

**CENTRAL ACUTE SERVICES BUILDING
+ INNOVATION CENTRE**

**ARCHITECTURAL
DESIGN STATEMENT**

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WESTMEAD REDEVELOPMENT. CENTRAL ACUDOCUMENT ISSUES - VERSION CONTROL				
VERSION	STATUS	DATE	AUTHOR	CHECKED BY
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01 Executive summary

The design proposal responds to the framework derived from the project aspirations that articulate the vision for the Westmead Redevelopment and its role in the Precinct. The purpose of these aspirations and the resulting framework is to provide guidance to those planning and designing the Westmead Redevelopment.

The built environment aspirations focus on providing a built environment to which people can connect, and that promotes the pursuit of skills, knowledge, care and innovation. The key aspects of this pursuit include: creating an environment, appropriately scaled, that enhances connectivity and offers way-finding solutions that support these pursuits, and through this process creating a flexible, adaptable and expandable platform that ensures the separation of different movement and work flow streams throughout the facility.

The design addresses these requirements in the proposed new Central Acute Services Building (CASB) with provision for a future second stage.

It responds to the Design Principles for the project which include:

- enabling greater integration between the Westmead Adults and Children's Hospitals on the precinct;
- creating a greater civic presence on Hawkesbury Road and improving way-finding;
- provision of equitable access to the precinct for all users by, in particular, rationalising and improving the car parking situation; and
- using the structural chassis and circulation patterns within the buildings to respond to and enhance the existing public and clinical separation principles on the site.

This report addresses the built form and Urban Design issues as set out under the Secretary's Environmental Assessment Requirements (SEAR's) for the Central Acute Service Building (Application Number SSD 7642).



View of new CASB and Innovation Centre from Plaza



Aerial view of new CASB, forecourt and
Innovation Centre

02 Introduction

The Design has been developed in accordance with the preferred Master Plan option which placed the new CASB on a 'central' site between the existing Adults and Children's Hospital

This will promote greater levels of service integration and rationalisation, whilst creating a more significant public presence and address for the precinct on Hawkesbury Road by means of the new Public Forecourt, access roads and ramps.

The new CASB will link back to the existing Adults and Children's Hospitals via walkways and bridges. It will assist each hospital to maintain its identity whilst offering opportunities for sharing of support facilities and staff, and wherever possible, rationalising service delivery to create operational efficiencies.

In addition, it will enable the rationalisation of ambulance and logistics traffic movements on the site to the north of the new CASB whilst promoting public access and car parking on the Hawkesbury Road side of the precinct.

Car parks will be rationalised and dedicated for the use of the public, the staff or, where necessary, mixed use by either constituency. This will improve way-finding for all those using or working in the hospital, whether they arrive by public transport, car, bicycle or on foot.

03 Location

Strategic Context

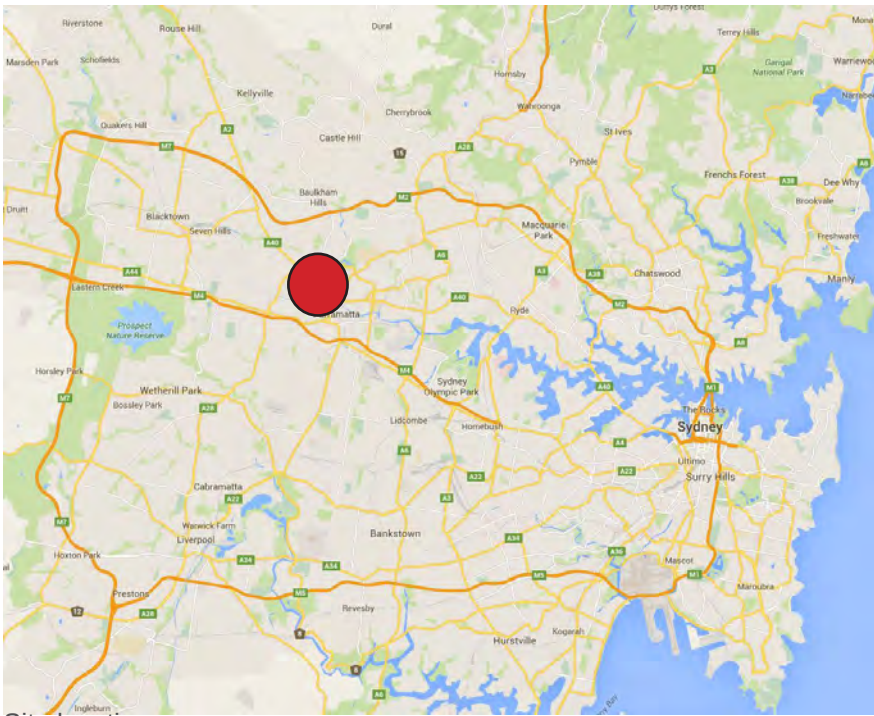
25 km west of the Sydney CBD the Westmead precinct is planned to be served by all transport modes. The Parramatta CBD lies approximately 2.5 km to the southeast of the hospital precinct beyond the Parramatta parklands.

Proposed enhanced transport linkages like the Western Sydney Light Rail Network will reinforce and enhance existing connections into Sydney’s leading health, education and medical research networks with growing global relevance and links.

The Master Plan provides the potential to bring light rail into the site and finally integrate it with the Westmead Hospital redefined entry and future research and education zone.



Strategic context diagram



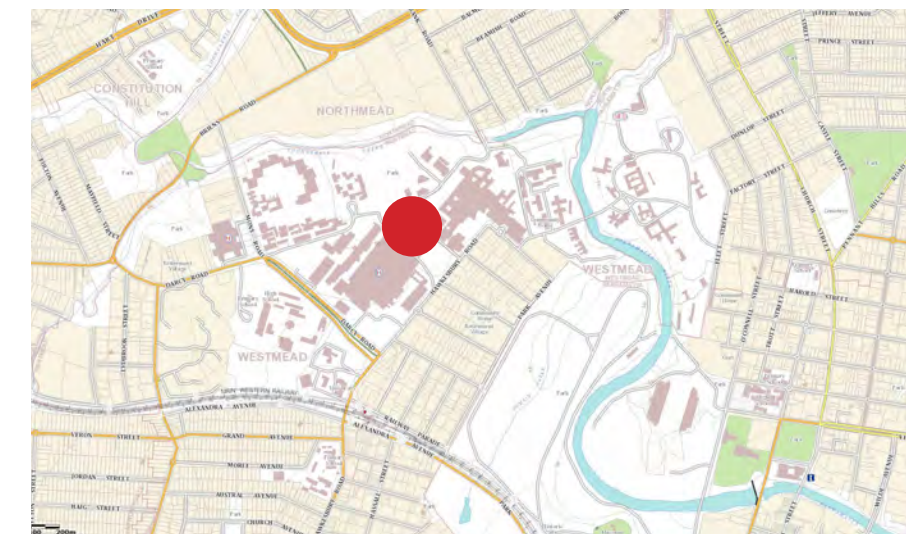
Site location

03 Location

Site Boundary

The boundary extends 260m along North West / South East Axis and 180m along the North East / South West Axis.

The extents include the Level 2 pedestrian which extends 80m to the East.



Aerial of existing site and local context

Local context



03 Location

Urban Design Issues

The design context for the CASB is similar to that for a small city development.

Projected growth of the Westmead Precinct requires a strategy for public access via various modes of transport.

The concept proposal provides for the following urban structure:

- Car parking strategically placed on all sides of the proposed development with Acute, Main and Ambulatory access points
- Public transport linkages to the existing Rail Station including a potential light rail link integrated with redefined main entry to Westmead Hospital and research and education zone.
- Bus access to the proposed new main entry and the new central CASB.
- Potential for bridge link across Darcy Road linking with UWS development.
- Pedestrian links to the broader precinct including a proposed link to the Children's Hospital
- Upgrading of Mons Road to facilitate access from the proposed multi deck car park
- Removal of staff and ambulance flows from Hawkesbury Road to facilitate a more urban and pedestrian friendly boulevard.

04 Existing Site

Existing Site Analysis

The proposed site is located centrally within the Westmead Hospital Campus. Hawkesbury Road lies towards the South East of the site and will be the main point of access for the public using the hospital.

