing direct access from the existing MCS courtyard.

By linking these disparate entries into a single, generous atrium space anchored by key public engagement functions, the MMRC seeks to create an activated and legible pedestrian experience.

LEGEND

1. Village Green - Main entry (Level 00)
2. Building D - Main entry, via bridge (Level 00)
3. Parkside Crescent - Campus entry (Level LG2)
4. MCS - Secondary entry, via bridge (Level 00)
5. MCS - Secondary entry, on grade (Level LG1)



INTEGRATED LANDSCAPE

Bordered by green space on both its long edges, the site provides an opportunity to create an integrated landscape experience, drawing green space into the building to provide a calming, natural environment that promotes wellness.

Immediately opposite the site to the west, Marsden Park is a created natural environment with significant areas of tree planting providing a picturesque green outlook for the MMRC. Terraced landscaping will soften the pedestrian transition from Lower Ground 2 up into the MMRC, providing a green and welcoming entry with opportunities for people to gather and sit.

The Campus master plan envisages a new Village Green to the east of the MMRC site. The project will realise the first part of this new campus public space. This will be the most activated landscape space, including an indigenous garden, play space and opportunities for staff and member of the public to inhabit the landscape in a variety of settings.

The through-site link provides a direct visual and physical connection between the east and west sides of the MMRC. It is envisaged as a green gully, bringing the landscape in and through the building. Internal planting around the central amphitheatre stair void and public spaces is proposed, as well as a publicly accessible terrace accessed from the central atrium at Level 00.

LEGEND

1. Marsden Park
2. MCS Courtyard
3. Village Green
4. Village Green (future extent outside site boundary TBC)
5. Interior Landscape



2.4 MASSING OPTIONS

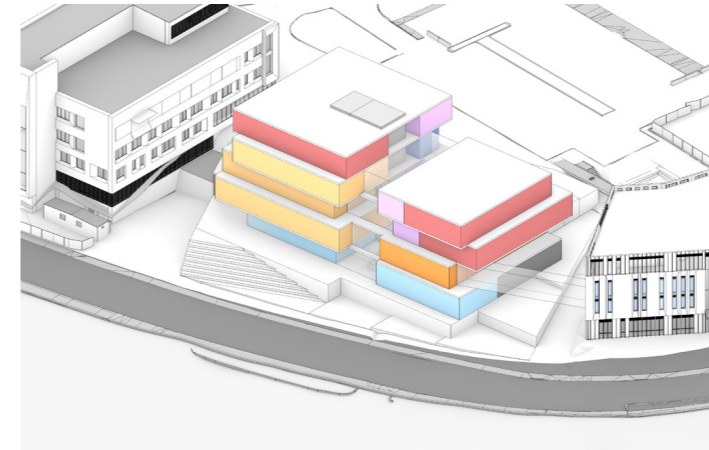
Four massing options were developed in Concept Design, in response to the following key considerations:

- Maximising physical permeability through the site – east-west from Parkside Crescent to the future Village Green, and north-south, from MCS through to Building D.
- Ensuring access to logical connection points into Building D and MCS, and minimising the length of bridge connections where possible.
- Responding to significant existing level changes.
- Maintaining 6m minimum distance from adjacent buildings for fire separation.
- Responding to the massing and scale of adjacent buildings.
- Optimising opportunity for connectivity to and activation of existing outdoor areas (sunken MCS forecourt, Marsden Park).
- Ensuring access for services vehicles and supporting the MMRC’s operational requirements.
- Addressing the predominantly western orientation to Parkside Crescent.
- Providing generous entries protected from inclement weather.
- Use of existing MCS vehicular entry point (immediately south of MMRC).
- Limiting vehicular and pedestrian crossover.

- Providing a larger building footprint with greater site coverage to maximise connectivity to the adjacent buildings.
- Creating a stepped building form in response to different scaled buildings either side.
- Reducing excavation by limiting extent of level Lower Ground 2 to naturally lower areas of site to south and west.
- Providing under croft plant areas to reduce visual impact of roof top plant.
- Rotating building forms to reduce the extent of direct west facing elevation and provide windows to each clinical room.
- Stepping of building form to break down the building massing and present a welcoming and human-scaled mass to both Parkside Crescent to the west and the future Village Green to the east.
- Stepping of building form to create generous, civic-scaled entry spaces that are covered from inclement weather.
- Activation of Parkside Crescent with a new entry, external stair, and through-site link.
- Use of existing driveway areas between the MCS and MMRC to cater for service vehicles and minimise pedestrian crossover.

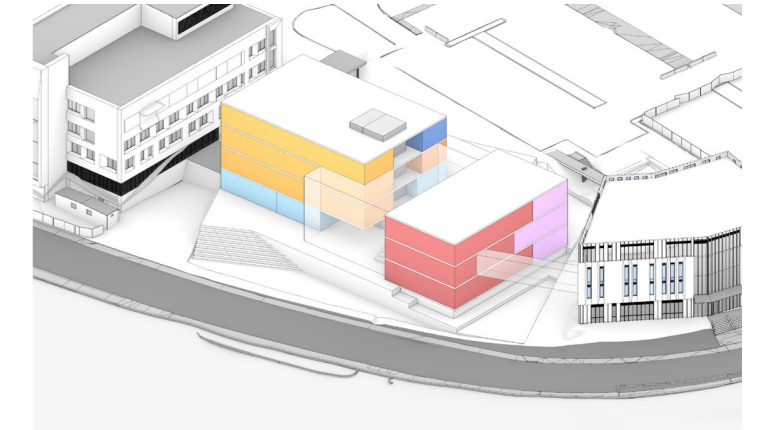
Investigation 4 was selected for its contextual response to the adjacent buildings, successful breaking down of scale along Parkside Crescent, reduced excavation and larger footprint creating a reduced height and reducing extent of bridge links to adjacent buildings. The building form twists open to reinforce a connection to landscape and afford users maximum amenity.

The proposed siting and building form investigations respond to these considerations in the following various ways:



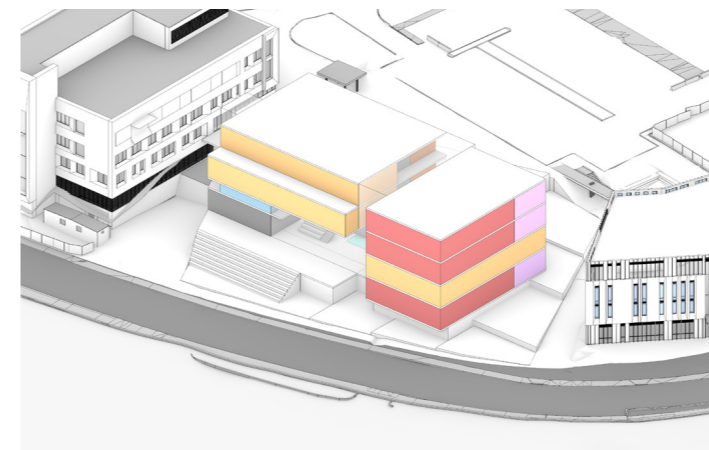
INVESTIGATION 1

- Horizontal sliding blocks
- Consistent and legible expression to each floor
- Multi-layered terracing and blurred edges
- Granular and articulated when compared to adjacent buildings



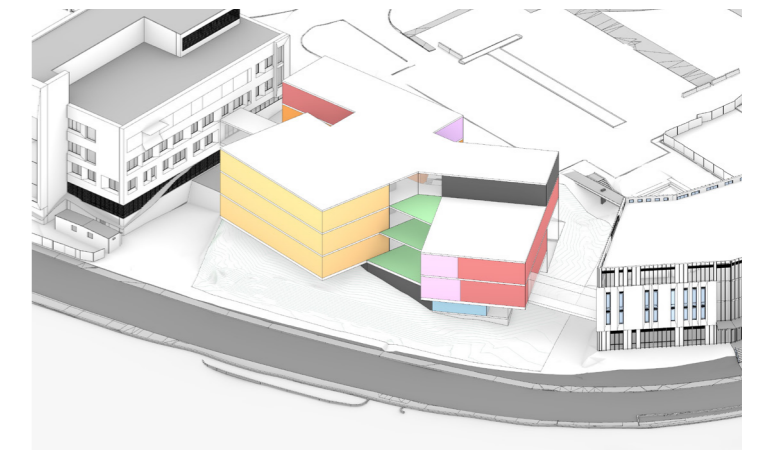
INVESTIGATION 2

- Consistent vertical stack
- Consistent expression to each multi-level volume
- Greater legibility to in-between spaces
- Sunken southern wing creating relationship with existing MCS terrace



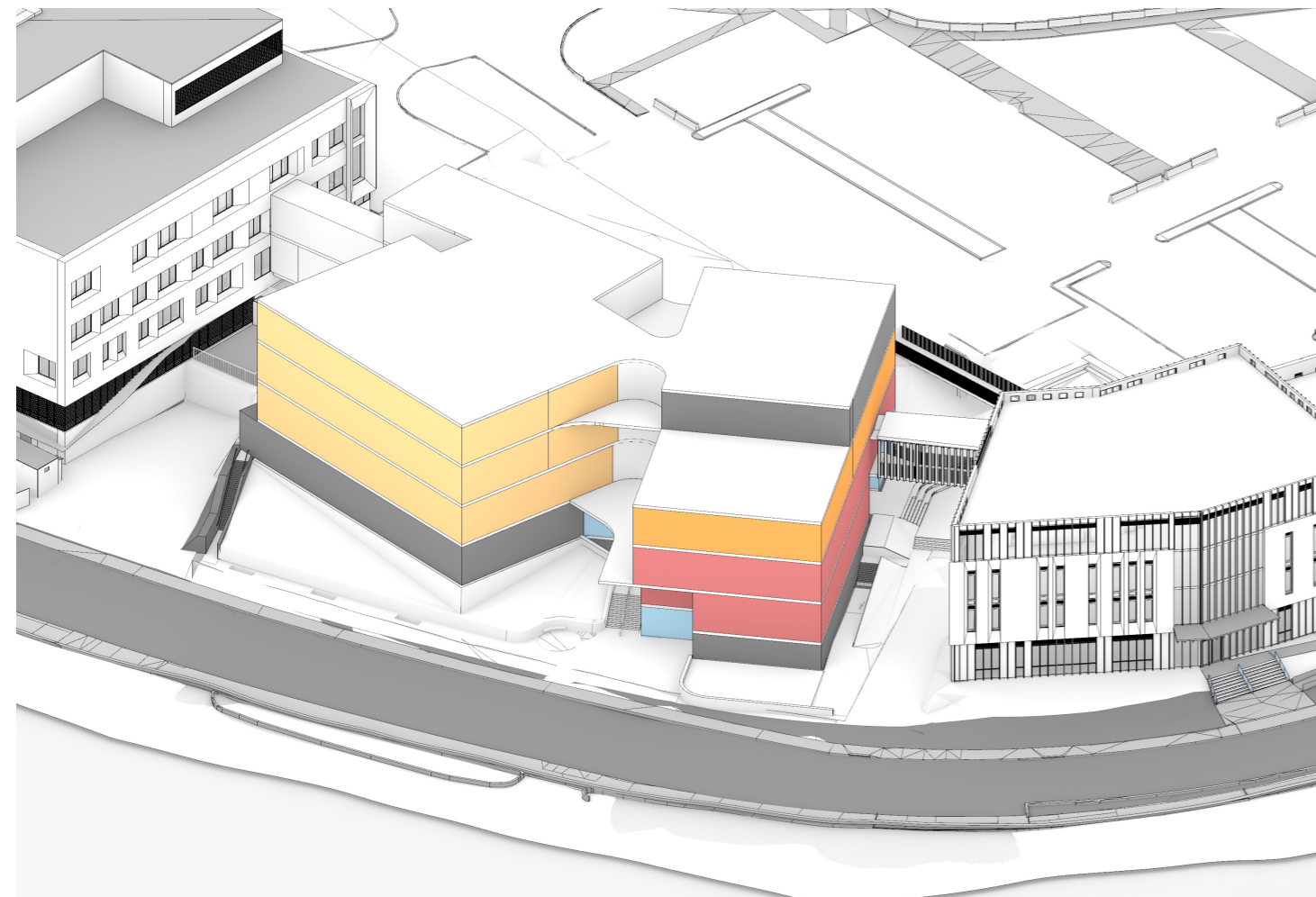
INVESTIGATION 3

- Similar to Investigation 2
- Reduced footprint on L00
- Enables greater articulation and more visual porosity
- Larger void connecting ground and lower ground levels



INVESTIGATION 4

- Series of angled boxes
- Reduces extent of excavation by shifting building footprint to the south
- Lower building with a larger footprint and site coverage



FURTHER DEVELOPMENT OF INVESTIGATION 4

- Entry/Shared Public
- Dry Research
- Shared Collaboration
- Clinical Research
- Research Assessment
- Logistics and Support
- Core/Plant

2.5 DESIGN APPROACH

ORGANISATIONAL STRATEGY

The location of the various functional areas within the MMRC is informed by key campus relationships. Clinical Research spaces are positioned to the north in closest proximity to Building D, supporting frequent movements between Clinical Research spaces and Building D by staff and members of the public alike (including members of the public who may be less ambulant). Stacking the Clinical Research clusters vertically allows for a clear way finding strategy within the MMRC, and also ensures an efficient building services strategy. In addition, this location provides Clinical Research spaces with expansive views over Marsden Park.

To encourage collaboration and interaction, Dry Research areas are largely located to the south adjacent to the MCS on Lower Ground 1 and Level 00, where direct connections between the two buildings are proposed. At the upper levels, Dry Research areas are positioned to the east allowing views over the Village Green below.

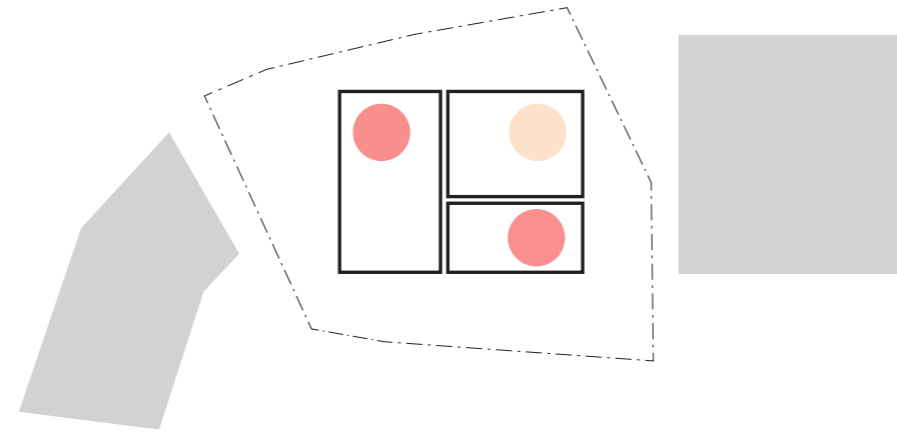
RESPONSE TO SITE

The building massing is derived by pulling these programmatic elements apart in direct response to the site and its context. The 'gaps' created by this opening up of the building become intuitive visual cues for entry; while also affording each room within the clinical areas access to natural light and views. In turn, this gesture draws users and landscape into the building to create an inviting and welcoming arrival experience for users and the public. A direct physical and visual connection through the MMRC from Parkside Crescent to the Village Green is created, facilitating through-site pedestrian movement, and opening up views through to green spaces at both entries.

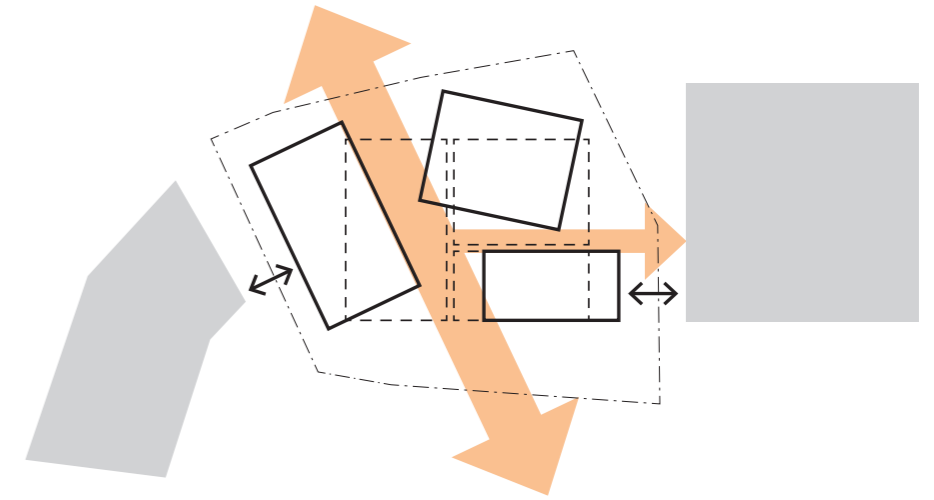
In doing so, the southern Dry Research wing is shifted closer to the MCS, minimising travel distances between the two buildings and reducing excavation by utilising naturally lower areas of the site. The northern Clinical Cluster wing shifts closer to Building D, minimising the required bridge connection to the north and opening up a generous elevation and entry to the eastern Village Green.

The subtle rotation of the various wings allows for west-facing façades to be oriented further toward the more favourable northern aspect, and ensures all rooms to be occupied by research participants within the Clinical Research areas (such as waiting spaces, consult rooms, and interview rooms) can be provided with a window.

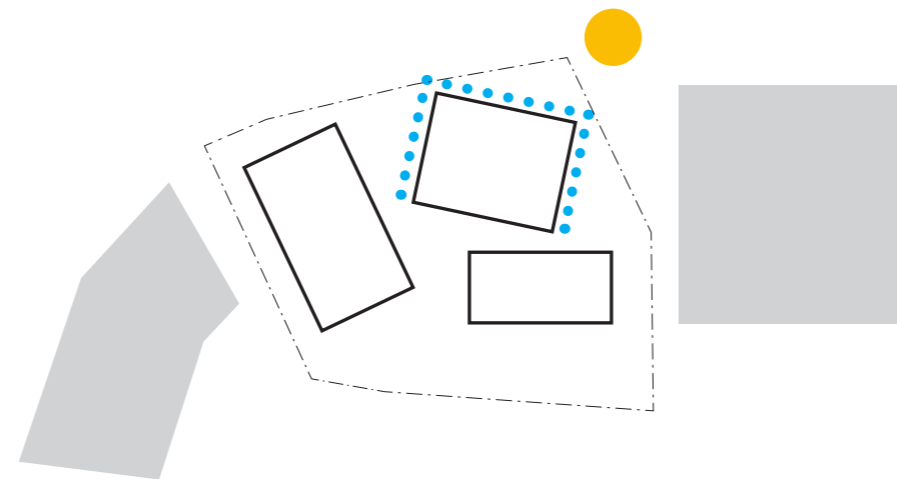
This dispersal of the functional elements allows the building to occupy the site fully to enable multiple, distributed points of entry. The remaining interstitial or 'in-between' space becomes the key connector, a continuous publicly accessible zone for circulating, meeting, resting, and waiting. This zone becomes the green gully through which landscape enters the building and permeates the interior.



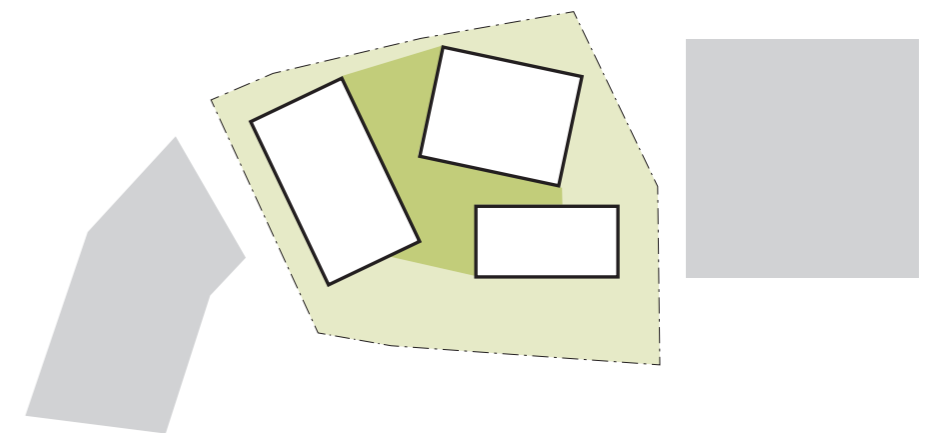
DISTRIBUTE PROGRAM



CONNECTED BUILDING



DAYLIGHT AND SOLAR ACCESS



THE IN-BETWEEN IS NATURE

3. BUILDING DESIGN AND URBAN RESPONSE

3.1 SITE LAYOUT

3.1.1 EXTENT OF WORKS

The following elements form the scope of the development:

- New Macarthur Medical Research Centre building.
- New link between MMRC and Building D.
- New elevated bridge link between MMRC and MCS. The new bridge interfaces with the existing MCS bridge landing at the MCS main entry on Level 00.
- New service bay at the south-west corner of the site
- New landscaping including:
 - to Parkside Crescent frontage
 - to existing on grade Hospital car park frontage
 - Extension of existing sunken MCS forecourt, which provides an accessible entry at level LG1 to the MMRC and MCS
- General works to make good.

3.1.2 ENTRIES

- **Parkside Crescent – Campus Entry (Level LG2):** Arrival to the building at Parkside Crescent occurs at level LG2, where users are provided with both an internal accessible entry to the lift lobby and an external public stair forming the base of the through-site link to Village Green. Protection from inclement weather and solar shading is provided by setbacks in the building footprint and overhanging ground floor terrace above.
- **MCS Forecourt Entry (Level LG1):** This entry provides a direct accessible connection between the MCS and MMRC. New landscaping works are proposed to enhance the existing MCS sunken forecourt and replace the existing stepped access to the MCS at this level with an accessible ramp. Refer to Landscape Architect’s drawings for more information.
- **Village Green – Main Entry (Level 00):** Level 00 serves as the main entry level of MMRC, with the majority of communal public spaces located on this level. The entry is positioned to capture key flows into and throughout the building, from the Village Green, Building D, Parkside Crescent, and MCS.
- **Bridge Connections (Level 00):** New bridge connections linking the MMRC to MCS and Building D connect visitors directly into the main entry and atrium of the MMRC. Refer to the Bridge Connections section of this report for further information.

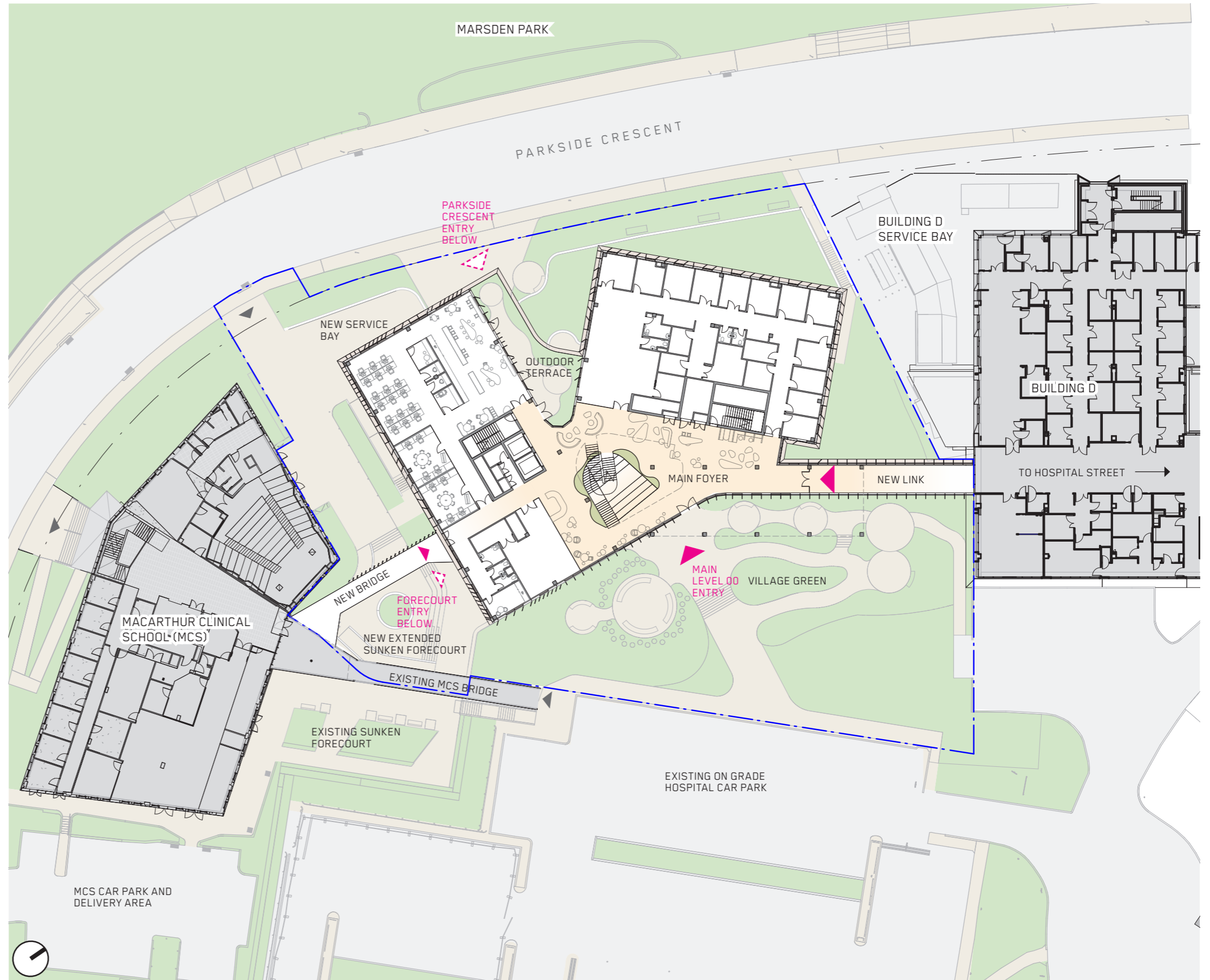
SERVICE VEHICLE ACCESS

A new service bay is proposed off Parkside Crescent at the south-west corner of the site, accessed via an existing vehicular entry between the MMRC and MCS. Widening of the vehicular crossover will be necessary to accommodate a waste vehicle turn radius. Refer to the Services and Operation section of this report for more detail.

3.1.3 LANDSCAPING

Refer to Landscape Architect’s documentation.

- Hospital boundary
- Site boundary
- ▶ Existing building entries
- ▶ New building entries
- ▶ New building entries below
- Existing surrounding buildings
- Vehicular access/roads
- Pedestrian access/paths
- Landscaping



SITE PLAN

3.2 MASSING, HEIGHT AND SCALE

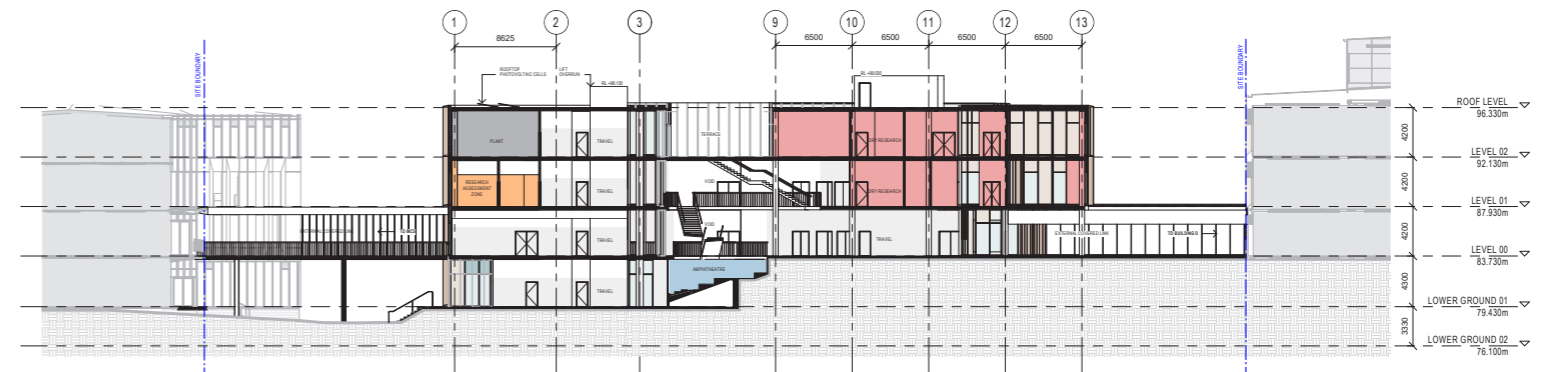
The building form, arrangement and positioning responds to the existing steep topography, the austere and monolithic character of the adjacent buildings, and the site's predominant east and west facing orientations.

Pulling apart the building form into a series of twisted boxes allows the north and south volumes to respond to the different orientations of Building D to the north and MCS to the south. This breaking down of the mass creates an undulating form, providing visual interest and variation along Parkside Crescent, and a natural entry point between the north and south wings.

Utilising the existing slope of the site by embedding program at pedestrian level along the southern edge of the building allows the height and bulk of this southern wing to be reduced adjacent the MCS, and activates the public realm between the two buildings and along Parkside Crescent. Roof top plant steps back at Level 2, allowing the building height to step down along with the natural slope of the site.

Distributing program across the site achieves a broader footprint with a lower building height and reduces overall excavation. The low-lying and embedded quality of the building engages closely with the landscape, and creates a more appropriate scale to the building at all of its edges despite the significant drop in topography from east to west.

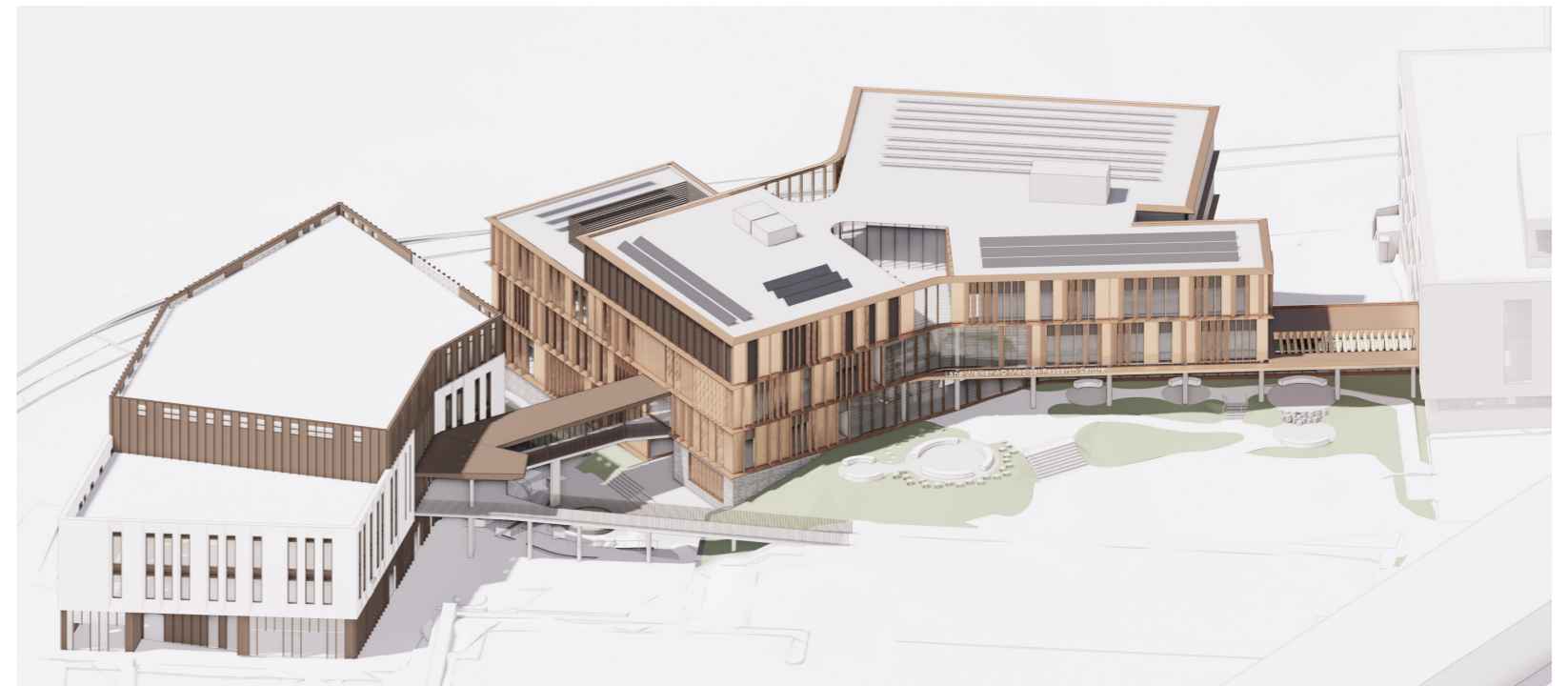
To the east, the building sets back from the existing car parking to provide a generous public landscape with outdoor rooms and play spaces, providing a place for pause, reflection and leisure for the precinct as a whole. Further setting back of the ground floor facade provides protection to the entry from inclement weather.



NORTH/SOUTH SECTION



AERIAL VIEW FROM WEST



AERIAL VIEW FROM EAST

3.3 PLANNING

3.3.1 FUNCTIONAL GROUPINGS

Spaces within the MMRC are distributed across five functional groupings:

- Shared Public Spaces,
- Dry Research (includes Shared Collaboration spaces, and Shared Administration spaces),
- Clinical Research,
- Research Assessment Zone, and
- Logistics and Support.

SHARED PUBLIC

These spaces are generally accessible to the public and will support community engagement programs and events, as well as research-focussed exhibitions.

DRY RESEARCH

This is essentially an open plan workspace, with non-allocated positions for researchers and students. Lockers, focus rooms and quiet rooms are provided to support the agile working environment. An industry start up zone is included, with incubator rooms and a maker space.

A small number of desks will be available for staff involved in the operation of the MMRC, including Administration, Building Management, IT support and Research Promotion staff. These will be located in the general Dry Research workspace areas.

Formal and informal spaces, including meeting rooms, breakout areas, and tea points are provided for staff, researchers and students.