The site is orientated North West to South East along its main axis and is not critically overshadowed by its adjoining neighbours.

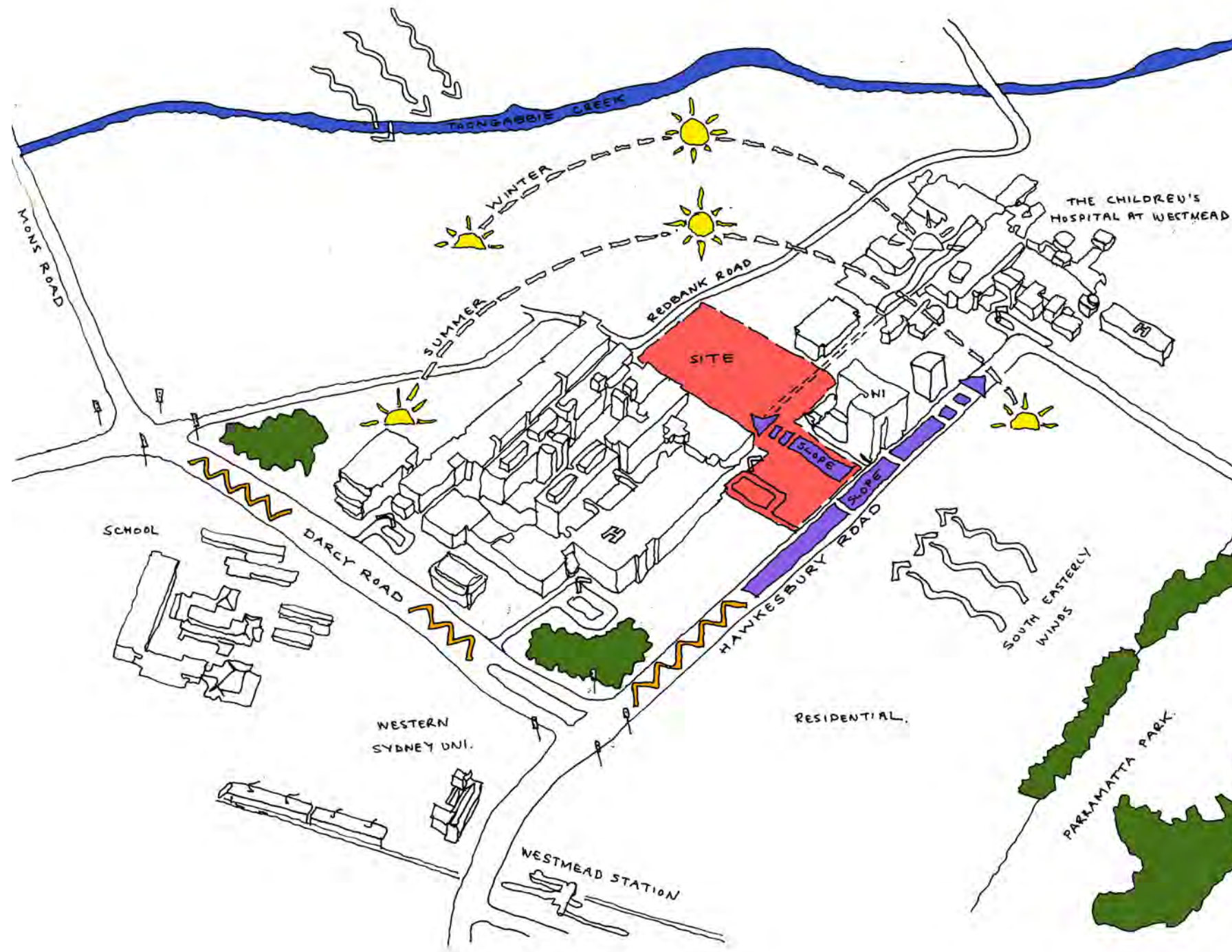
Colder South Easterly winds will have an impact on the eastern edge of the development site. Design response to this impact is located in Section 07 - Building Articulation

Westmead Station is located approximately 10minutes walk south from the Hospital campus, while a Bus T-way runs along Darcy Road.

Topography

The site falls from a high point of RL 25.8 along Hawkesbury Road to RL 19.4 adjacent to Redbank Road to the North. The surrounding site falls from a high point of RL32 on the Hawkesbury Road/ Darcy Road junction towards the low point of Toongabbie Creek which varies from RL 10 to RL 6.5

This gives a general height variation across the Hospital Campus site of 22-25m. The proposed site has a height variation of 6.4m.

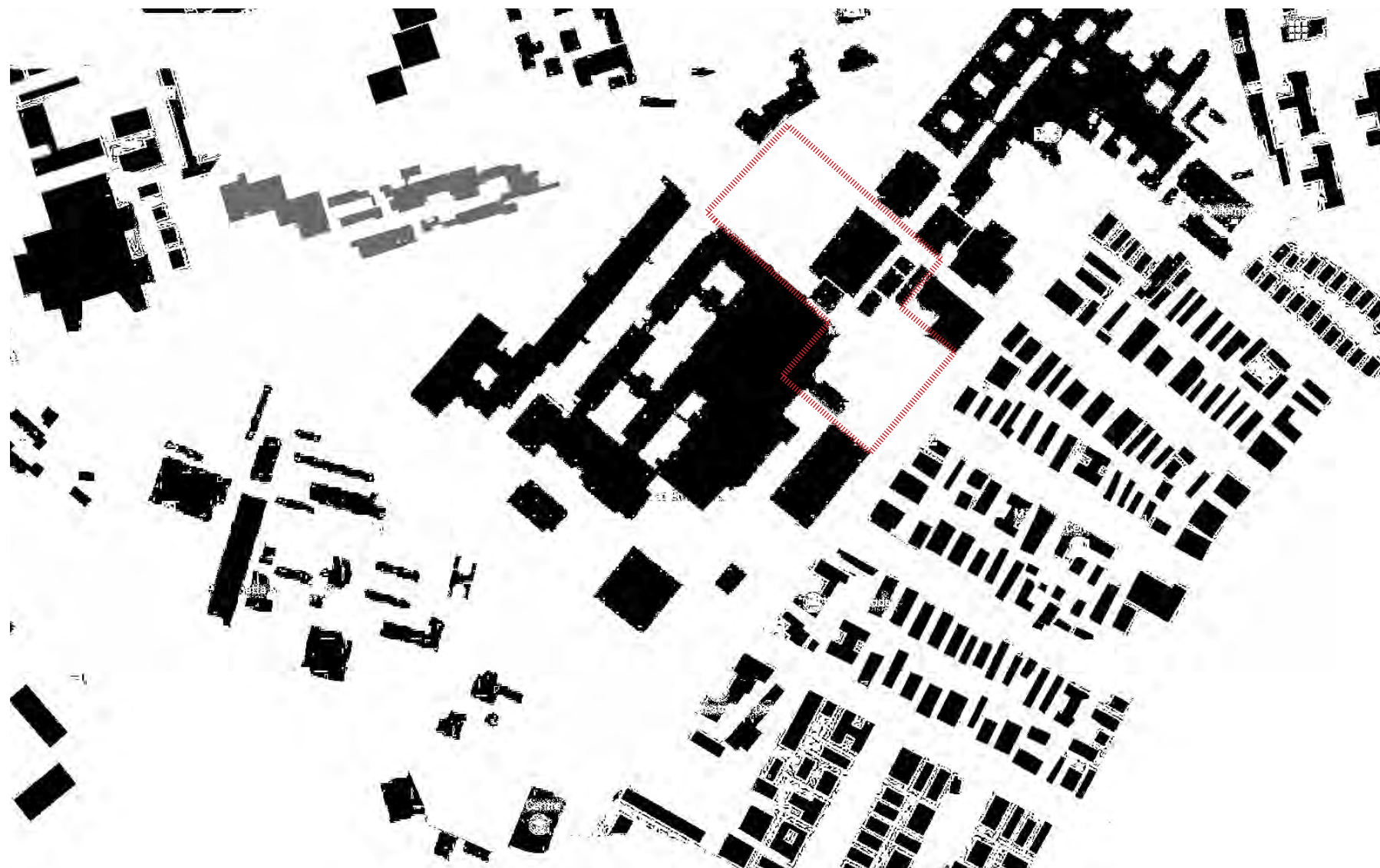


Site Analysis Diagram

04 Existing Site

Surrounding Figure Ground

The noli diagram shows no determinable pattern within the local environs. Residential blocks are well grouped to the south of Hawkesbury Road whereas the existing Westmead Hospital Campus is starting to have a determinable relationship with Hawkesbury Road. The relationship with Darcy and Institute Roads are segregated and fractured. The CASB will maintain this defined/structured relationship to Hawkesbury Road.