CLINICAL RESEARCH

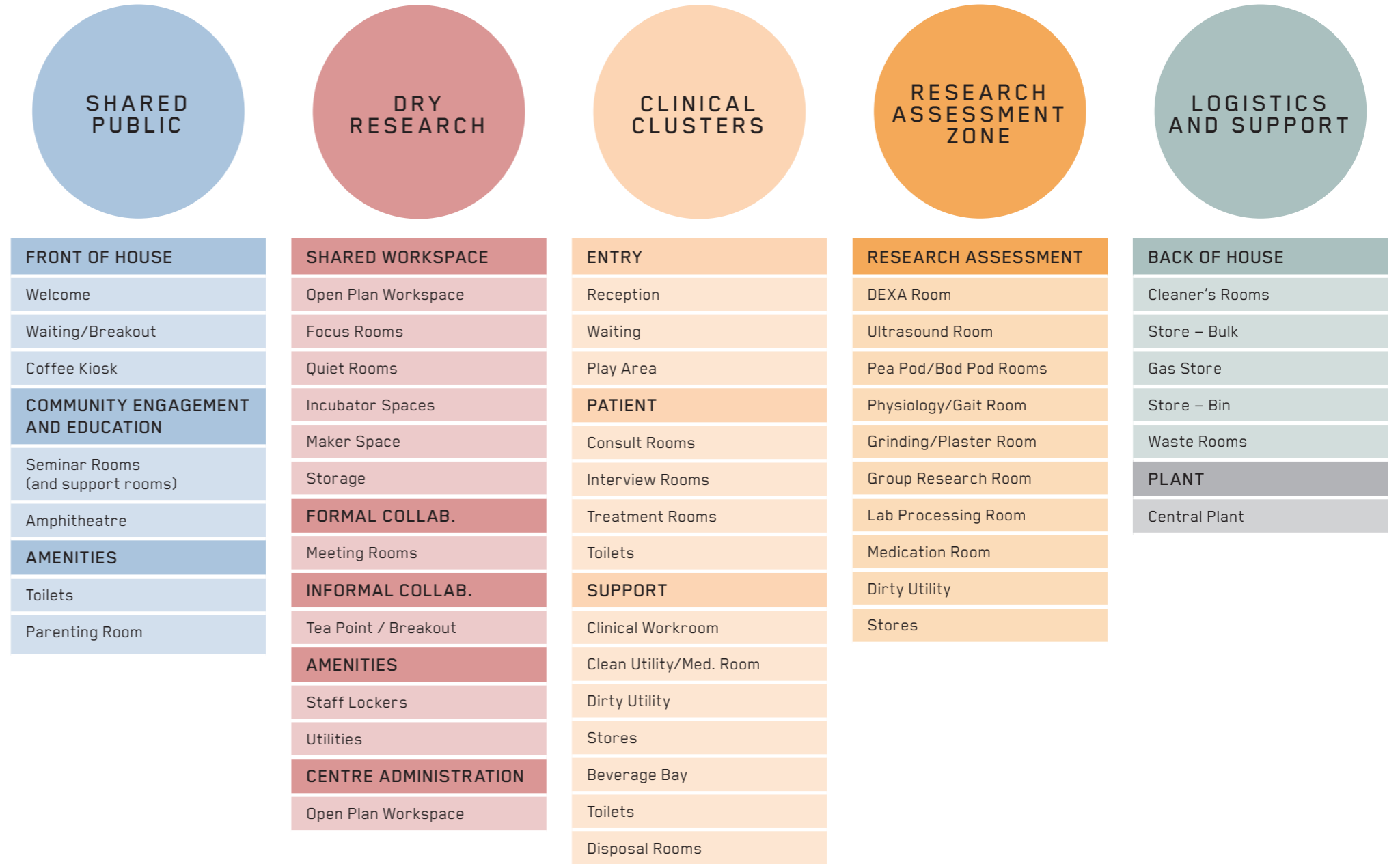
Clinical research spaces within the MMRC are provided in three 'Clinical Clusters', each of which include a suite of consult and interview rooms supported by entry/waiting facilities and support spaces.

RESEARCH ASSESSMENT

The Research Assessment Zone includes a series of specialised rooms provided to enhance research objectives and outcomes.

LOGISTICS AND SUPPORT

Back of house facilities to support the building's operations.



3.3.2 BLOCK AND STACK

The building is distributed across five floors. The lowest level (LG2) addresses Parkside Crescent and provides a universally accessible entry into the heart of the building.

The main entry is located on level 00 (L00), which fronts the future Village Green and Hospital car park. The floor level of L00 aligns with the equivalent L00's of MCS and Building D, allowing for seamless connections to both buildings.

An additional entry at Lower Ground 1 (LG1) provides access to MMRC from the adjacent MCS sunken forecourt for enhances permeability between the two buildings.

Shared Public spaces are distributed across the lower floors in proximity to the entries and to activation circulation routes.

Dry Research areas are stacked across four floors and considers a holistic workplace approach, encouraging users to move throughout the building, fostering serendipitous interaction and avoiding the duplication of facilities.

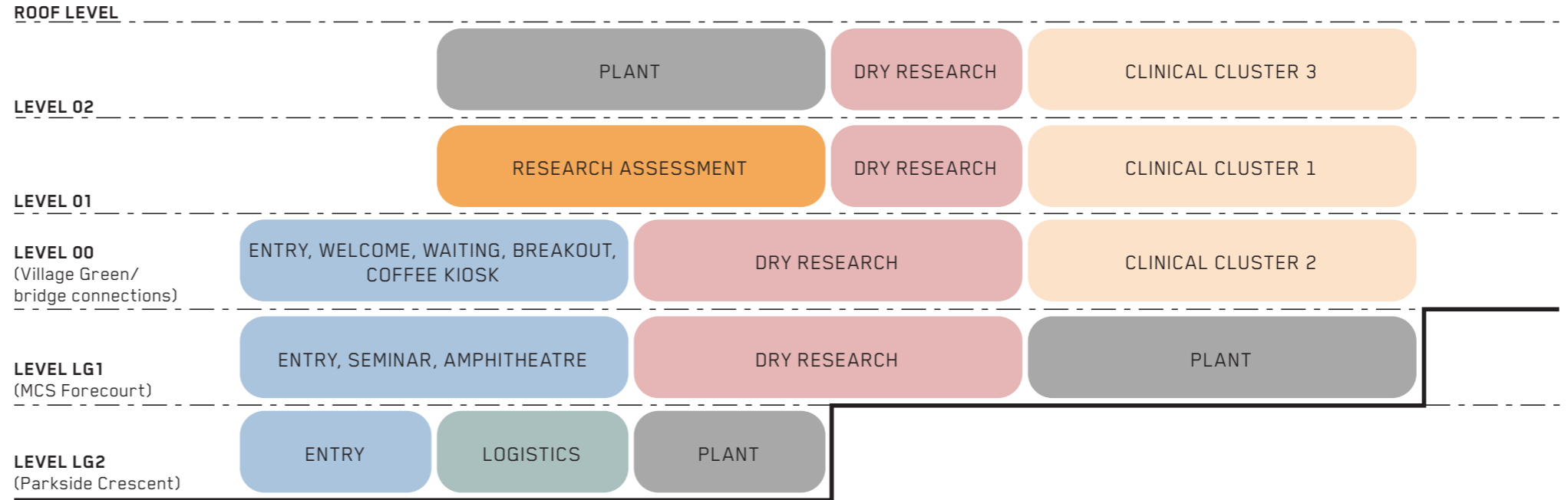
Clinical Research clusters are stacked across three floors and co-located with Dry Research areas, further maximising opportunities for activation, interaction and collaboration. The Research Assessment Zone is located at L01 for easy access from all Clinical Clusters.

Logistics and Support spaces are located at LG2 for direct access from the loading area at Parkside Crescent.

A central core provides direct and equitable access to all department entries and promotes intuitive way finding, with a central atrium and stair with amphitheatre at the base forming part of the through site link and acting as an organisational device to capture visitors arriving from multiple entry points.

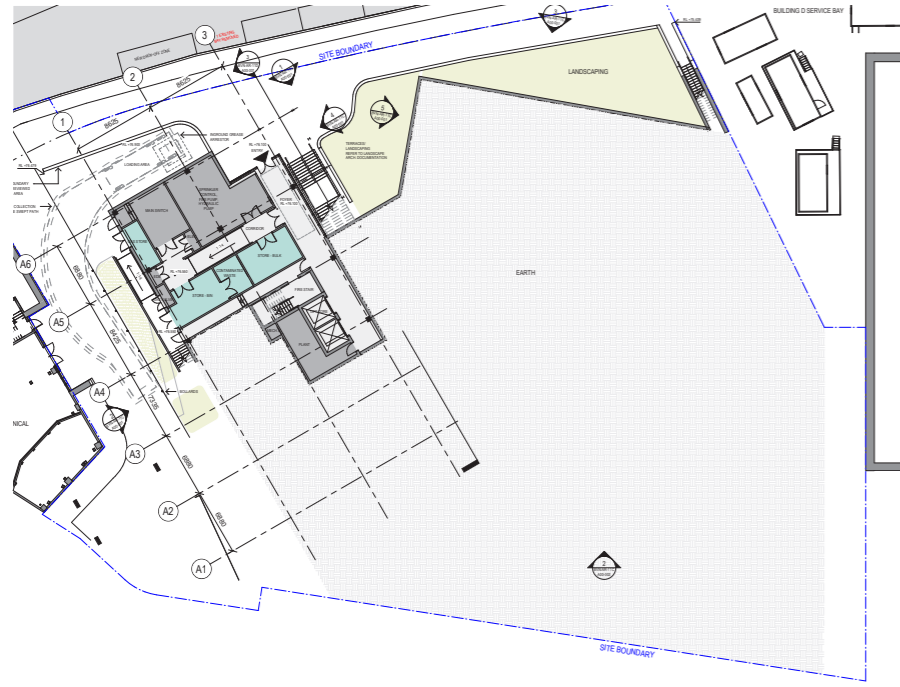


FUNCTIONAL GROUPING	APPROX. TBA (m ²)
Shared Public	489
Dry Research	1,264
Clinical Clusters	1,330
Research Assessment Zone	358
Logistics and Support	94
Subtotal	3,533
Travel and Engineering	1,998
Total TBA	5,531

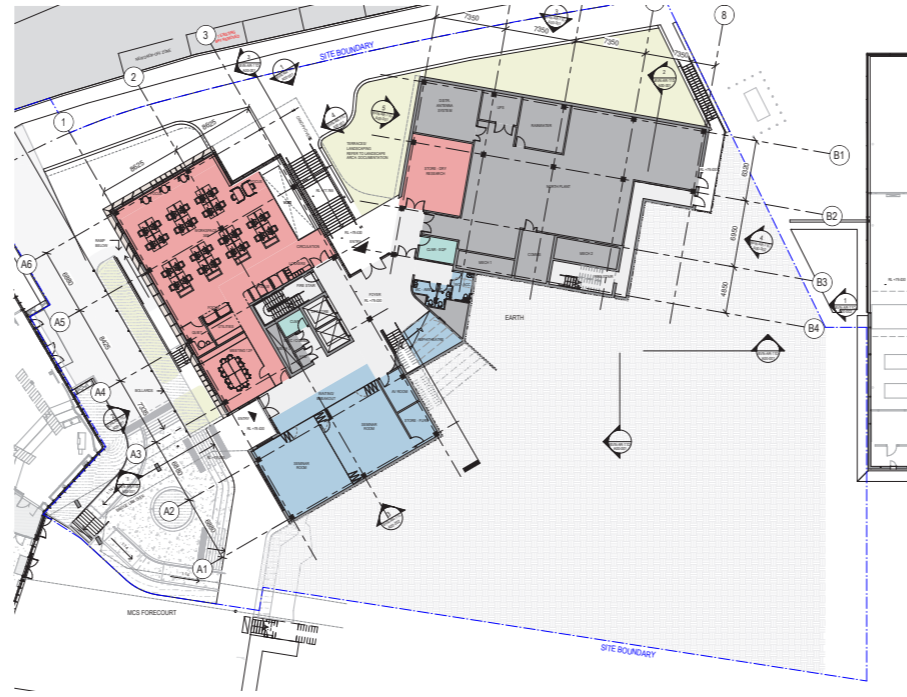


BLOCK AND STACK DIAGRAM

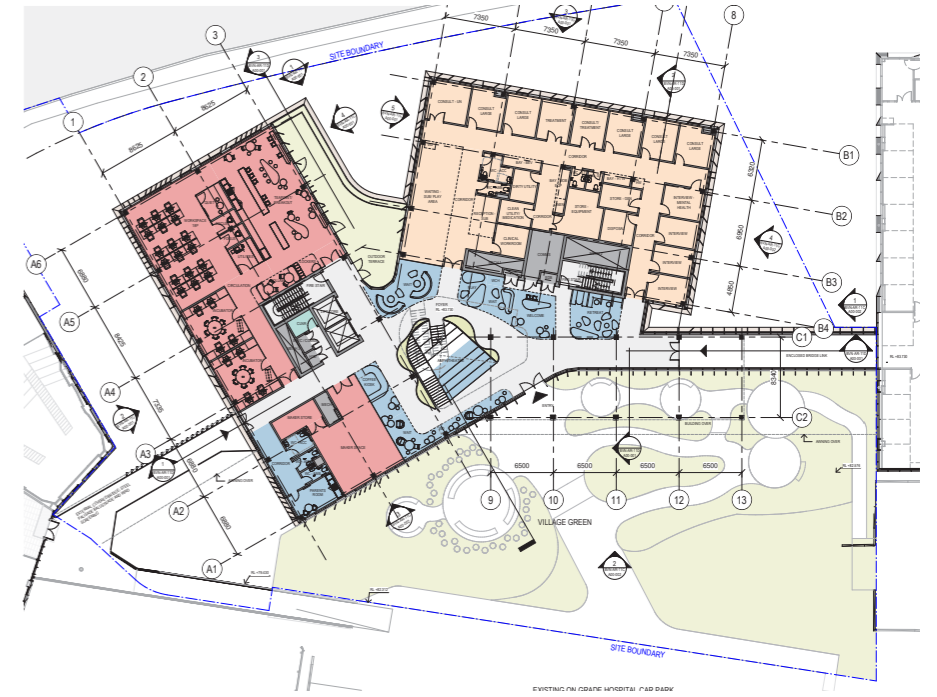
3.3.3 DEPARTMENT PLANS



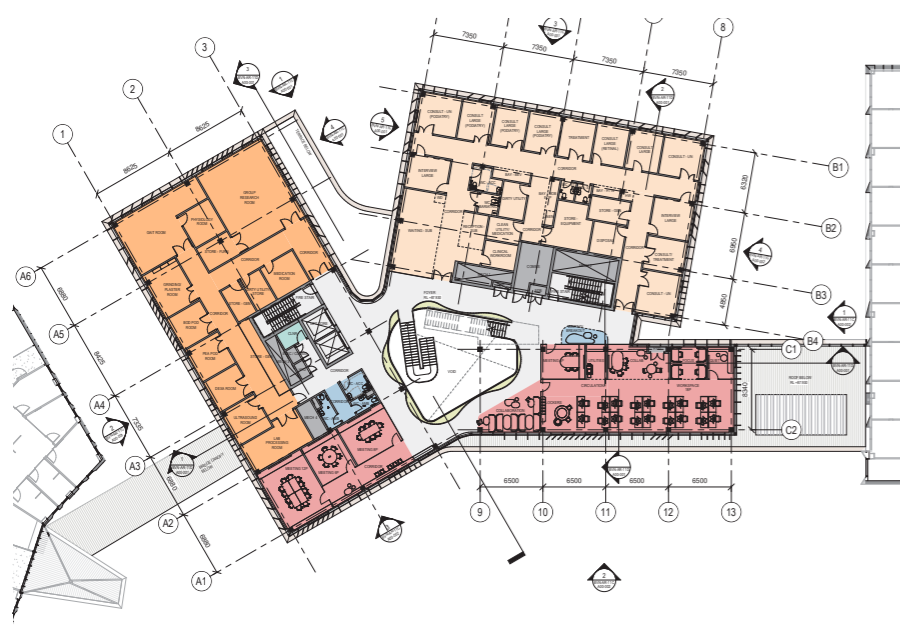
LEVEL LG2



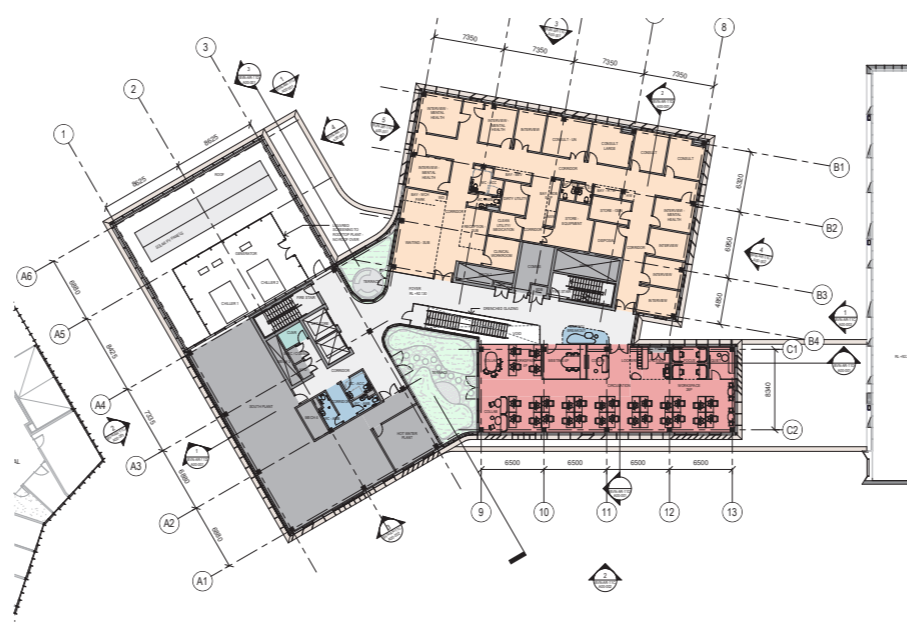
LEVEL LG1



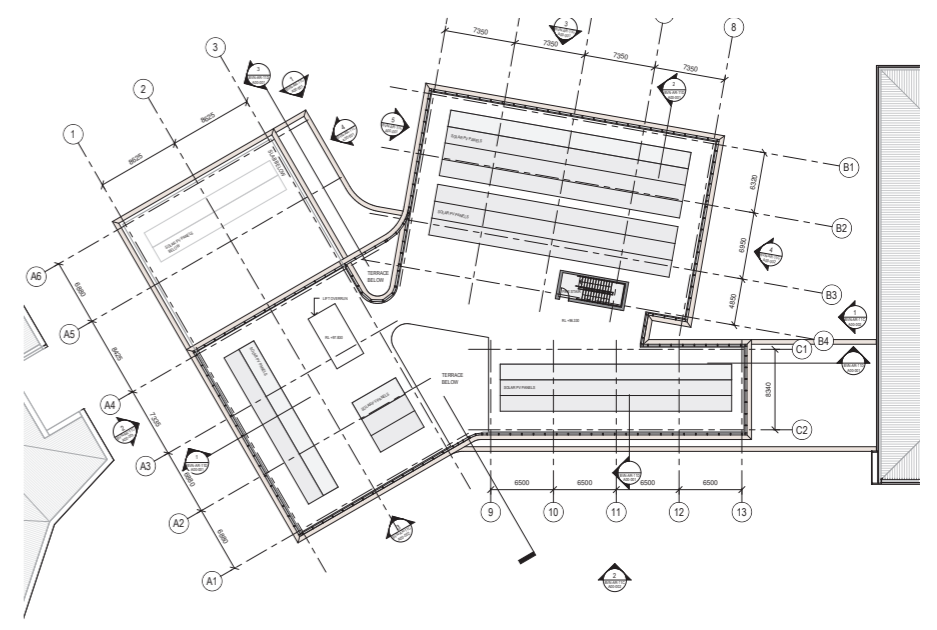
LEVEL 00



LEVEL 01



LEVEL 02



ROOF LEVEL



3.3.4 SHARED PUBLIC SPACES

A key design principle for the Shared Public areas is the integration of planting into the building to promote and enhance health, well-being, and connectedness to people and place. Soft joinery and furnishings ensure spaces are informal and easy to traverse.

Shared Public areas are distributed across all points of entry and up through the building. These spaces are designed to be human-centred and to support the building's diverse visitor population by providing a variety of settings and varying degrees of privacy and openness.

SEMINAR ROOMS

Seminar rooms are provided for community engagement events and other functions. Providing operable walls between the seminar rooms and locating them off a main circulation route provides additional flexibility for larger group events. Proximity of Seminar Rooms to Dry Research and the MCS also supports shared use of the spaces.

AMPHITHEATRE

The amphitheatre is located at Level LG1, drawing visitors up to L00 and the Village Green entry. The amphitheatre acts as an informal event space and touchdown point, and balances the more formal Seminar Rooms.

WELCOME

The Welcome point is positioned centrally in the main entry space at Level 00 to be clearly visible and easily accessible from all entries and the lift lobby, which opens into the shared circulation and waiting space. The Welcome will be the first port of call for all visitors and will be a central hub for providing visitor services, staff services, information and directions, group orientation and event entry.

WAITING/BREAKOUT

After visiting the Welcome point to check in, visitors will be able to wait in the central Waiting/Breakout spaces until they are called to a Clinical Cluster. These spaces will be provided with a wide range of settings to support a diverse cohort of visitors. The brief includes a play area, retreat spaces in quieter areas suitable for neurodiverse people, touchdown points to facilitate use of BYO devices, booth seating, and general waiting areas. The amphitheatre, waiting, entry and general circulation areas will all be enabled to support exhibition content.

COFFEE KIOSK

A buzzing coffee kiosk will provide food and beverage options (including child-friendly options). The kiosk encourages movement across the floor and traffic from the adjacent MCS across the bridge connection. The kiosk is strategically positioned against the dynamic Maker Space, where research is put on display and is highly visible from the waiting spaces.

LEVEL 00 OUTDOOR TERRACE

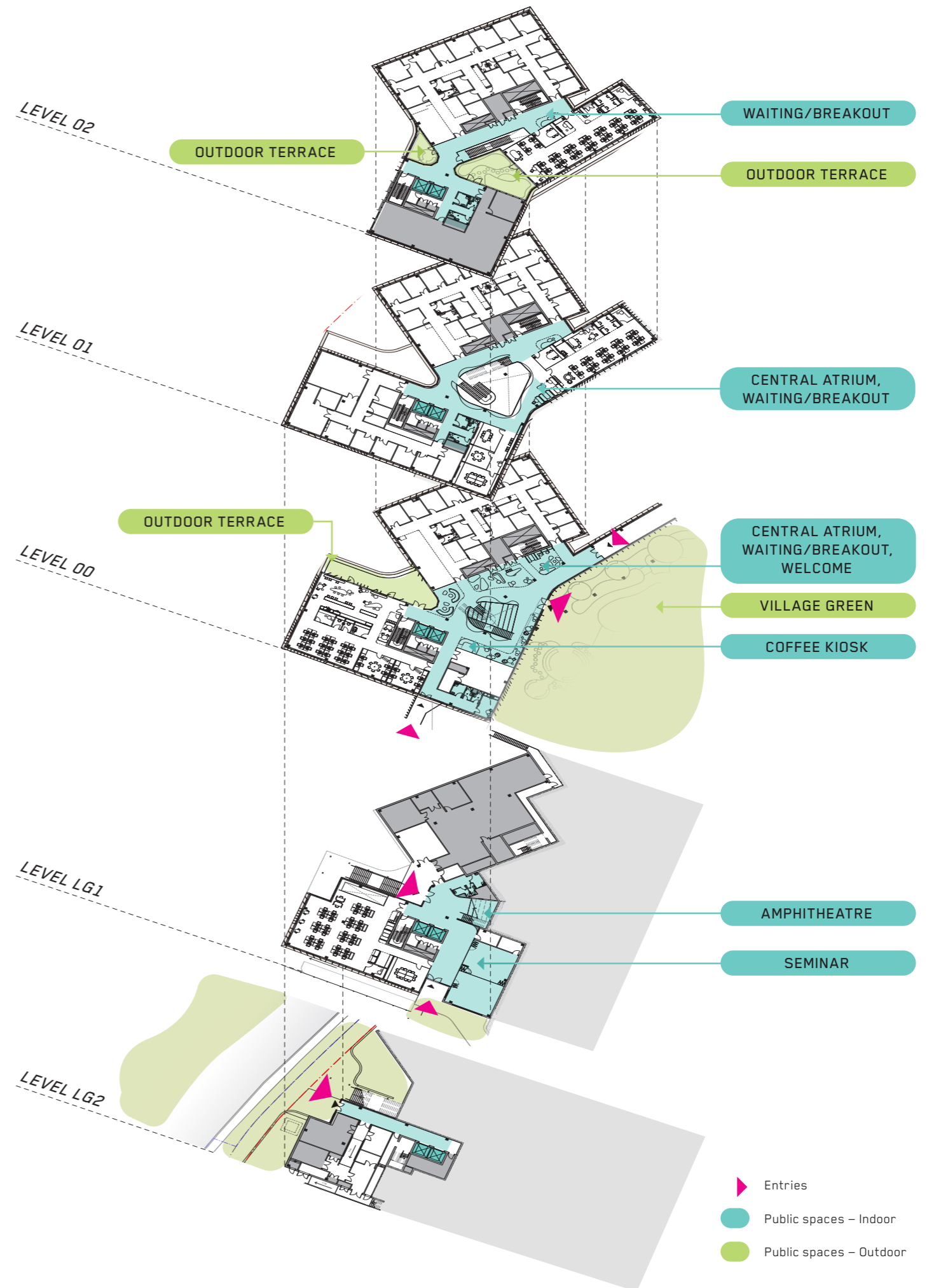
This landscaped outdoor terrace overlooks Marsden Park and is accessed from the shared waiting area, providing a space for both staff and public to sit and retreat.

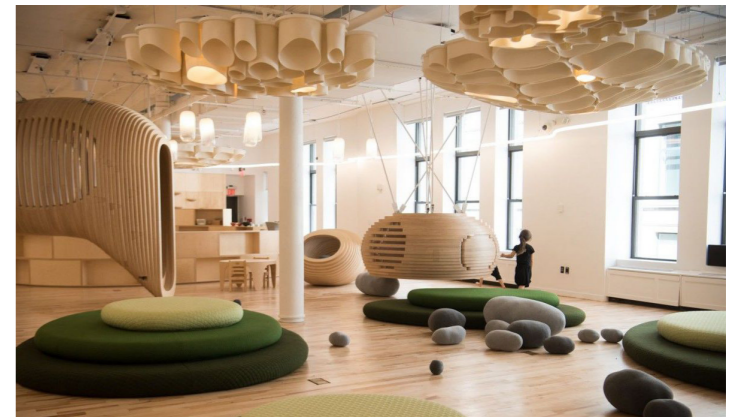
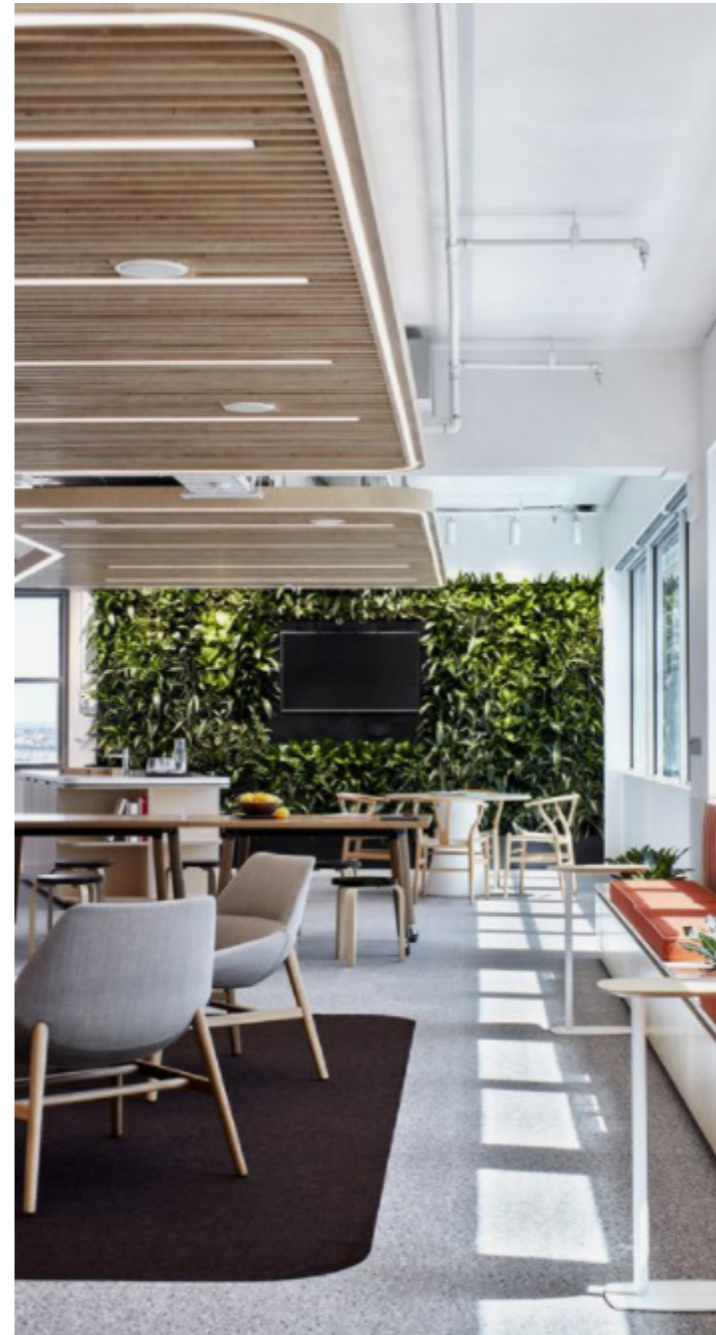
CENTRAL ATRIUM

Users take the lift or central stairs to the upper floors, which are punctuated by an open atrium that looks back down into the waiting space below. Waiting/breakout spaces are dispersed around the perimeter of the atrium at levels 01 and 02 to activate the void edge.

LEVEL 02 OUTDOOR TERRACES

Level 02, being the upper-most floor, is quieter in nature. Outdoor terraces on this floor offer a calmer environment for staff and to retreat.





SHARED PUBLIC SPACES - PRECEDENT IMAGES

3.4 BUILDING ENVELOPE

3.4.1 FACADE DESIGN

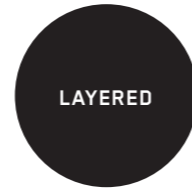
Three key principles provide a framework for the building's expression:



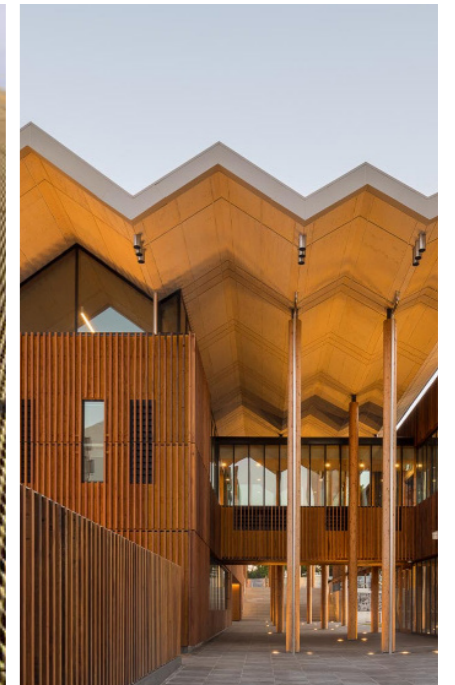
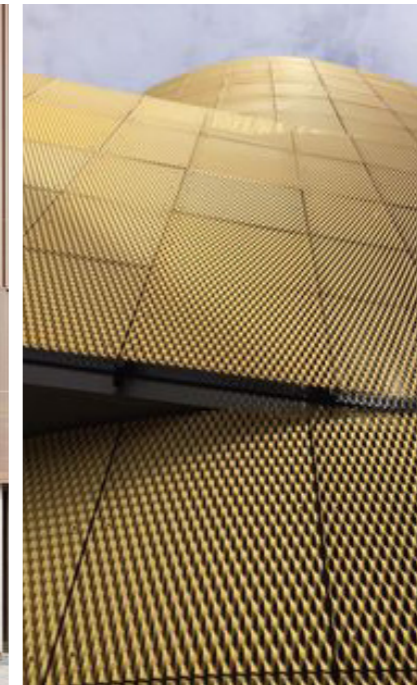
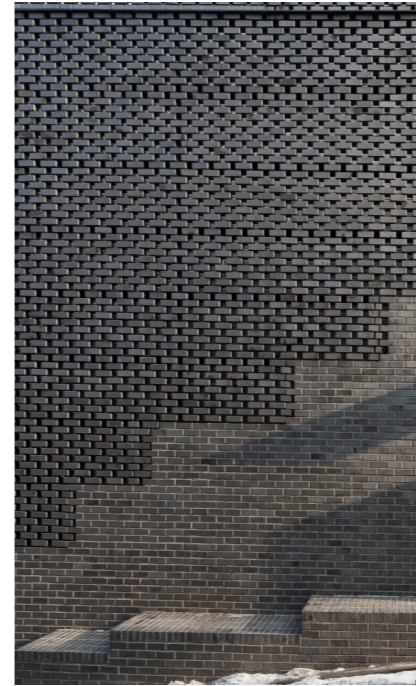
- A flexible, modular facade that responds to changing program and performance requirements



- Horizontal and vertical screening elements add texture, pattern and playfulness, and respond to solar orientation
- Creates a welcoming 'place'-an envelope that is relaxed, inviting and timeless



- Layered mesh screens add depth and create varying degrees of visual permeability
- Dynamic interior spaces that change and evolve with the sun throughout the day, but maintain views out to landscape



The building is wrapped in a modular curtain wall system with a regularly spaced grid. This grid is shifted at each level in response to internal planning and to reinforce the separate reading of each floor. This modular system allows for a continuous skin to be applied across the facade which adapts to suit internal functional requirements. The ratio of glazed to solid panels is varied according to internal usage. Full height atrium and entry façades provide areas of maximum transparency, while also providing glass louvred openings to facilitate the building's mixed mode ventilation system within public circulation areas.

This modular skin is wrapped in an outer layer of screening elements comprising a solid horizontal ledge at each floor level and vertical mesh fins of the same depth placed at varying intervals and on varying angles depending on orientation and internal function.

The horizontal ledge provides a unifying datum that defines each level and reinforces the shift of the curtain grid alignment between floors. This horizontal expression, identifying each level individually, distinguishes the MMRC from the monolithic expression of its neighbours.

This secondary order of horizontal and vertical screening provides depth and a subtle patterning across the facade, blurring the edges of the building and creating a sense of movement and dynamism. These qualities of depth and layering offer a counterpoint to the flatter, monolithic qualities of the adjacent buildings, and allow the MMRC to take advantage of its relationship to the landscape by providing outlook and openness whilst maintaining shading and privacy.