Existing Figureground

04 Existing Site

Existing Building Typology

Westmead Hospital comprises an amalgamation of building typologies that have been constructed since the 1970's.

They can be categorised into the following:

1. The original Hospital Campus Circa 1970's (upto 6 storeys)
2. Existing Hospital Car Parks Circa 1970's (2-3 storeys)
3. Extensions to the Hospital Campus Circa 2005 (2-3 storeys)
4. New Childrens Hospital constructed in 1995 (3-4 storeys)
5. New Research buildings added in recent years (upto 8 storeys)
6. Proposed site boundary



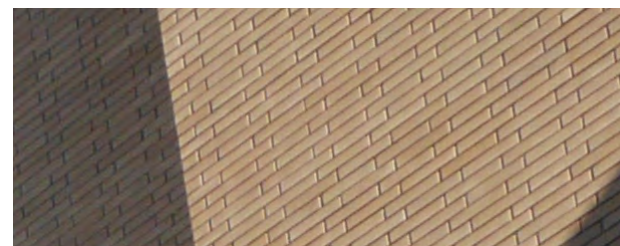
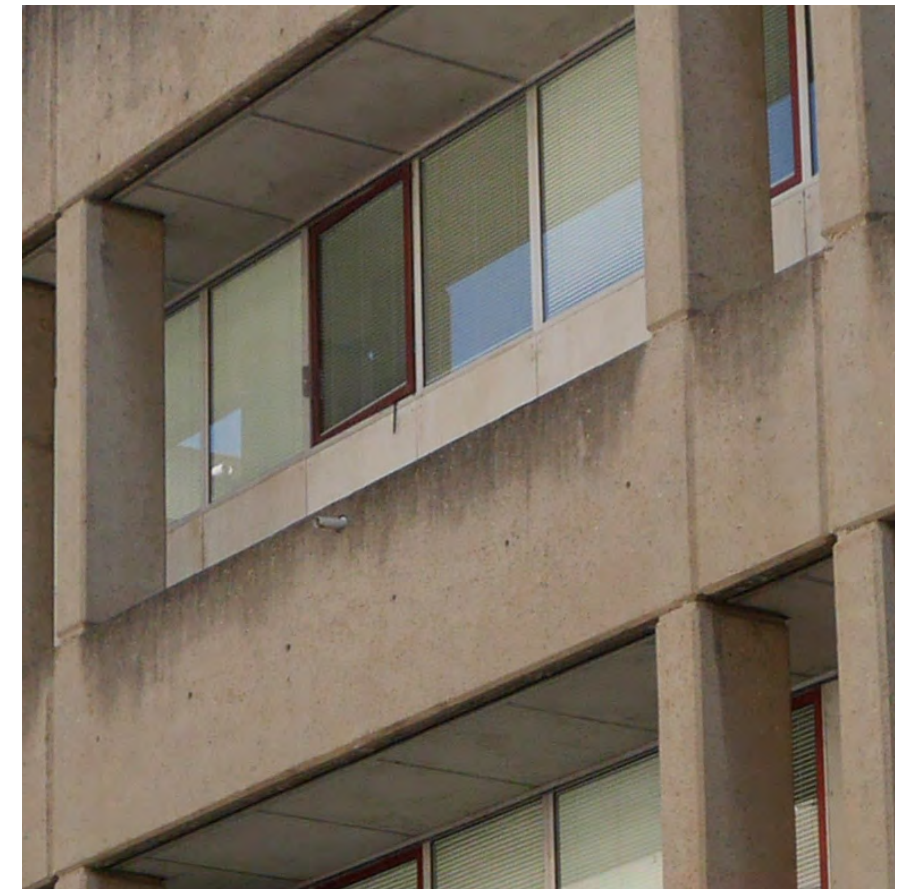
Building Typology Diagram

04 Existing Site

Existing Character

A variety of distinct characters currently exist in and around the proposed site. The existing Westmead Hospital is expressive in its structure and materiality,

The 2005 Additions combine a panellised facade and glazing to promote flexibility to the internal clinical services while the Westmead Institute Building which was awarded the 2015 Sulman award for public architecture comprises a rational and well considered facade harnessing daylight and ensuring privacy to the research centre.



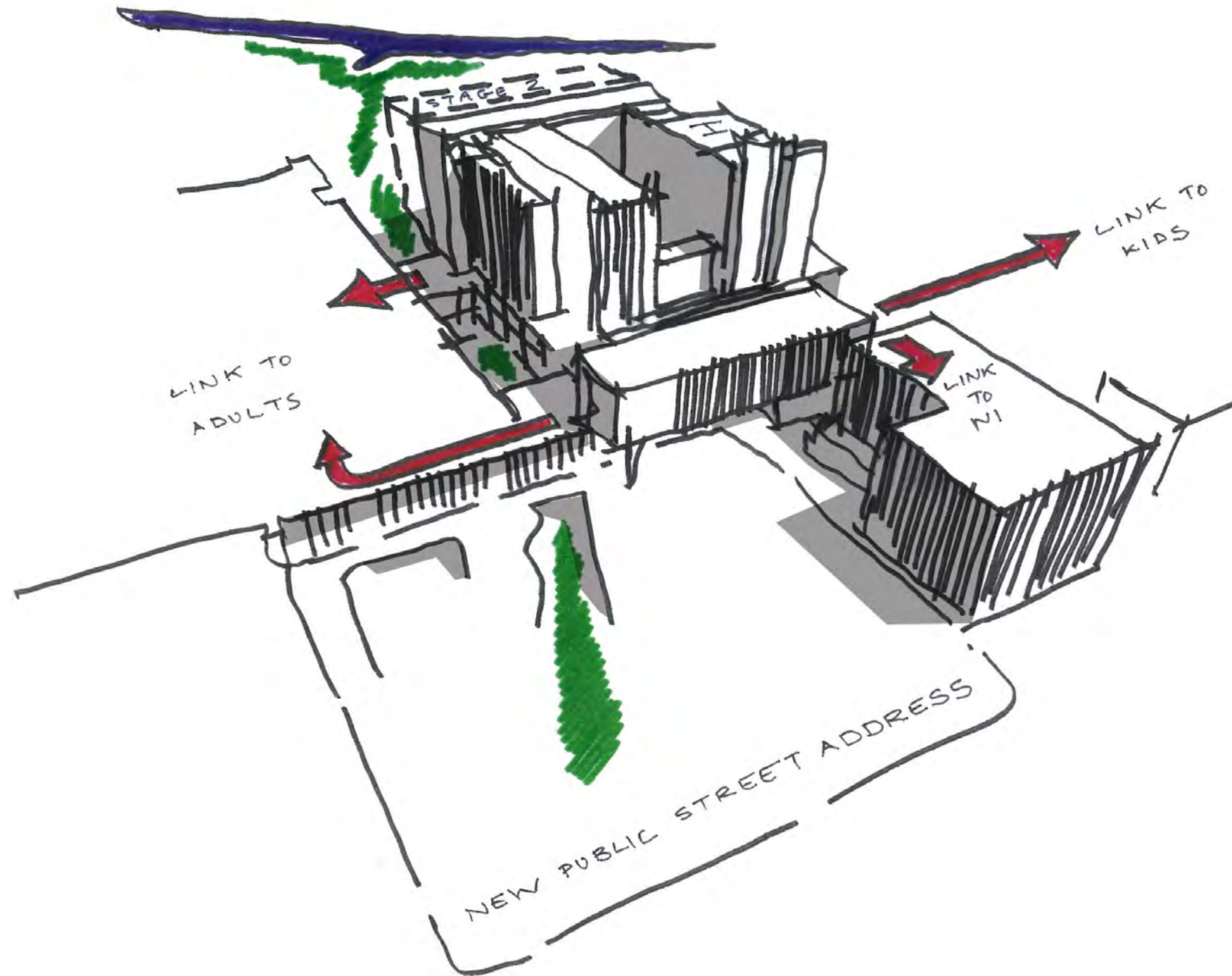
05 Architectural Intent

Key Design Principles

In response to SEAR's issues 3 and 4 the key design principles for the new CASB include the following:

- Planning for the development of the CASB in two stages to support future expansion of capacity for key services, and proposing an architectural form that is flexible and supports future growth including that associated with greater implementation of the Comprehensive Care Centre model.
- Supporting greater integration of the Westmead Adults' and Children's Hospitals on the precinct.
- consideration of local context through height, bulk scale and setback.
- Using the new forecourt to create a greater civic presence and to enhance way-finding to the Emergency Departments (adults and children), and the new Main Entry to the hospital.
- Providing equitable access to the precinct for all by ensuring that the planning for future site utilisation supports the addition of significant numbers of parking spaces – new and temporary where required.
- Clarifying the links between public transport drop off zones (including integration with the potential light rail alignment), car parking opportunities, and the main entry points to the facility for the public and for staff.