Perforated patterning to these fins further enhances this sense of layered transparency, casting dynamic shadows as the sun moves across the elevation. This may also provide an opportunity for the building to consider embedding elements of public art and community engagement in the design and arrangement of these perforations, adding a layer of meaning, relevance and depth to the building expression.

The curtain wall facade is grounded by a textured masonry base which encloses the undercroft plant areas behind. This base provides texture and tactility for pedestrians arriving at Parkside Crescent, softening the arrival sequence.

A mixed mode ventilation system has been adopted within public circulation and waiting areas. This is facilitated by mechanically operated frameless glass louvres within the full height glazing to these atrium, entry and circulation areas.

The facade is comprised of the following materials:

- Curtain wall system with aluminium solid panels, clear vision glazing, and shadowbox glazed spandrel,
- Full height perforated metal or metal mesh screening,
- Horizontal aluminium shading element,
- Framelsss glass louvres to atrium spaces,
- Timber batten or board lining to entry facade panels and soffits,
- Textured brickwork.

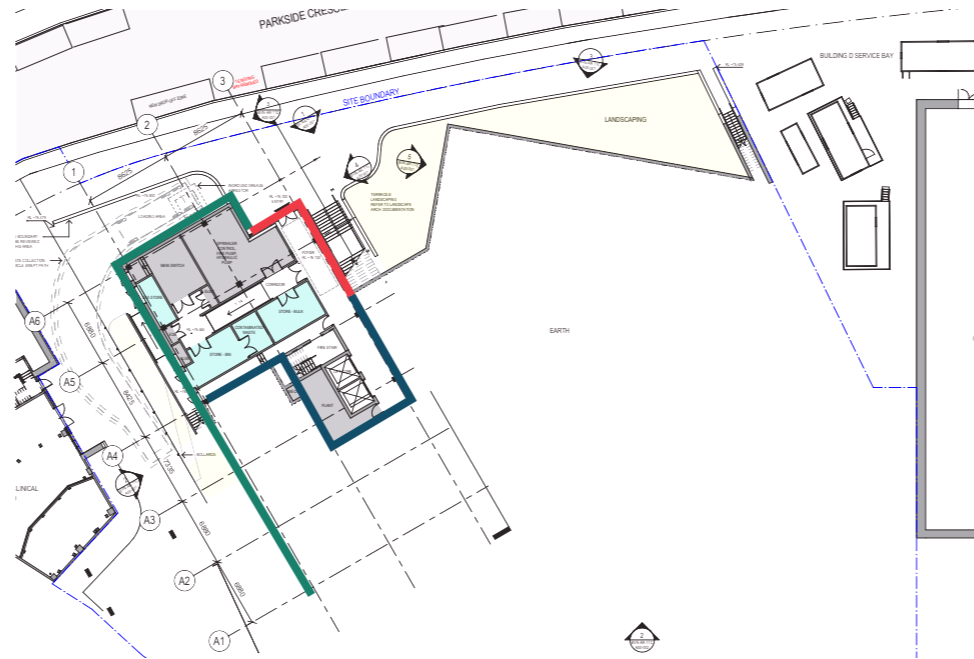
3.4.2 FACADE TYPES

- Retaining wall

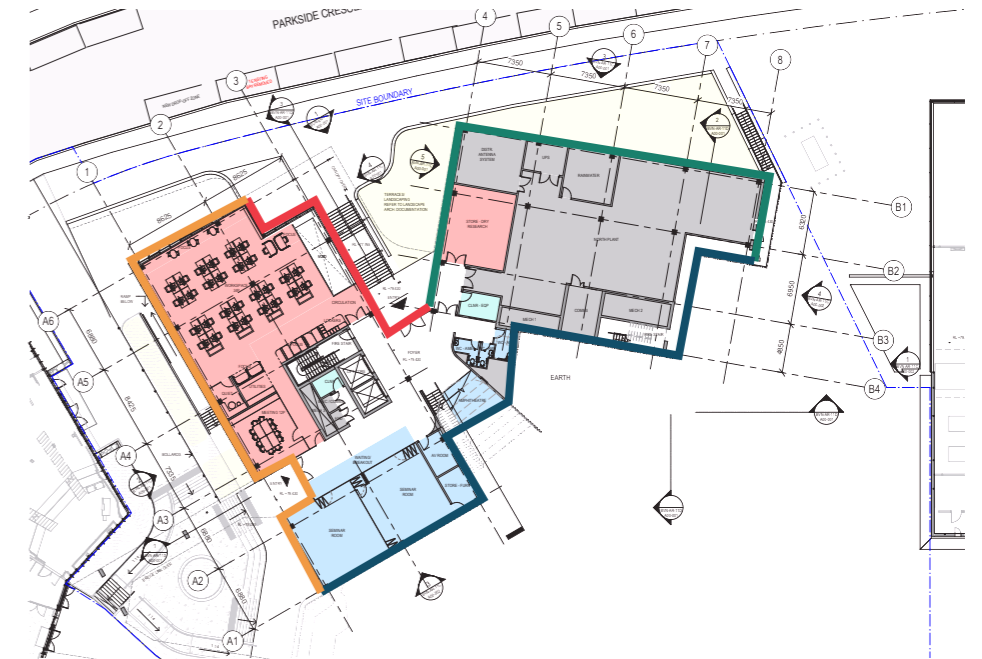
- Full height glazing with mechanically operated frameless glass louvres

- Curtain wall (nom. 1200mm spacing) with nom. 450mm deep perforated metal vertical shading and expressed horizontal ledge. Vision glazing to 2700mm, shadow box spandrel above. Two-stage aluminium louvres to plant areas

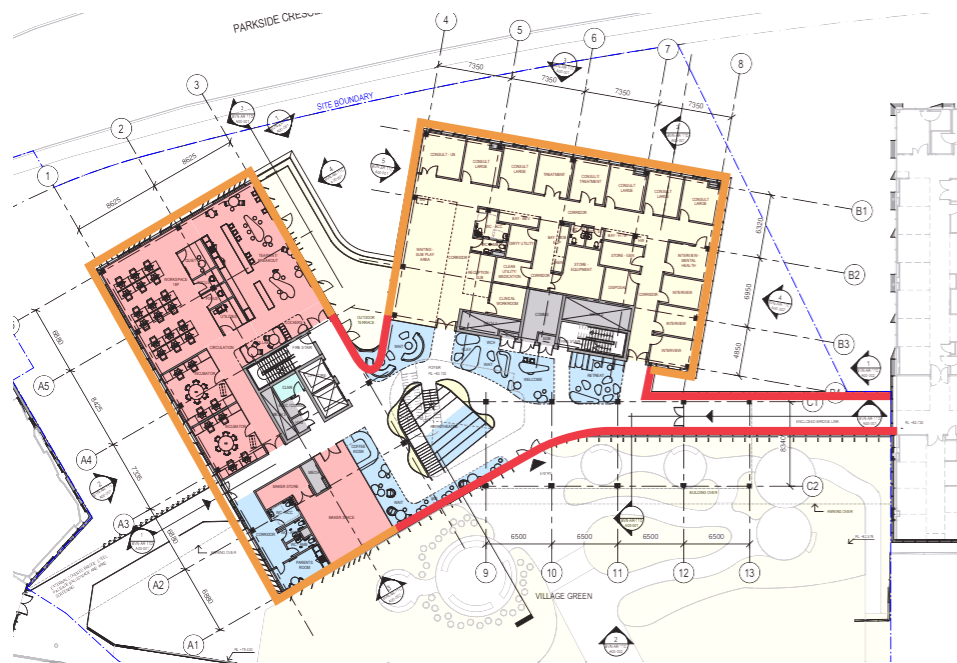
- Textured feature brickwork with openings as required to plant areas



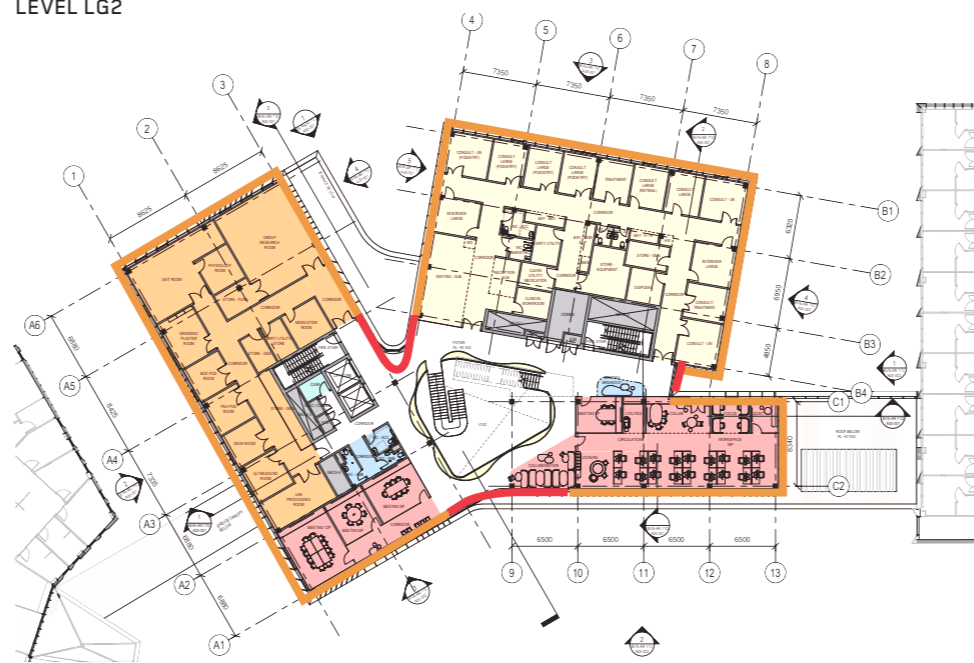
LEVEL LG2



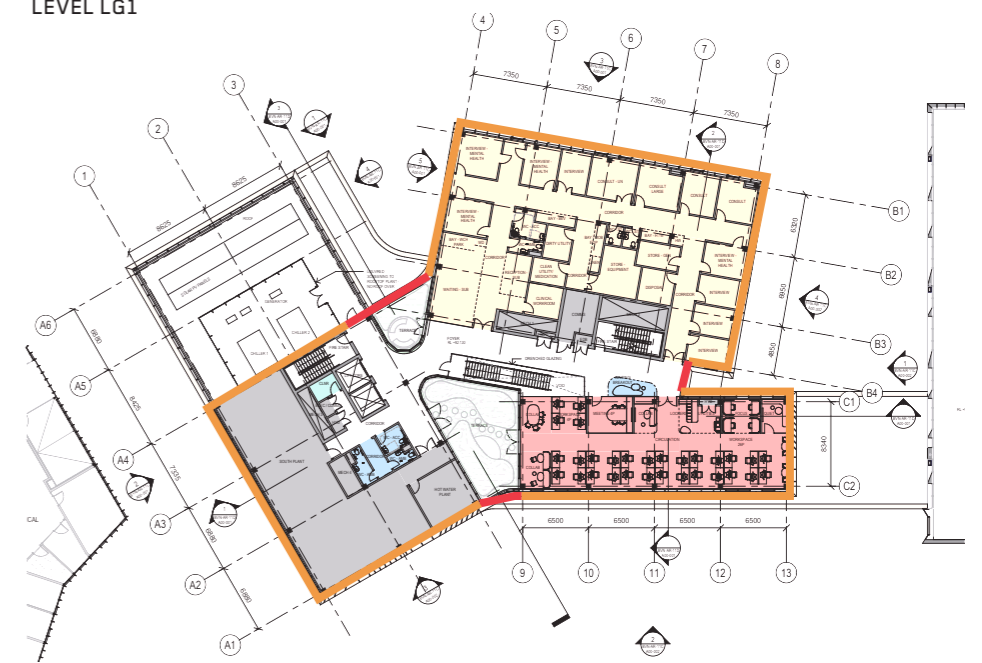
LEVEL LG1



LEVEL 00



LEVEL 01

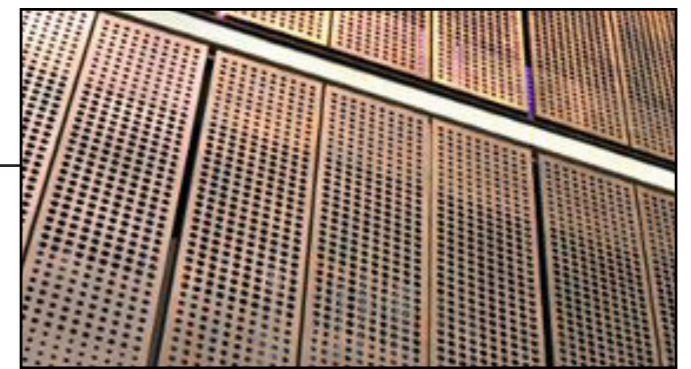


LEVEL 02

3.4.3 MATERIAL PALETTE



Frameless glass louvers



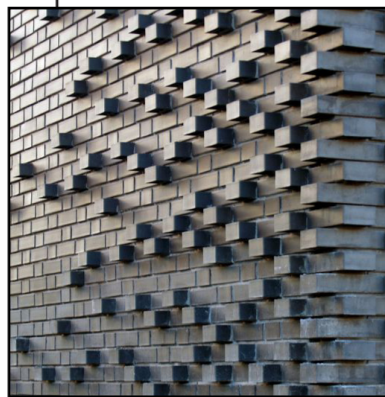
Perforated aluminium or expanded metal mesh vertical screens



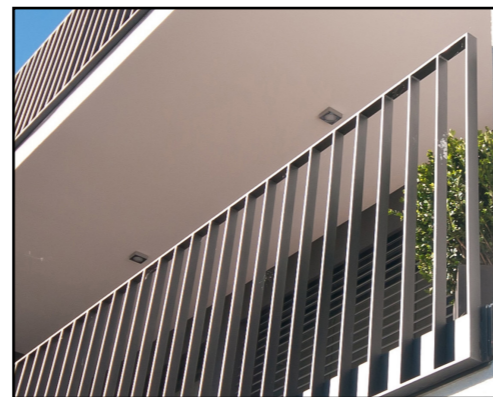
Timber to soffits and cladding to entry structure



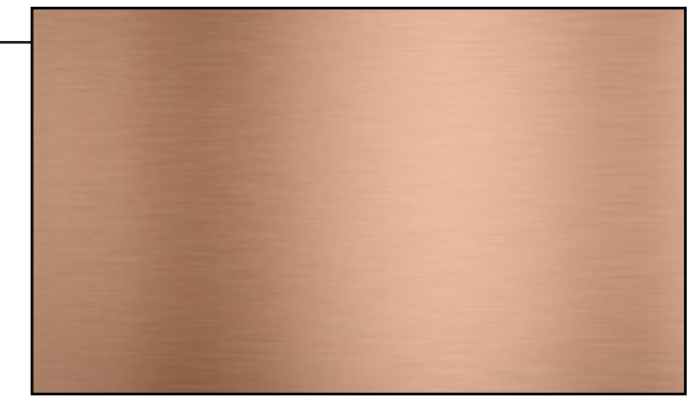
Smokey grey textured brick with colour variation to podium; openings as required to plant areas



Steel palisade balustrade to terraces



Full height clear vision glazing



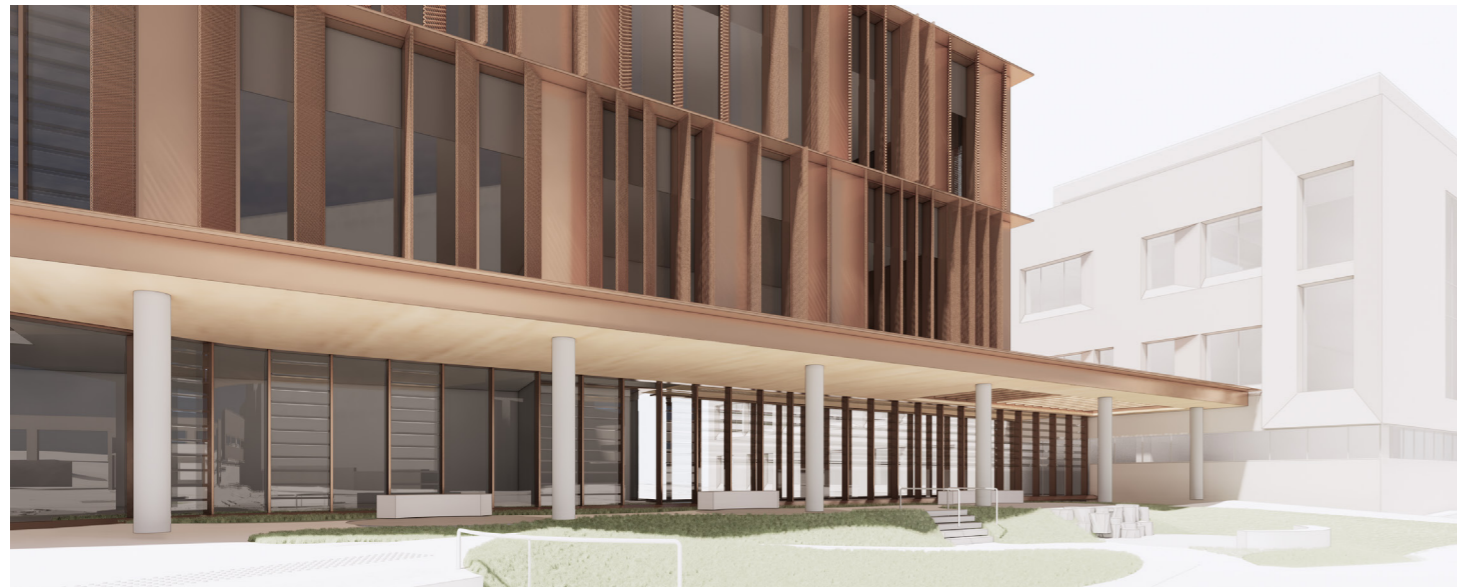
Aluminium to curtain wall and horizontal shading