Using the structural chassis and building circulation to respond to and enhance the existing public and clinical separation principles on the site.



Key Principles Diagram

05 Architectural Intent

1. MULTI DECK CAR PARKING

2. NEW EMERGENCY ENTRY

3. EXISTING EDUCATION PRECINCT

4. DEVELOPMENT ZONE - POTENTIAL MEDICAL SUITES

5. EXISTING RESEARCH

6. SOUTH ENTRY

7. DEVELOPMENT ZONE

8. DEVELOPMENT ZONE

9. AMBULATORY CARE

10. DAY PROCEDURES ENTRY

11. PUBLIC CONCOURSE EAST/WEST

12. NORTH SOUTH HOSPITAL STREET

13. NORTH ENTRY ACUTE

14. NEW SUPER ACUTE BUILDING

15. EXISTING ICPMR BLOCK FUTURE DEVELOPMENT ZONE

16. EXISTING LOGISTICS ZONE

17. NEW EAST WEST AXIS

18. EXISTING LINK TO CHILDRENS HOSPITAL

19. NEW STAFF CAR PARK MULTI DECK

20. EXISTING RESEARCH PRECINCT

21. PRIVATE HOSPITAL DEVELOPMENT ZONE

22. BERNIE AMOS OVAL

23. FUTURE SUPPORT EXPANSION

24. EXISTING WESTMEAD CHILDRENS HOSPITAL

25. UWS DEVELOPMENT SITE
- FUTURE DEVELOPMENT ZONE 7

AMBULATORY

COMMERCIAL + PARKING

UNIVERSITY / COMMERCIAL

- WESTMEAD HOSPITAL ZONE

CHILDREN'S HOSPITAL ZONE

MENTAL HEALTH ZONE

PRIVATE HOSPITAL

SUPPORT ZONE

INTEGRATED SERVICES ZONE

CAR PARKING

FUTURE DEVELOPMENT OPPORTUNITIES



Masterplan Principles

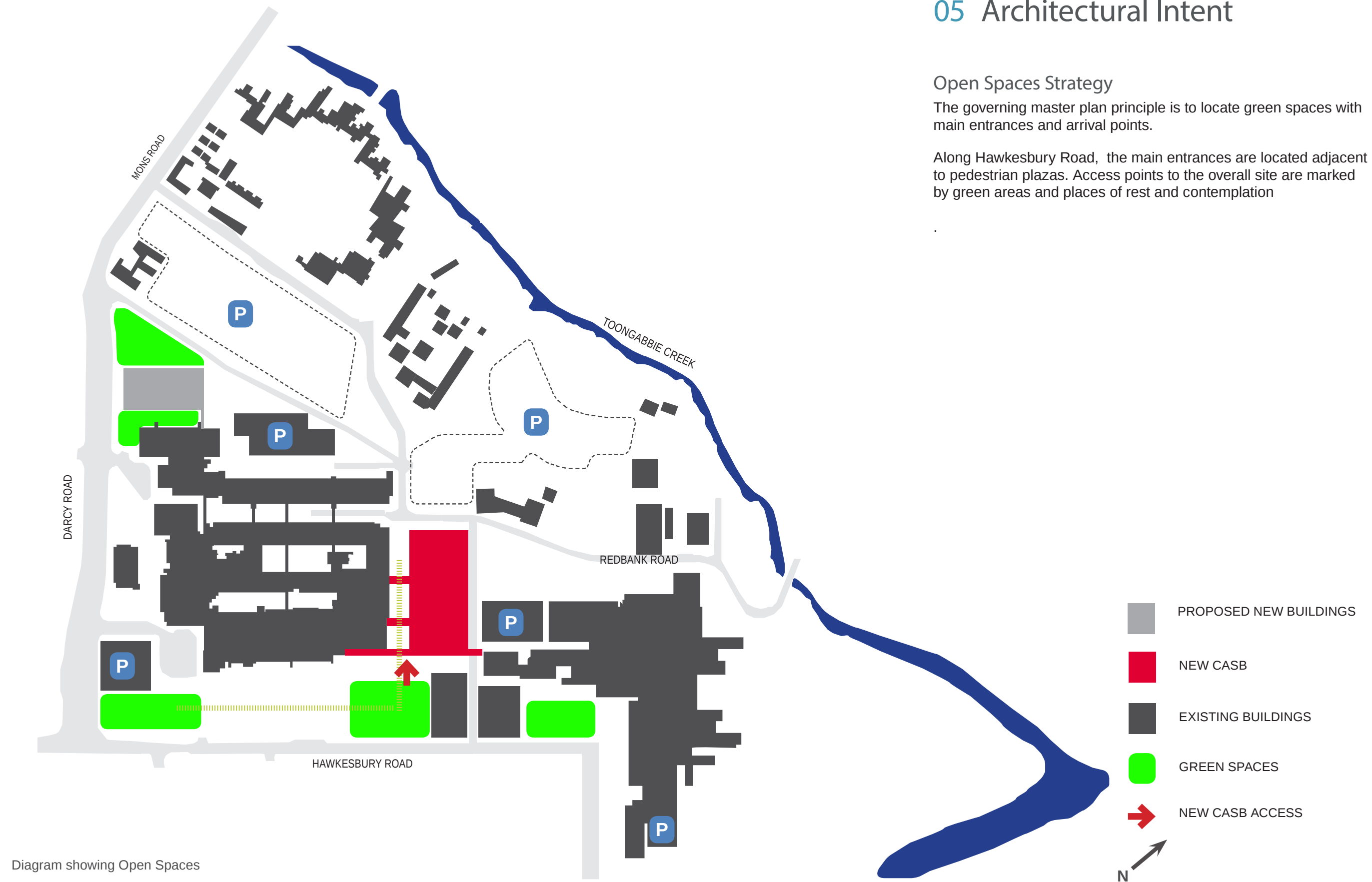
The precinct planning addresses the future accommodation needs of the precinct stakeholders and builds on the strategies proposed in the Strategic Master Plan. The optimised master plan maximises use of the site and elevates the identity of the Westmead Health Precinct as a premier health and medical research precinct. The optimised master plan identifies opportunities and strategies for both core health and associated developments such as education, medical suites and additional research zones.

05 Architectural Intent

Open Spaces Strategy

The governing master plan principle is to locate green spaces with main entrances and arrival points.

Along Hawkesbury Road, the main entrances are located adjacent to pedestrian plazas. Access points to the overall site are marked by green areas and places of rest and contemplation

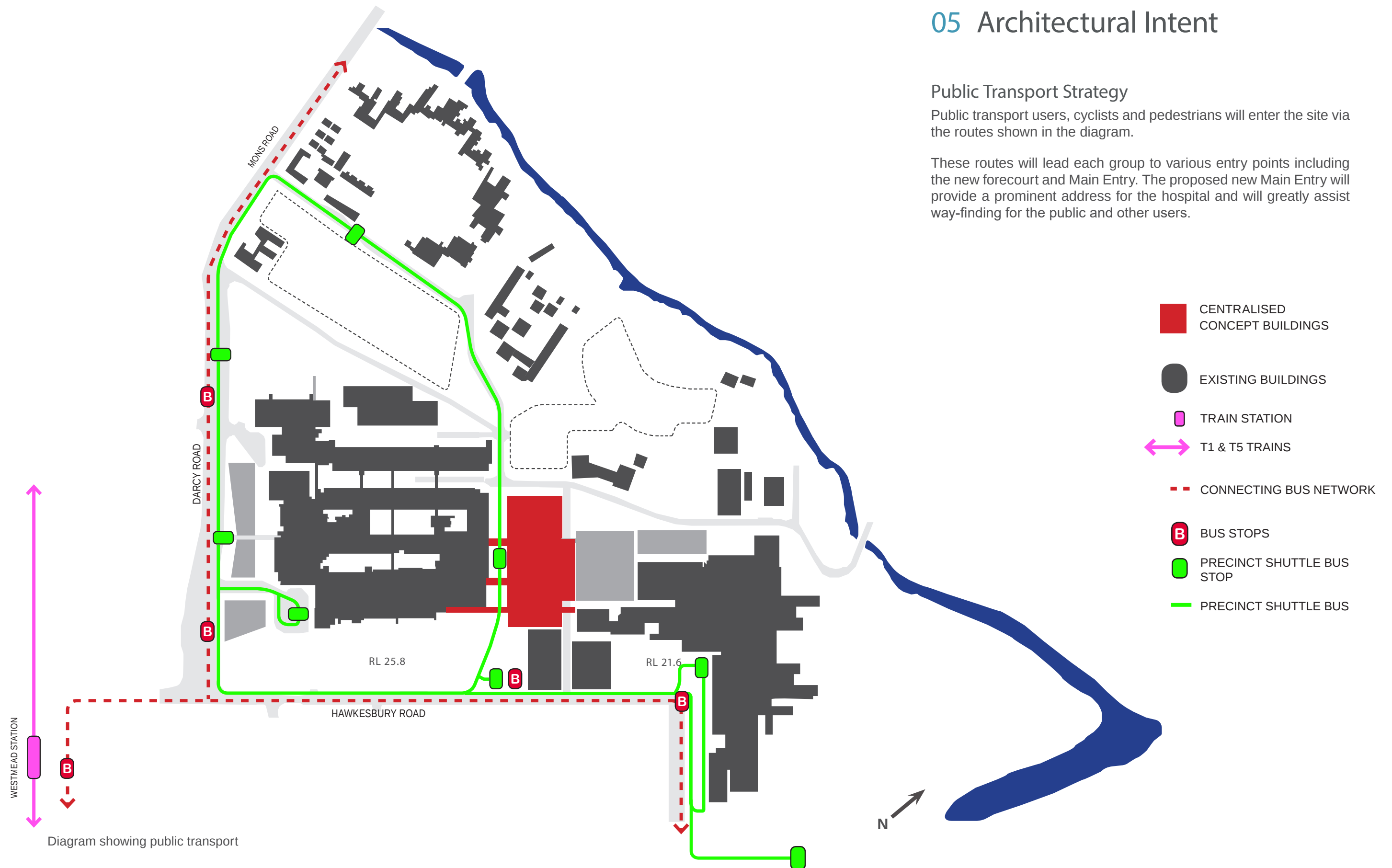


05 Architectural Intent

Public Transport Strategy

Public transport users, cyclists and pedestrians will enter the site via the routes shown in the diagram.

These routes will lead each group to various entry points including the new forecourt and Main Entry. The proposed new Main Entry will provide a prominent address for the hospital and will greatly assist way-finding for the public and other users.



05 Architectural Intent

Parking Strategy

Existing and new car parks will be designated for use by:

- Public – patients and visitors
- Staff Only
- Mixed Use by public and staff

Public use car parks are located near and accessed from Hawkesbury and Darcy Roads i.e. at the front of the hospital.

Staff and mixed use car parks are located on the north side of the hospital i.e. at the rear and accessed from Mons Road via the New Access Road.

After hours staff parking areas are also designated and will be provided near building entry points.



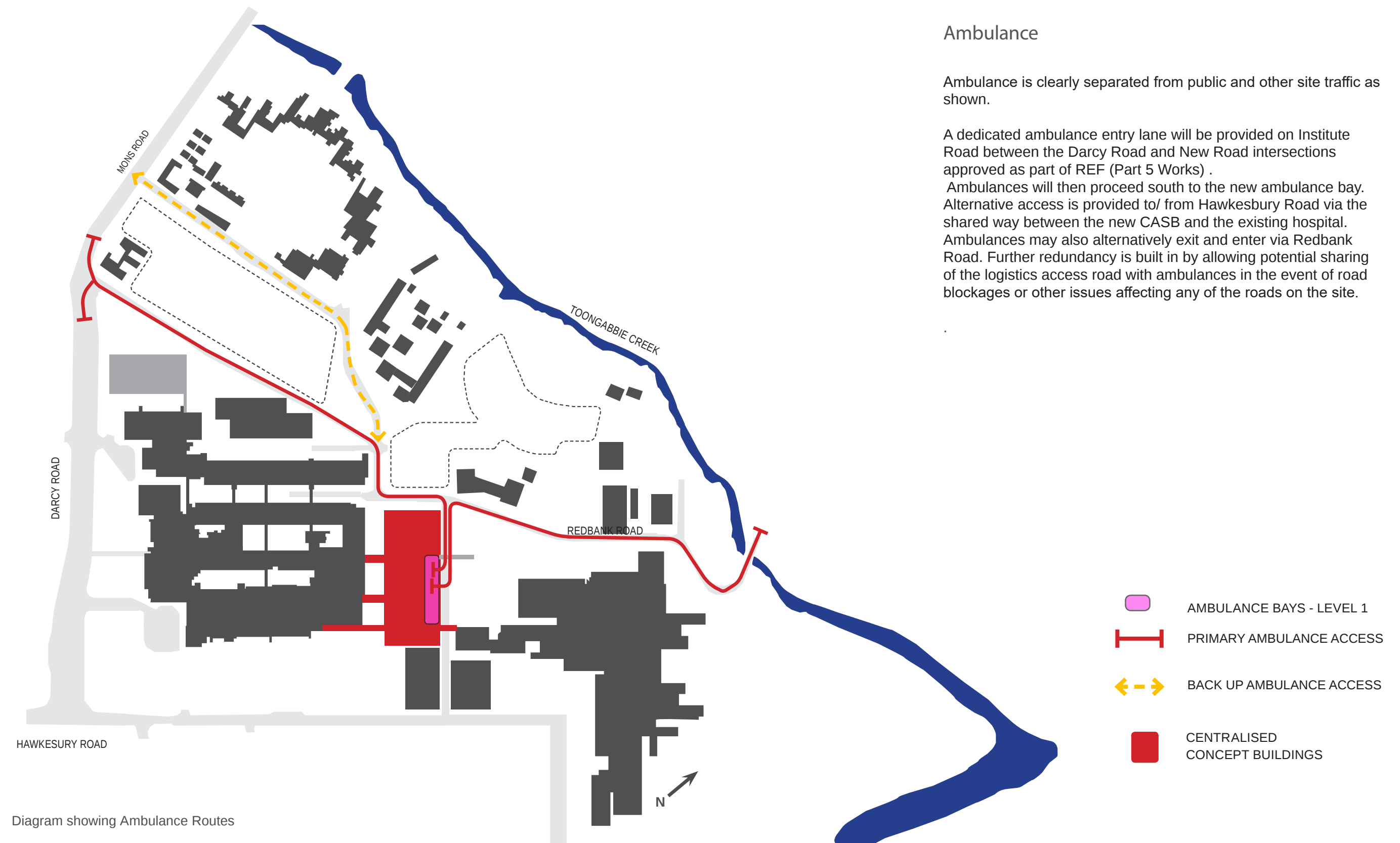
05 Architectural Intent

Ambulance

Ambulance is clearly separated from public and other site traffic as shown.

A dedicated ambulance entry lane will be provided on Institute Road between the Darcy Road and New Road intersections approved as part of REF (Part 5 Works) .

Ambulances will then proceed south to the new ambulance bay. Alternative access is provided to/ from Hawkesbury Road via the shared way between the new CASB and the existing hospital. Ambulances may also alternatively exit and enter via Redbank Road. Further redundancy is built in by allowing potential sharing of the logistics access road with ambulances in the event of road blockages or other issues affecting any of the roads on the site.