3.5 BRIDGE CONNECTIONS

Two key bridge connections are provided as part of the MMRC:

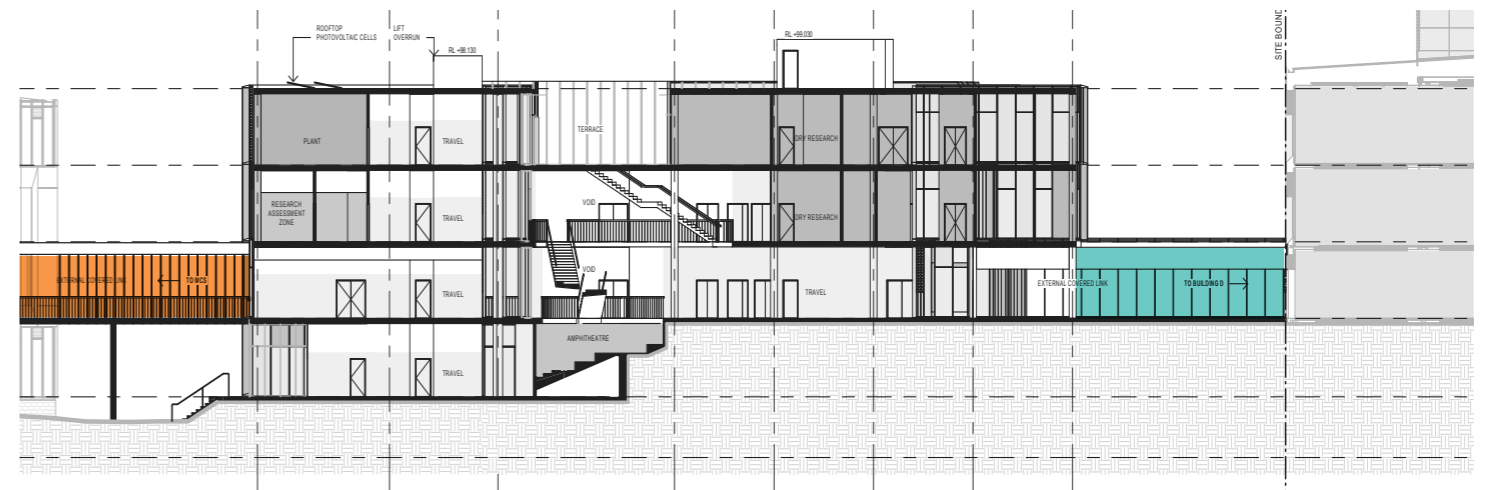
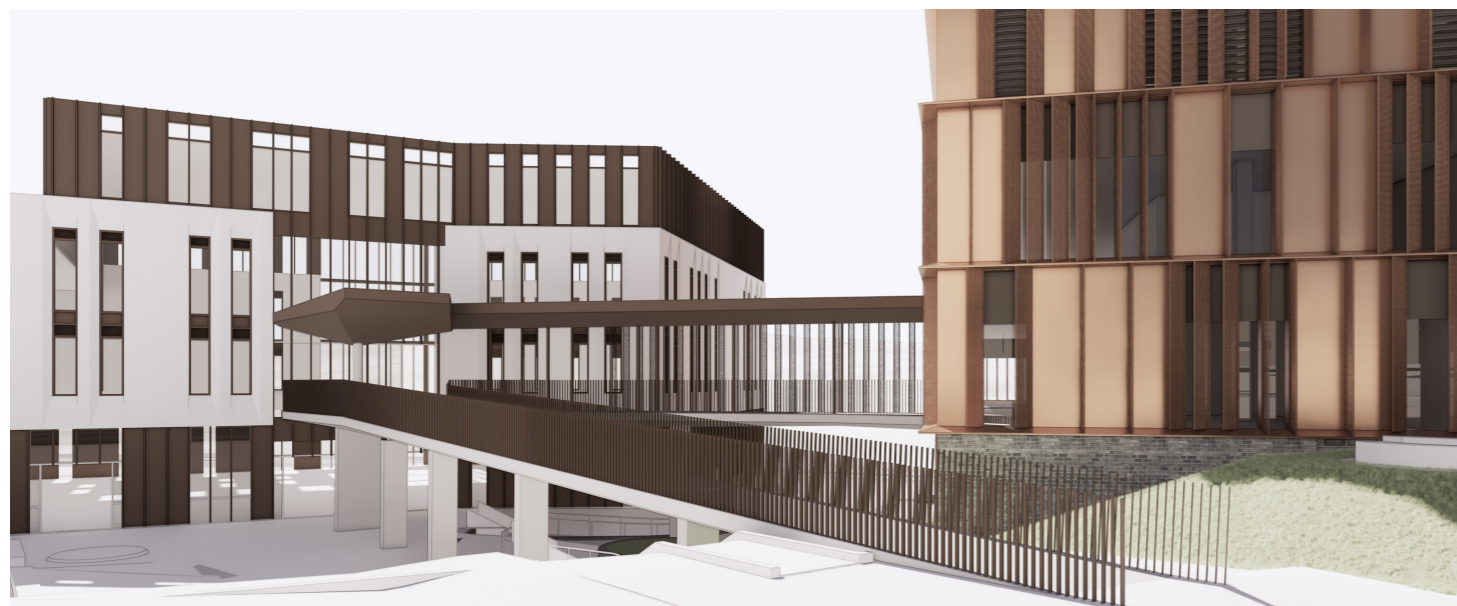
BUILDING D BRIDGE

- An external covered passage connecting from the existing corridor in Building D into the MMRC.
- Forms an extension to the interconnected internal movement through the hospital.
- Borrows from the quality and character of the existing undercroft entry into the building to form a protected verandah over.
- A deep undercroft and timber soffit provides shelter and protection from inclement weather while creating a warm and engaging space at pedestrian level.
- The bridge facade is designed as an extension of the MMRC, with fixed glazing and louvres providing protection from the wind.



MCS

- Covered external bridge provided accessible entry from the MCS to the MMRC.
- Borrows the language of the existing bridge awning structure and balustrading.
- Wind screening provided to the west as per advice from Wind Engineering Report.



MCS BRIDGE LOCATION



BUILDING D CONNECTION POSITION



BRIDGES - PRECEDENT IMAGES

3.6 VISUALISATIONS



VIEW FROM MARSDEN PARK LOOKING EAST

Note: Signage design indicative only



VIEW FROM VILLAGE GREEN LOOKING WEST

Note: Signage design indicative only

3.7 PUBLIC ART STRATEGY

KEY OBJECTIVES AND OPPORTUNITIES

During Design Development it is proposed that the MMRC will build the existing relationship between the Campbelltown Arts Centre and Campbelltown Hospital to progress the public art strategy. This collaborative framework will drive curation, selection and commissioning of artists alongside engagement with the project stakeholders.

The art objectives to be developed in the Public Art Strategy will form a brief that responds to the proposed development, planning context and specific art opportunities within the site.

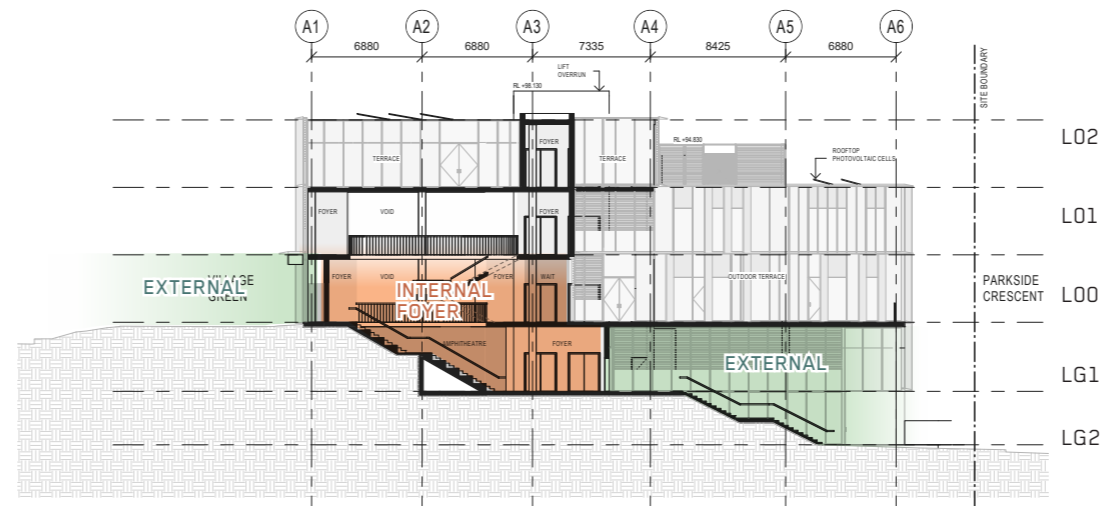
Artists will be asked to respond intelligently and with originality to public spaces in order to help create an inclusive, cultural and social precinct.

POTENTIAL LOCATIONS

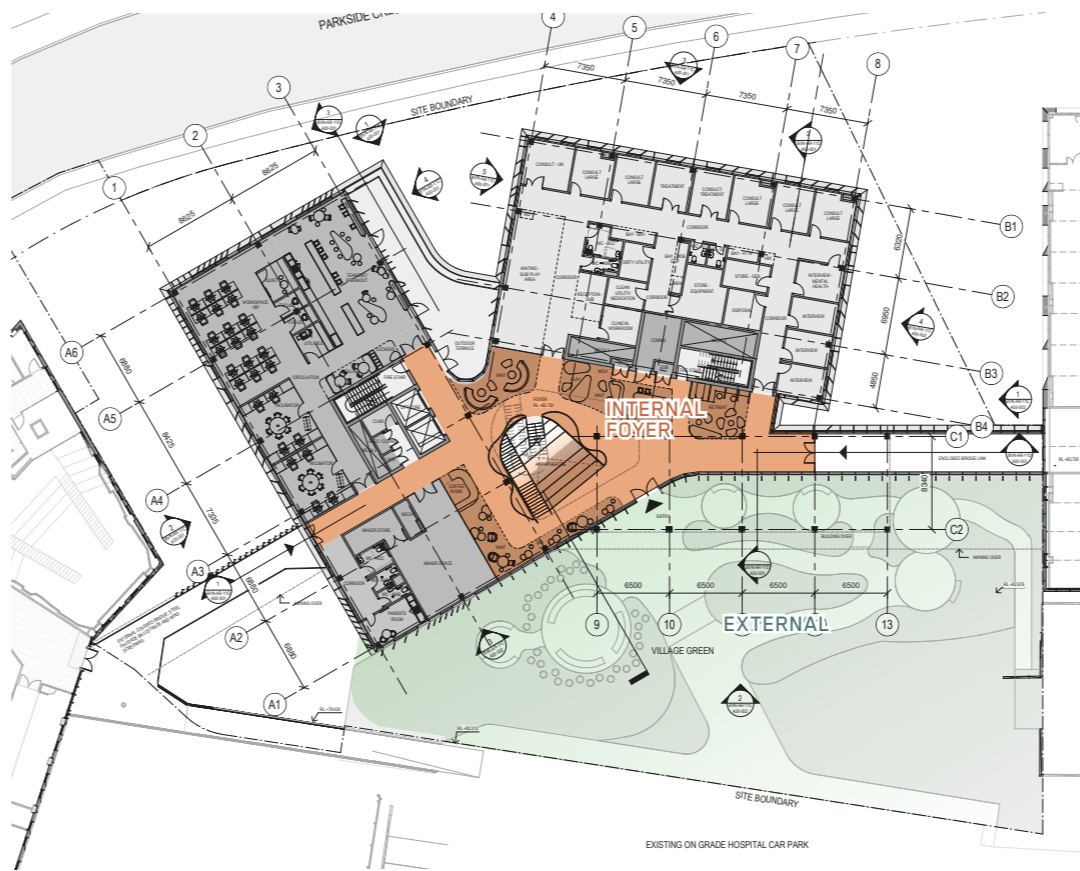
A number of unique and exciting opportunities exist for public art in a variety of mediums within the building that will further enrich the user experience, be representative of the diverse and rich cultural network and heritage of the place, and reinforce its connection to Country.



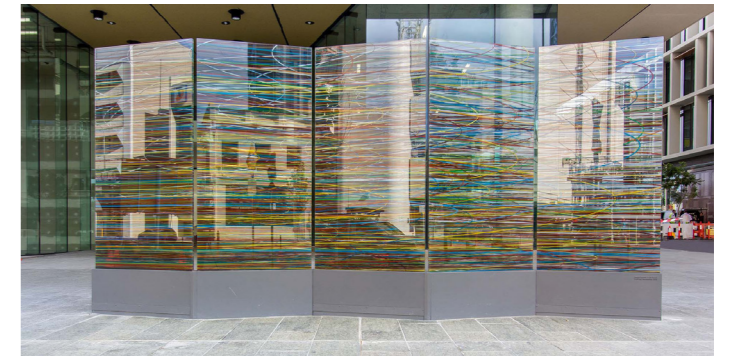
LOWER GROUND 1



SECTION



LEVEL 00



Pascal Dombis- Irrational Geometries



Daniel Boyd - MCA Sydney



Daniel Boyd - 20th Biennale Sydney



Jonathan Jones - QAGOMA

3.8 SERVICING AND OPERATION

SERVICE VEHICLES

Taking advantage of the natural fall of landscape to the existing helipad and in turn reducing the extent of excavation to the site, the existing driveway area between the MMRC and the adjacent MCS to the south and hardstand adjacent is utilised for loading and waste collection. Vehicles enter through the existing driveway, reverse into a loading area adjacent to the building, then continue forwards, directly out of the site. This minimises overlap with pedestrian movement along Parkside Crescent, and provides safe egress and visibility from the site for larger vehicles.

In addition, an existing car park space is proposed to be removed to allow for an accessible drop off and loading bay to be accommodated on Parkside Crescent

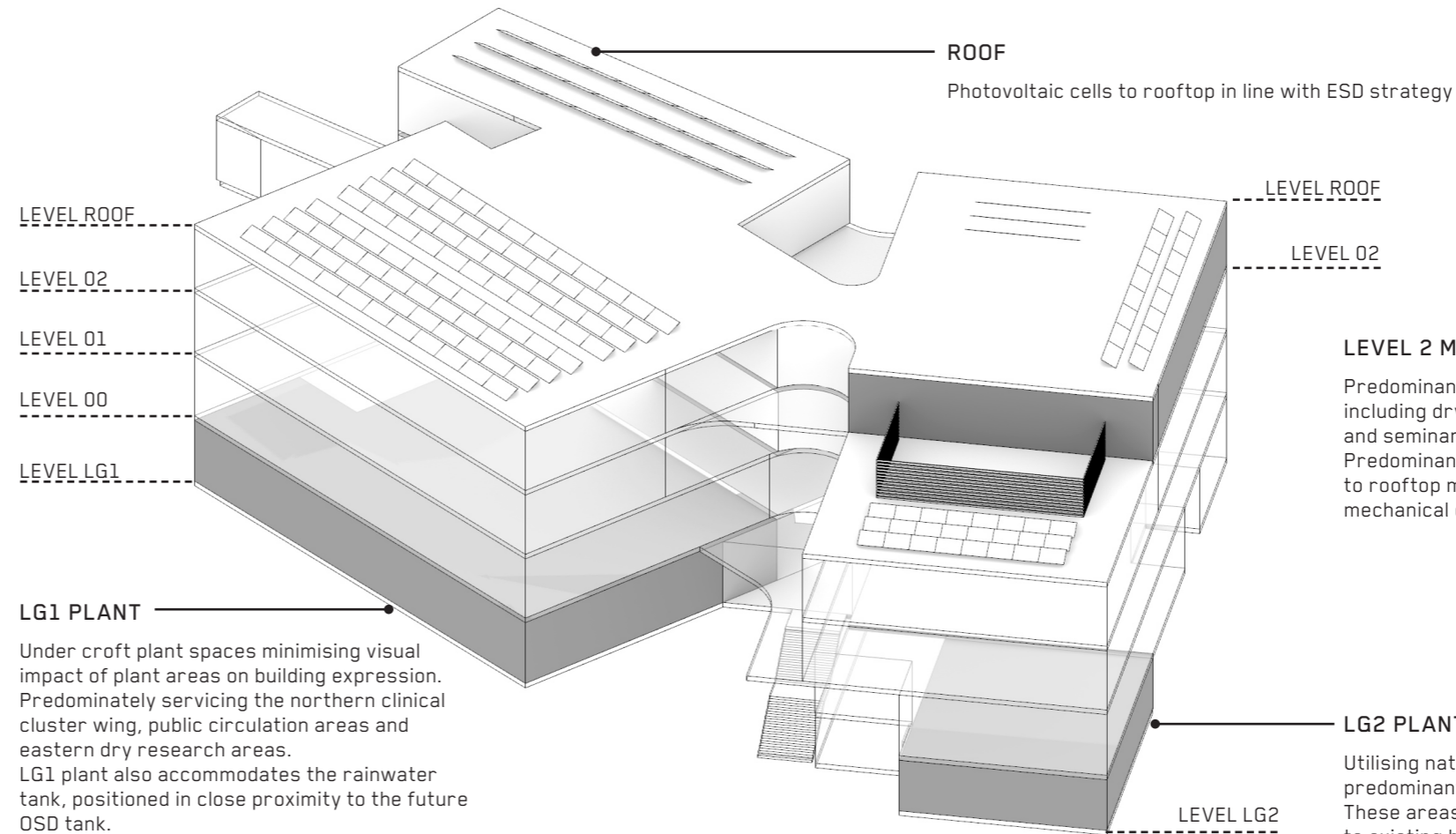
Refer to the Transport and Accessibility Impact Assessment for further information.