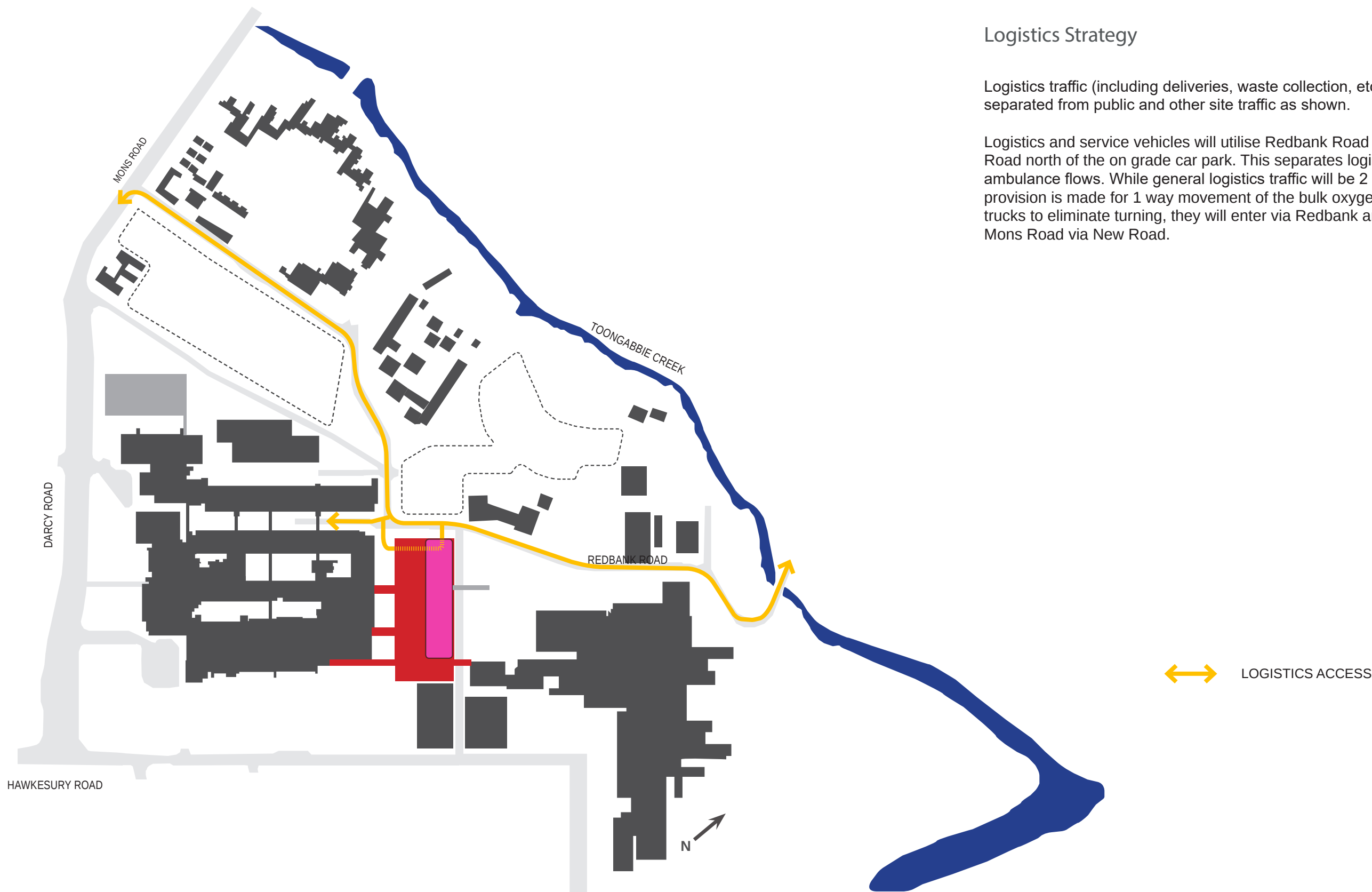


05 Architectural Intent

Logistics Strategy

Logistics traffic (including deliveries, waste collection, etc) is clearly separated from public and other site traffic as shown.

Logistics and service vehicles will utilise Redbank Road and New Road north of the on grade car park. This separates logistics from ambulance flows. While general logistics traffic will be 2 way, provision is made for 1 way movement of the bulk oxygen delivery trucks to eliminate turning, they will enter via Redbank and exit to Mons Road via New Road.



05 Architectural Intent

- 1 AREA 1
- 2 AREA 2
- 3 AREA 3
- 4 AREA 4
- 5 AREA 5
- ENTRY PLAZAS



Entry Zones

The main public face and new street address will be located from Hawkesbury Road. In order to facilitate way finding entry points have been combined with open spaces.

During the first stage of master plan implementation **Area 1** will remain as the main entry access point to Ambulatory Care services, **Area 4** will remain as the access point to The Children's Hospital At Westmead and **Area 5** will remain as the Dental Entry .

On completion of the CASB the new forecourt **Area 3** will provide drop off areas to the existing Day surgery, the new CASB, Adults ED, Children's ED, and the Innovation Centre.

Future stages will see the Main Entrance to Westmead hospital move to **Area 2** where it will be potentially integrated into the wider Light rail transport strategy for Westmead.

Indicative Massing showing Hospital campus
Entry Zones

05 Architectural Intent

Hospital Chassis

The chassis is the fundamental organising principal of the building and provides corridors for horizontal circulation and lifts and stairs for vertical circulation.

The chassis provides a framework for,

- Separation of flows to support patient dignity and improved clinical flows
- Intuitive way-finding
- Logical and consistent location of amenities and support spaces
- Efficient reticulation of major services

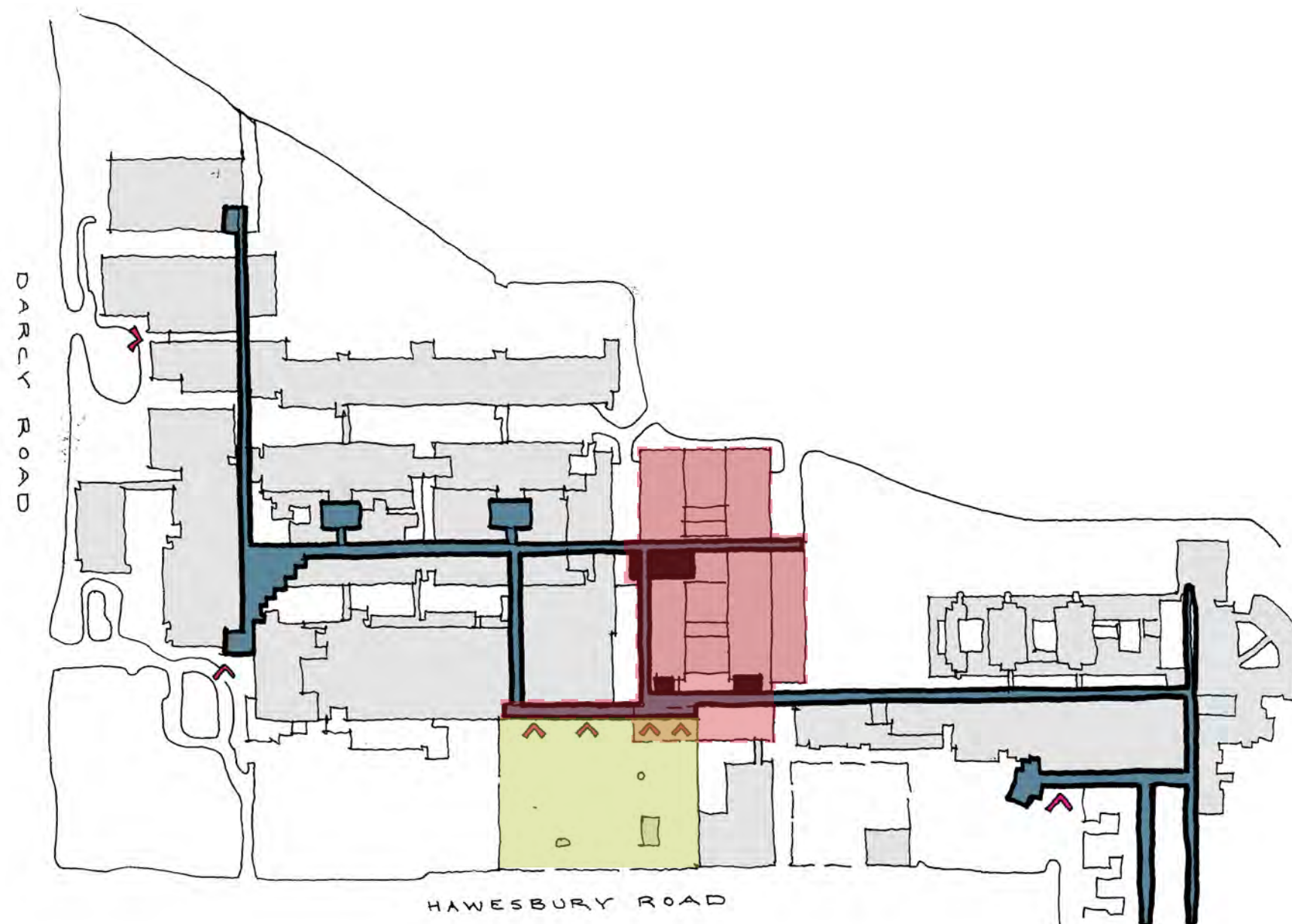
The current level 2 public circulation corridors will be extended to link the new CASB to the existing hospital. The central hospital street will be extended east to link into the new CASB chassis at the central lift core. A major upgrade and reconfiguration of the public circulation at the exiting outpatient entry will provide a new main entry for the hospital with seating and waiting areas extending east to the southwest lift core of the new CASB.

A generous public concourse will run north south along the western face of the CASB at level 2, linking the 2 east west spines and continuing north to a public outdoor/ café area with views looking north towards Toongabbie Creek. A future bridge link will run north from this space to link the CASB to future development zones as identified in the master plan.

A secondary branch of the hospital street runs north through the dental building and connects to the new Multi Storey Car Park via an enclosed pedestrian bridge.

The public circulation on level 2 will provide identifiable horizontal pathways which support intuitive way finding and link together the various lift cores isolating the majority of cross platform public circulation to level 2, supporting a separation of public, staff/ patient and logistic flows.

This corridor system is supported by ambulatory functions on level 2 of the existing hospital, defines the permeable public realm for the existing and future developments on the precinct.



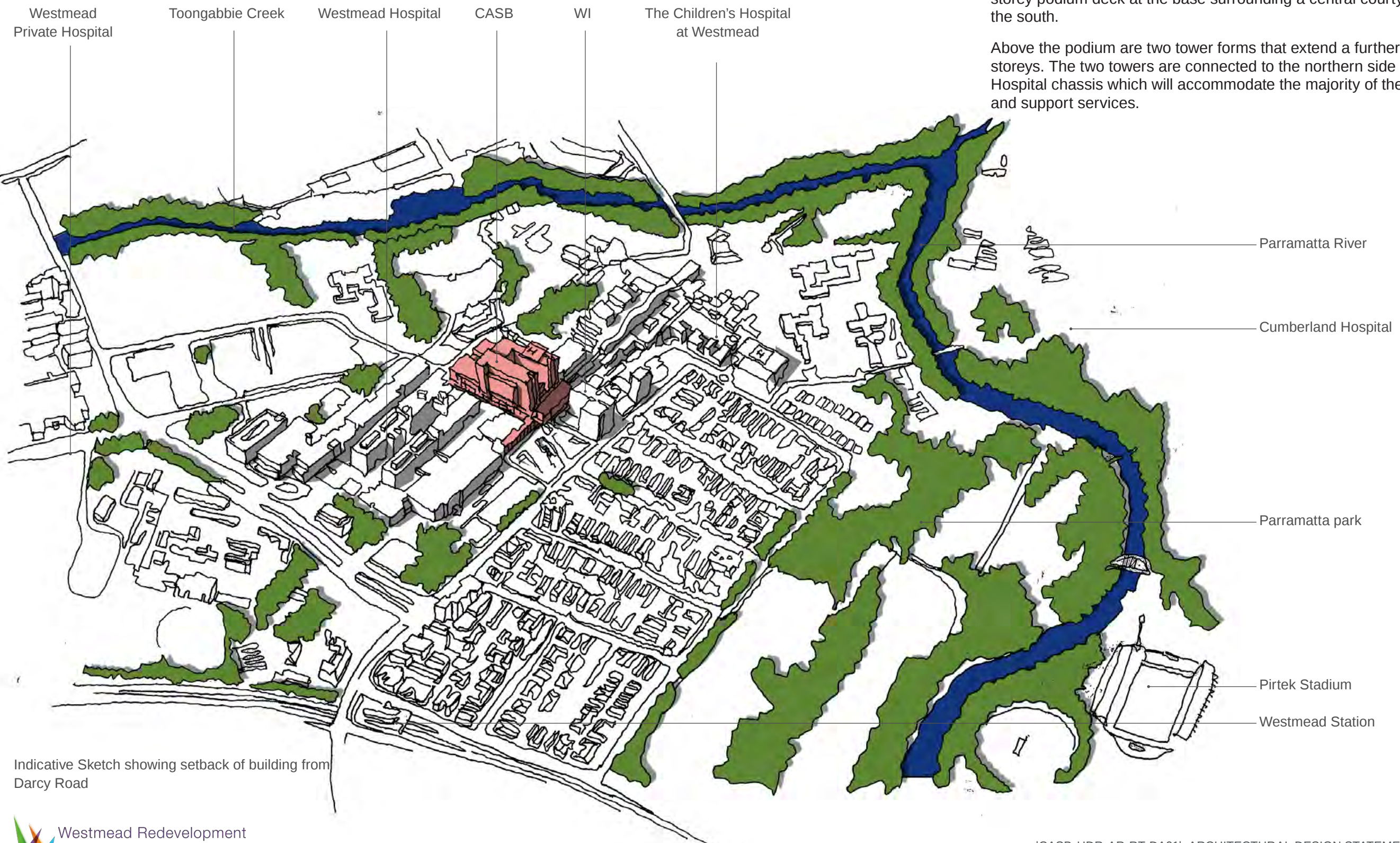
Indicative Sketch showing Public circulation at Level 2

06 Building in Context

Building Envelope

The proposed CASB is located over 13 storeys, one of which is below the Hawkesbury Road road level. The built form includes a 5 storey podium deck at the base surrounding a central courtyard to the south.

Above the podium are two tower forms that extend a further 8 storeys. The two towers are connected to the northern side by the Hospital chassis which will accommodate the majority of the lifts and support services.



06 Building in Context

Views and Vistas

Views from the main hospital building will allow far reaching views of Sydney CBD to the South East and the Blue Mountains to the West. Local views of Parramatta Park and Toongabbie Creek will aid visual amenity from the new CASB.