SERVICES

Mechanical services are accommodated predominantly on level 01 in a partial undercroft, serving the northern wing and public circulation areas of the building from the bottom-up.

Similarly, Level 2 rooftop plant is consolidated in the south to service the southern wing from the top-down. A small amount of screened rooftop plant is setback at Level 1 housing rooftop chillers and generator.

Additional services at LG2 are located in close proximity to relevant existing hydraulic services on the site.



3.9 ENVIRONMENTAL AMENITY

NATURAL DAYLIGHT

- The MMRC's orientation is predominately east and west facing.
- East and west solar exposure will be ameliorated with glazing specification, external shading, and internal blinds.

VENTILATION

- Mixed mode ventilation is proposed for foyer and shared public circulation areas.
- This will be facilitated by glazed operable louvres connected to the BMS.

ACCESS TO LANDSCAPE AND OUTDOOR SPACES

- Marsden Park directly fronts the site and will be easily accessible to all users and visitors from MMRC's Parkside Crescent entry at level LG2.
- MMRC will also front the future Village Green envisaged as part of future hospital redevelopment works.
- MMRC proposes a number of outdoor areas including a yarning circle, play space, terraces, and general seating areas.

WIND

A wind assessment has been completed, identifying existing predominant wind activity as coming from the northeast and southeast to southerly direction during the Summer period. During the Winter, winds typically occur from a range of angles from west southwest to north-west.

It is expected that the wind effects identified in the report can be ameliorated with the consideration of the following treatment strategies into the design of the development:

- Level 00 – Village Green and Main Entry: The inclusion of dense landscaping across the eastern frontage of the development as indicated in the architectural and landscape drawings.
- Level 00 – Western terrace: Inclusion of dense landscaping elements along the perimeter.
- Level 00 – Building D bridge link: Inclusion of screening on the western and eastern aspects.
- Level 00 – MCS bridge link: Inclusion of screening on the western aspect.

3.10 AMENITY IMPACTS TO SURROUNDS

SOLAR ACCESS

The building mass has been positioned to be low-lying on the site to minimise solar access impact to adjacent buildings.

VISUAL PRIVACY AND AMENITY

Given the building's distance from any residential areas there is no impact on visual privacy to these areas. Extensive existing and proposed trees and setbacks minimise view loss from adjacent buildings.

WIND IMPACTS

Based on the wind assessment completed, the inclusion of the subject development is expected to have a minimal impact on existing wind conditions, and will have no wind impact on other parts of the campus or in the surrounding areas.

ACOUSTICS IMPACTS

An acoustic assessment has been undertaken, and the following strategies have been considered thus far in the design of the development to ameliorate any potential acoustic impacts:

- Stand-by generator is located within an acoustic enclosure at level 02, and is set back from the adjacent MCS by greater than 22m as recommended.

Refer to acoustic assessment report for further information.

EXTERNAL LIGHTING STRATEGY

The Design Team will design the External lighting such that all external building and pole mounted light fittings will be in accordance with the requirements of the Building Code of Australia and relevant Australian Standards. In particular the design will be in accordance with the following:

- AS/NZS 1158.3.1-2005 Lighting for Roads and Public Places (Part 3.1: Pedestrian Area (category P))
- AS4282-1997 Control of Obtrusive Effects of Outdoor Lighting
- Building Code of Australia (Amendment 1) - Clause J6.5

4. GOVERNMENT ARCHITECT CONSULTATION

4.1 BETTER PLACED

Better Placed is a policy developed by the Government Architect NSW that aims to improve the quality of our built environment by defining what is meant by 'good design' and establishing a framework against which good design can be reviewed. This will be an ongoing process that will continue to be further addressed in the future planning and design stages of the new MMRC.

The section below outlines the approach taken in the development of the new facility in addressing the objectives of the Better Placed Policy, which outlines the following seven key objectives:

- Better fit – contextual, local and of its place
- Better performance – sustainable, adaptable and durable
- Better for community – inclusive, connected and diverse
- Better for people – safe, comfortable and liveable
- Better for working – functional, efficient and fit for purpose
- Better value – creating and adding value.
- Better look and feel – engaging, inviting and attractive.

BETTER FIT

- MMRC has been designed to integrate into its immediate and wider environment.
- The facility has been orientated to address the primary access points into the site from all four sides, and responds to the existing steep topography from the lower Parkside Crescent to the higher Village Green level of the existing Hospital car park.
- The massing of the facility breaks down the scale of building along Parkside Crescent, and also twists open to engage with the existing surrounding landscape and adjacent buildings. This breaking down of the mass provides visual interest and variation along Parkside Crescent, and creates a natural entry point between the north and south wings.
- The landscape design connects to the natural geology of Macarthur, with the diverse selection of landscape species primarily consisting of endemic species from the Macarthur region to embrace the natural qualities and resilience of the region within the site.

BETTER PERFORMANCE

- Longevity, functionality and robustness underpin the MMRC design.
- The facility will provide mixed-mode ventilation to public circulation areas within the building to create a comfortable indoor experience at all times.
- Clinical research clusters are designed with maximum flexibility, offering consult rooms that are generic and therefore adaptable to changing research uses.
- Selected facade materials are resilient and low maintenance.
- The facility promotes social sustainability on the Campus by providing much needed public and green spaces for visitors and staff.
- In order to demonstrate an equivalent 5 Star rating and ESD performance, the project has utilised the Green Star Design and As-built v1.3 rating tool as a framework to guide the project in aligning with 'Australian Best Practice' and target initiatives that exceed relevant sustainability performance standards.

BETTER FOR COMMUNITY

- MMRC has been designed to deliver the best quality people-centred health research facility, servicing not only the community of the Campbelltown/Macarthur region but also the wider Southwest Sydney Health District. At the core of the project's aspirations is a commitment to improving the immediate health needs of the local community and creating a welcoming and uplifting experience for visitors and staff alike.
- MMRC will become an important linking piece on the Campus, with proposed bridge connections into both the MCS and Building D helping to facilitate an interconnected internal pedestrian network across the campus and strengthening relationships between clinical, research and education spaces.
- Publicly accessible spaces are dispersed across all levels of the facility, providing a variety of settings for members of the local community to gather. These include a stepped amphitheatre and seminar rooms to support larger groups and formal community events. A variety of diverse informal waiting and breakout settings provide a range opportunities for informal community engagement.
- External landscaped areas include a variety of seating areas allowing groups of various sizes to gather, a children's play space, and a yarning circle.

BETTER FOR PEOPLE

- The planning of the MMRC considers the principles of CPTED in developing the site master plan and concept planning to establish a safe and secure environment for staff, contractors and visitors.

- The MMRC will place people at the centre of research to create an environment that is warm, welcoming, and intuitive, with 'sticky' spaces to suit a diverse array of users.
- Public spaces have been planned to not only be inviting and intuitive, but also human centred and easily adaptable to suit all nature of users of the building. This is achieved through the provision of a variety of different and flexible waiting environments that respond to the flows and characteristics of the building.
- Clear access into publicly accessible spaces are established allowing safe access and egress for people with varying physical abilities. Consult room sizes have been increased above the typical Australasian Health Facility Guidelines requirements to enable larger groups and to support mobile equipment for maximum flexibility of rooms. Windows are provided to all visitor consult rooms and waiting areas, with corridors terminating at windows where possible.
- A key design principle for the MMRC is the integration of greening into the building to promote and enhance health, well-being, and connectedness to people and place. The building will be porous, engaging and green, visually and physically engaging with the surrounding landscape by bringing green spaces into the building, and maximising views out to green space.

BETTER WORKING

- Extensive user consultation has been undertaken to develop spaces underpinned by the aspirations of the MMRC and inform the design of a building which will be functional, efficient and fit for purpose.
- A primary objective of the facility is to enhance the visitor and staff experience, and create a supportive work environment and a stress-free experience for visitors and staff.
- The focus of the research workspaces is to adopt a strategy that enables flexibility and future growth, whilst also providing users with the tools that contribute to a high performance research environment and create a magnetic home base that enables greater inter-agency collaboration, knowledge sharing and shared resource.
- The massing, orientation, and planning of the building maximises access to natural light, reducing stress, encouraging a positive work attitude towards co-workers, and promoting a balanced lifestyle. A variety of breakout spaces is provided for staff to have time out from their work allowing respite and self-regeneration.

BETTER VALUE

- The MMRC will become a key component within south West Sydney's rapidly developing health and medical research precinct.
- The MMRC's location within the hospital campus will maximise

opportunities for drawing on the local community for clinical research and will enable locally focussed research outcomes for South West Sydney.

- The MMRC will facilitate scientific, clinical and industry collaboration whilst providing a bench-to-beside approach enabling greater translation of research from medical discovery to the development of new prevention strategies, diagnostics, and more effective treatments.
- Providing a modern, future-proofed building that promotes precinct-wide integration will provide ongoing value for the immediate and wider community long into the future.

BETTER LOOK AND FEEL

- Multiple entry points, expansive glazing and operable façades are designed to create a welcoming and intuitive experience and a seamless, inviting transition from outside in.
- Generous spaces, legible entries, and an expansive central atrium ensure a clear and intuitive wayfinding experience.
- The internal planning of MMRC enhances the visitor and staff journey through access to natural light, views and appropriately scaled and sheltered outdoor spaces.
- Opportunities to incorporate artworks within the building and the landscape will be explored further during Design Development.

4.2 SDRP 1

02 JUNE 2021

ITEM	FEEDBACK	RESPONSE
MASTER PLAN AND LANDSCAPE		
1	The primary access to the MMRC should be via the eastern future village green or Parkside Crescent. It should be possible to enter the building without using Building D's northern entrance the sky bridge connection.	Clear entries to the building have been developed with equal access provided to the building from both Parkside Crescent from the LG2 entry with a grade of 1:40 to the door and from the village green through a short 1:20 walkway to the entry at L00.
2	To mitigate the potential of the [hospital master plan's future pedestrian common and village green] not happening or happening at a much later date, consideration should be given to pushing the proposed building towards the park to create a village green within the bounds of the site.	A small village green has been provided on the eastern side of the building connecting into the landscape design within the site boundary. The building form has been shifted toward the western Parkside Crescent edge to allow for a more generous landscape to be provided to this edge and reducing reliance on future master plan.
3	Additional site area which is not required for the building should be utilised to create outdoor spaces rather than leaving room for future development.	The eastern design has utilised the external space outside of the building with a small nature play space, yarning circle and outdoor breakout space.
4	Research existing and proposed transport routes (bicycle lanes, bus, pedestrian, and vehicle) to understand access and arrival locations and the user journey overall. Make alternative means of travel, such as cycling or walking, accessible to the building users to encourage a healthy lifestyle. Additional consideration should be given to after-hours transport and access and any design implications given the likelihood for hours of operation to change over time in response to user needs and research topics.	Bike racks have been provided on the western side of the site outside the building entrance. The building operational model suggests a typical working / opening times. However, the building could be utilised for after hours events and community engagement initiatives.
5	The proposed entry from Parkside Crescent is key to connecting to the park and integrating with the wider road network. This entry should be retained to allow easy access to adjacent parklands and local shops.	Parkside Crescent entry has been retained.
6	With further user group consultation, confirm loading and servicing needs of the building.	Loading and servicing needs have been confirmed and detailed in this SSD application. The building loading and servicing strategy has been developed to limit crossover between pedestrians and loading/waste vehicles.
7	Plant large trees to increase the urban tree canopy coverage and shade outdoor areas. Planting large trees to the north and south will also improve the outlook toward the inactive façades of Building D and the Macarthur Clinical School building.	Large trees such as Angophora and eucalyptus trees have been used through the design to increase canopy coverage.
8	Review the outdoor learning and waiting spaces with the newly appointed landscape architect. Provide different sizes and quality of outdoor spaces to accommodate multiple users, including large groups and different demographics.	The landscape design has created a series of outdoor seating areas both within and out of the building that will have multiple purposes including learning, waiting and connecting to country and culture.
9	Confirm the plant species for the landscape and production garden. Consideration should be given to any impacts resulting from the site's proximity to bush fire prone land.	The species selected are primarily native with an emphasis on connecting to the Dharawal Six Season. The production gardens will be integrated into the gardens consisting of bush tucker species
10	If gabions are used to manage the slope, they should be covered with planting.	The gabion walls have climbing planting at the bases to soften the walling.
ARCHITECTURAL EXPRESSION		
11	Consider pushing the north-facing section of the MMRC further east to allow for a visual connection from the village green to the park. This adjustment could allow for a more extensive outdoor terrace.	The proposal has undergone an iterative design process to arrive at the most appropriate building form, siting and contextual relationships. This has taken into account a variety of factors not limited to the extent of outdoor terrace available to users of the building but also building orientation, solar shading and performative requirements, privacy, access to views and extent excavation.
12	Further to the above, explore options for the Parkside Crescent entry, which addresses the significant slope of the site, and how the Parkside Crescent entry relates to the village green entry. For example, the Parkside Crescent entry could be dug into the landscape, and different multistorey atriums options could be explored.	The Parkside Crescent entry by its nature has a more civic response to the street due to the significant topography of the site. In order to create an activated and engaging presence against this edge the building uses texture to materiality, warmth, integration of landscape, and building form to both protect users from inclement weather and reduce the monumental scale of this arrival. A two storey void greets users at this arrival point once within the building at the lower ground 2 level to provide a sense of scale and generosity to this arrival. In addition, when arriving at lower ground 1, whether via lifts, external public stair or the additional entry provided to the southern edge of the building, a direct line of sight is available to users to the atrium above and beyond to the Village Green.
13	Develop the building's massing and façade to reflect the internal planning, external break-out spaces and multiple entrances, which are currently more dynamic.	The building accommodates 5 entries that capture users coming from the multitude of directions surrounding the site to create an engaging and lively public realm and ensure the building is permeable and accessible at all edges. The facade, with a unitised curtain wall system, adapts seamlessly as it wraps around the building creating a cohesiveness and simplicity to the building expression while allowing it to adapt to the building performance and functional requirements of the building. At all entry locations the building uses warmth, variation in texture and material tone to mark the arrival points to create a simple and intuitive wayfinding strategy.
14	To connect to Building D and Macarthur Clinical School and to manage multiple entries at different levels, consider using various half levels.	The use of half levels has been considered but not adopted in this proposal due to the limitations this produces in providing a completely accessible and equitable internal arrangement.

ITEM	FEEDBACK	RESPONSE
SUSTAINABILITY AND ENVIRONMENTAL ASPECTS		
15	Develop an ESD approach internally and a shading strategy for external spaces that suit the site conditions and the challenging western orientation.	A deep horizontal ledge and 450mm deep fins, varying in orientation according to the solar shading requirements of each facade has been adopted to provide shading to the challenging western and eastern orientation of the building.
16	Aiming for a net-zero building is highly encouraged to reach Australia's Net Zero emissions goal by 2050.	Addressed as part of the ESD report.