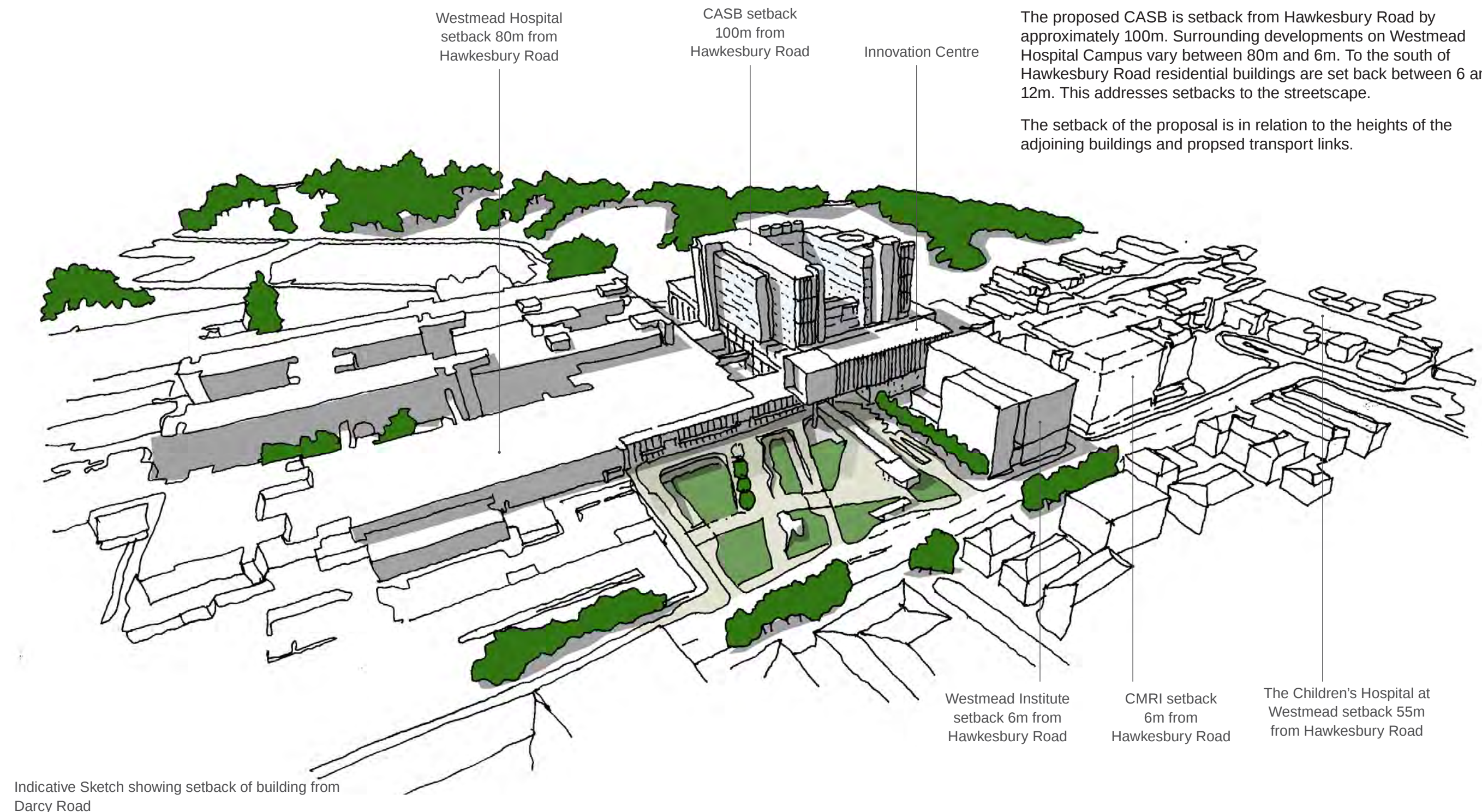
Diagram showing Views and Vista of local surroundings

06 Building in Context

Building Setbacks in relation to surrounding development

The proposed CASB is setback from Hawkesbury Road by approximately 100m. Surrounding developments on Westmead Hospital Campus vary between 80m and 6m. To the south of Hawkesbury Road residential buildings are set back between 6 and 12m. This addresses setbacks to the streetscape.

The setback of the proposal is in relation to the heights of the adjoining buildings and proposed transport links.



06 Building in Context

Open Spaces

The existing Westmead Hospital buildings have no civic presence or address on Hawkesbury Road due to their set back and the various car park structures, untidy vehicle entries, drop offs and patchy landscaping all forming a visual barrier between the building and Hawkesbury Road.

Improving street presence and address is a key project aspiration, one which will provide Westmead with an identity which reflects its flagship status.

The forecourt will include voids which will allow landscaping, light and natural ventilation to level 1 below. If technically possible, the level 2 forecourt will be constructed as an extension of the existing level 2 vehicle drop-off bridge which connects the existing outpatient entry to Hawkesbury Road. (Refer to Section 06 - Entry Plaza Overview) Construction will be sequenced as to not impede vehicular access to the cancer centre for any extended period.



Diagram showing Green Space Linkages across Surrounding area

06 Building in Context

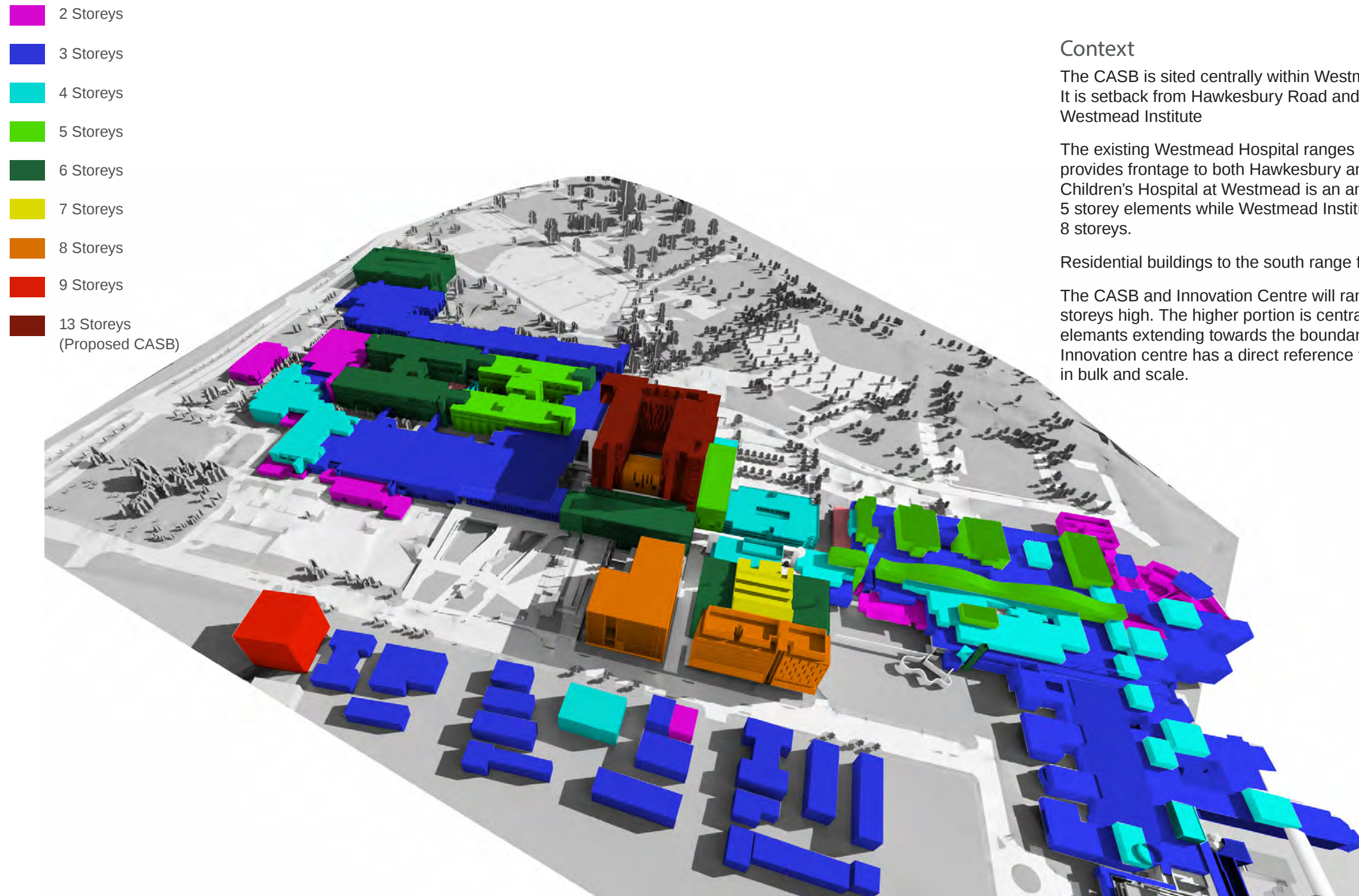
Context

The CASB is sited centrally within Westmead Hospital Campus. It is setback from Hawkesbury Road and is to the rear of Westmead Institute

The existing Westmead Hospital ranges from 3 -6 storeys and provides frontage to both Hawkesbury and Darcy Road. The Children's Hospital at Westmead is an amalgamation of 2,3,4 and 5 storey elements while Westmead Institute and CRMI extend to 8 storeys.

Residential buildings to the south range from 3-9 storeys in height.

The CASB and Innovation Centre will range between 4 and 13 storeys high. The higher portion is centrally located with lower elements extending towards the boundary site. In particular the Innovation centre has a direct reference to the Westmead Institute in bulk and scale.



Context massing of site