4.3 SDRP 2

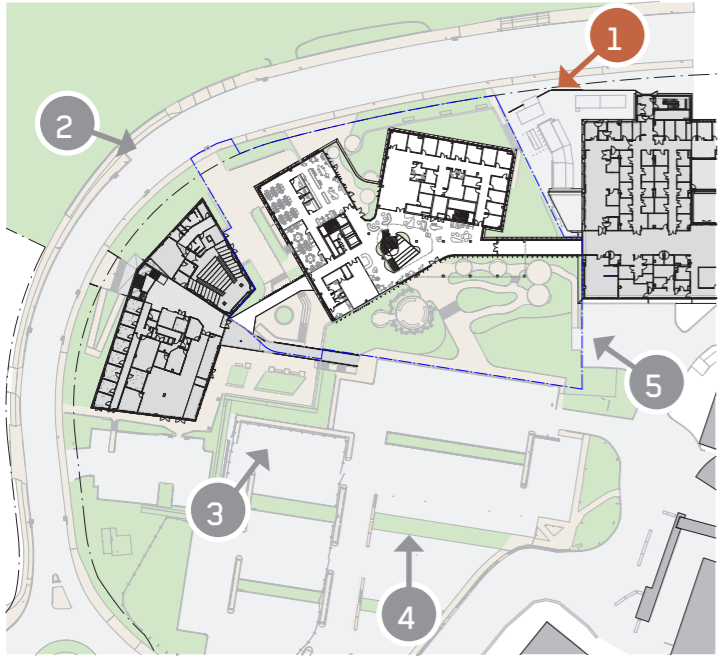
04 AUGUST 2021

ITEM	FEEDBACK	RESPONSE
MASTER PLAN AND LANDSCAPE		
1	The SDRP 01 presentation showed the building conceptually within the landscape. Currently, the building appears insular and lacks connection to the outdoors. Develop the design to feel open to the public and welcoming during the day, night and weekends.	The bleacher seating has been removed from Parkside Crescent which draws the landscape up through the building connecting the surrounding landscape context of Marsden park.
2	People naturally try to circulate between buildings and do not always feel comfortable entering a building. Consider circulation of all people using the Campbelltown Hospital precinct and how they might walk from Parkside Crescent to the village green without entering the building.	Due to the existing building layout and 8m level change between Parkside Crescent and the village green the external circulation is quite difficult to achieve from park side Crescent. The design has improved the pedestrian connection and legibility to the south of the building creating a visible lower plaza extension/connecting the Macarthur clinical school forecourt which has external stair connections to the village green.
3	Consider the following to improve the Parkside Crescent entry:	--
	a. amendments to the loading dock, Parkside Crescent entry and bleachers seating steps to remove or reduce conflicts between uses	Bleacher seating has been removed and replaced with landscape which draws the landscape up through the building creating improving the gully landscape concept.
	b. greening this entry using landscape and planting to break up the extent of bleachers seating steps, and exploring the use of creepers on and above the gabion walls to develop the gully garden concept	Climbing plants will be planted along the base of the gabion wall.
	c. providing equitable and amenable access from the Parkside Crescent entry, noting the lift is currently only accessible from a dead end corridor.	A more generous entry has been provided to this arrival point through the creation of a double height space of the entry. The building facade responds to this feedback by stepping back to create a more generous undercroft space and reducing the internal travel distances to the lift.
4	Consider the following to further develop the village green:	--
	a. mitigating the potential for the meandering, sloped path to contribute to the stress of those visiting health facilities by providing straightforward navigation, legible wayfinding, and barrier-free circulation	Sloped pathways have been reduced to the minimum amount of grade to achieve equal access to the building, with a direct and clear pathway to the entry.
	b. exploring sociability, education value, play spaces and functionality, for example, providing options for comfortable seating (with a back and armrest) and for locations where carers can sit and supervise.	Seating will be developed further during detailed design. The design will ensure that the seating will be comfortable and accommodate all users with back and arm rest.
5	Provide details of the ground plane and potential for landscaping between the northern and southern neighbouring buildings to understand their safety, legibility and use.	The southern Plaza has been developed as a lower plaza with visibility and sight lines from Parkside Crescent. The space between the neighbouring building and Building D is a loading dock and not accessible by the public.
6	Address crime prevention through environmental design via lighting and creating visibility through outdoor spaces.	The landscape design has a series of different areas of activation which will encourage activity and viability within the public realm throughout the operating hours of the facility. The design has been refined to create clear sight lines to all the landscape spaces. Lighting will be designed and developed to comply with all the appropriate standard for public safety.
7	Install bike racks where possible as cyclists always try to park as close as possible to their destination. Encourage cycling through introducing end of trip facilities.	Cycle parking has been added to Parkside Crescent which connects with the broader cycle network.
8	Provide sections through the building which show its relationship with topography and neighbouring buildings.	Sections have been included in this SSD application.
9	Provide sun studies, and shadow diagrams for 21 June from 11 am to 2 pm, including surrounding properties.	Sun studies have been included in this SSD application.
CONNECTING WITH COUNTRY		
10	It is acknowledged that it has been challenging to engage with Aboriginal community members in person due to Covid 19 restrictions and lockdown. However, local Aboriginal community consultation is required to inform design development, including understanding the needs of indoor and outdoor gathering spaces.	Community consultation and engagement will be undertaken as part of the detailed design development to inform both the landscape and the architectural expression of the building. The design is committed to embedding the principles and outcomes of the robust designing with Country framework described within this submission including the importance of continuing agency of the local Indigenous community.
11	Develop the yarning circle with local Aboriginal community members and explore the opportunity to engage a local Aboriginal artist. Consider using benches and paved areas that are more tactile than currently proposed, including motifs within the paving, and introducing fire or water elements in the centre.	Addressed as part of the landscape submission
12	Use of endemic and native plants are encouraged as part of the response to Country.	Planting inspired by the Dharawal Six Seasons. Addressed as part of the landscape submission

ITEM	FEEDBACK	RESPONSE
ARCHITECTURAL EXPRESSION		
13	Improve the relationship between the building and landscape, including providing openings to create indoor/outdoor spaces which will help break down the institutional feel and scale and achieve the concept of bringing the park and landscape in. For example, the eastern level 0 portico could be pushed outward and doors could open onto the village green.	The undercroft space to Village Green provides a blurred verandah edge to the building, allowing users a space to pause and look back out to the landscape protected from inclement weather. This awning structure has extended to the north to engage with Building D, and provide shelter from wind and wind driven rain to the external Building D bridge. Openings in the top of this deep awning allow light to filter through to outdoor settings below.
14	Develop the 'sticky spaces' to achieve the concepts presented at SDRP 01, including the human experience of visiting the building and how circulation spaces can feel less corridor-like.	Generous corridor spaces have been provided throughout the proposal, with particular attention to provision of glazing at the ends of corridors. The use of multi level and shifting atrium spaces creates interesting vertical volumes, creating interest and a sense of movement and transition through the circulation areas.
15	Consider how programs along the edge of the outdoor terrace neighbouring the Macarthur Clinical School could be introduced to activate this outdoor space.	Active and engaging spaces have been positioned at the perimeter to engage with outdoor terrace areas. In particular, seminar areas on Lower Ground 1 have direct access to a new sunken forecourt spaces created as part of this proposal to provide universal access to both buildings as well an engaging and welcome landscape area. This space also provides a generous and comfortable ante space for users to spill out from both buildings and activate this new laneway. On ground floor, the western terrace edges the main staff tea point in the building which has been consolidated into a single larger space to encourage cross collaboration and interdisciplinary engagement. All terraces provided are public, encouraging users to engage with the staff.
16	Increase the current 2.7m ceiling height which is considered too low for some of the larger-scale spaces.	Where possible within the functional requirements of the building, ceilings have been increased or removed to expose services within the proposal to create a more generous scale and height. Feature ceilings and acoustic treatments are used to passively create intimate spaces and 'rooms' within the greater contiguous workspace areas as required. Further coordination is required to satisfy the acoustic requirements of the spaces in detailed design.
17	Provide windows at the end of the level 1 research assessment area corridor to allow this area to receive natural light.	To be developed as part of detailed documentation; current planning requirements have prioritised views and light to each of the research assessment rooms to create comfortable work environments for staff and users and avoided inboard rooms with no access to direct daylight.

5. VISUAL IMPACT STUDY

5.1 VIEW 1

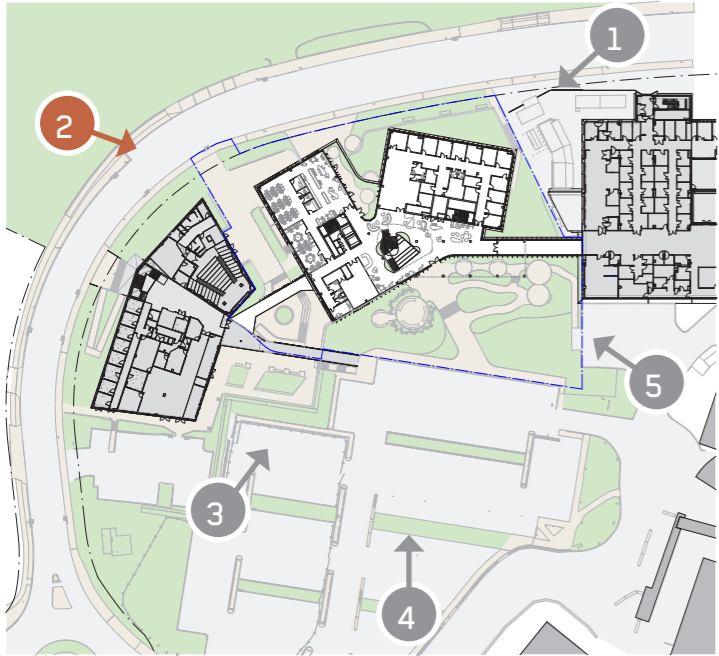


KEY PLAN

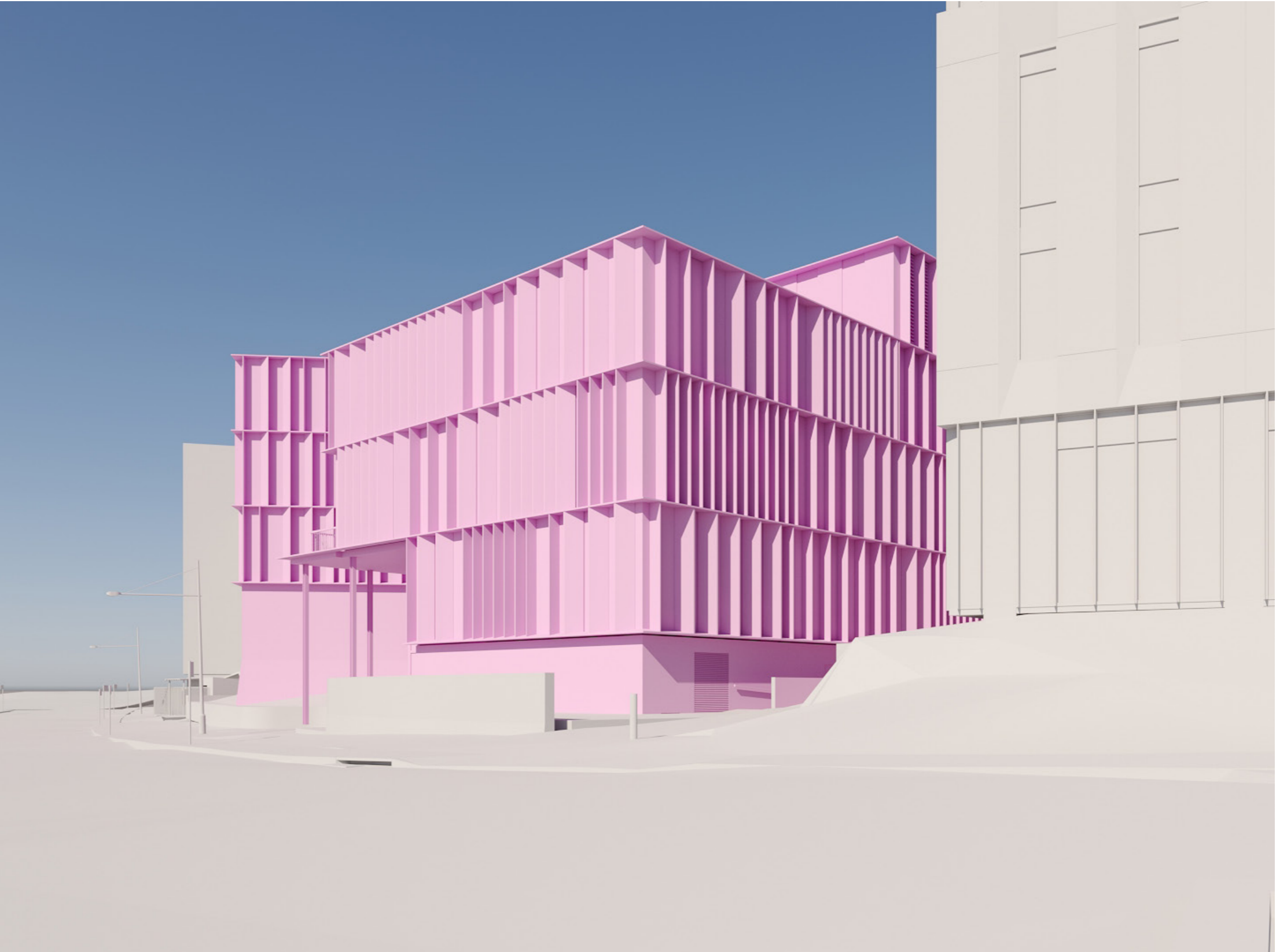


PROPOSAL

5.2 VIEW 2

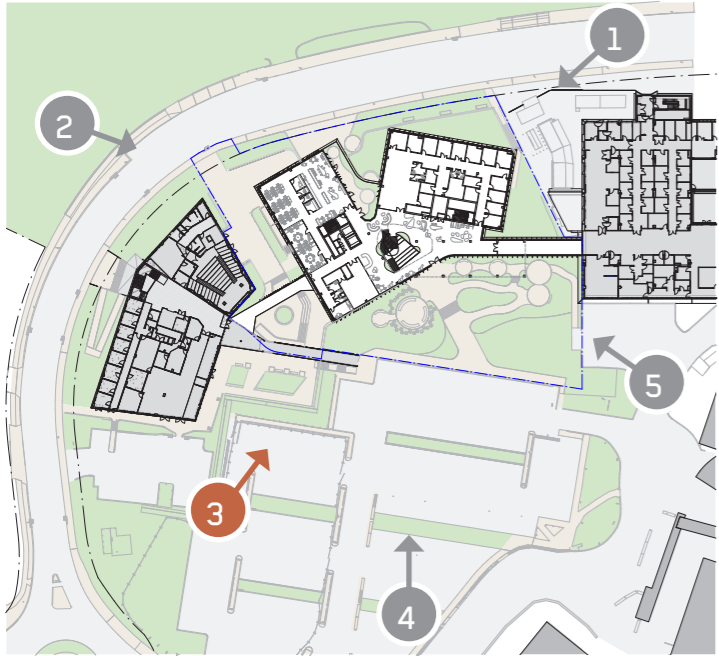


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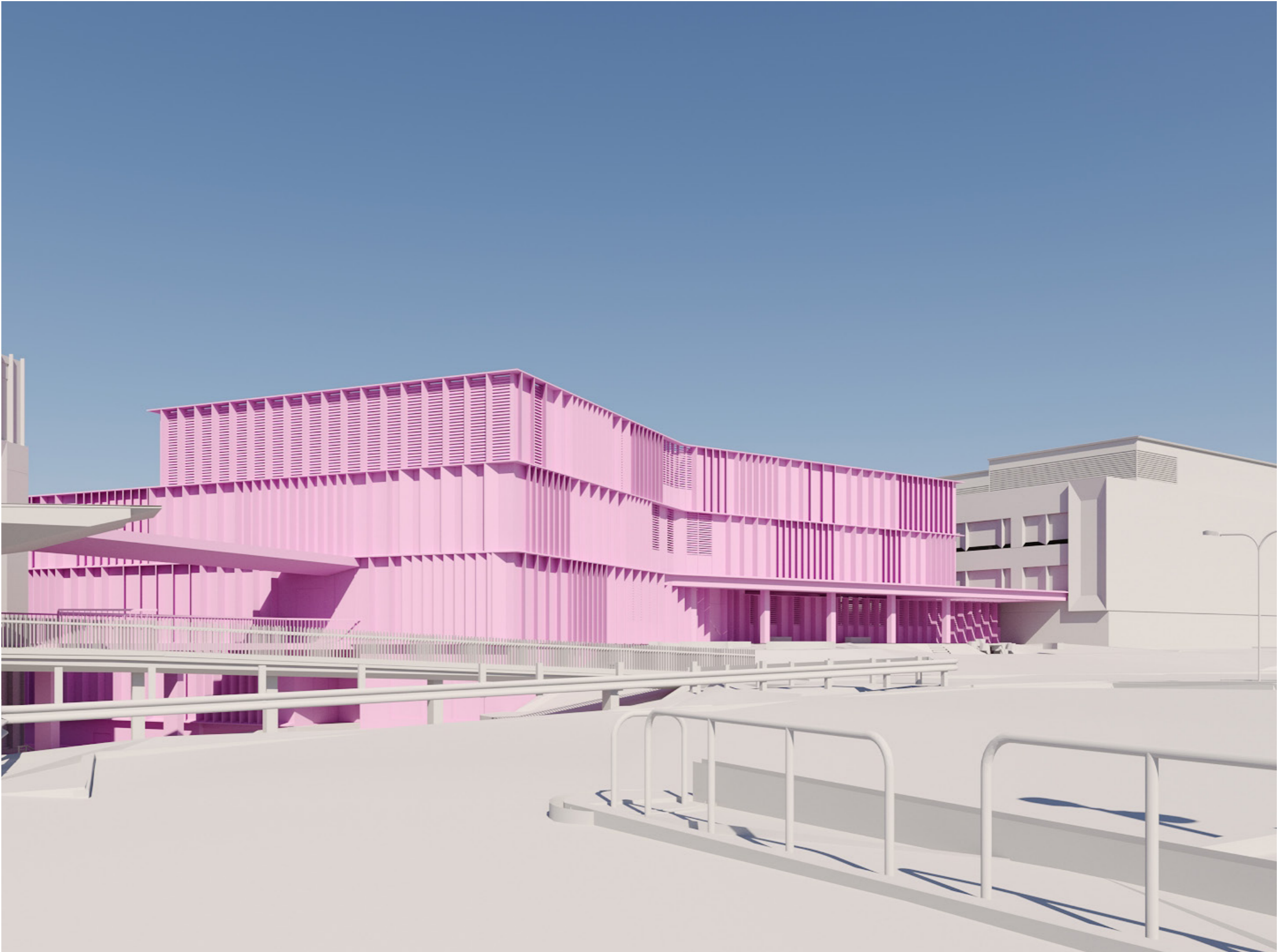


PROPOSAL

5.3 VIEW 3



KEY PLAN



PROPOSAL

5.4 VIEW 4



KEY PLAN



PROPOSAL

5.5 VIEW 5



KEY PLAN



PROPOSAL

