

APPENDIX 4

URBAN DESIGN ANALYSIS



MASTER PLAN UPDATE REPORT WESTMEAD CAMPUS REDEVELOPMENT

DECEMBER 2011

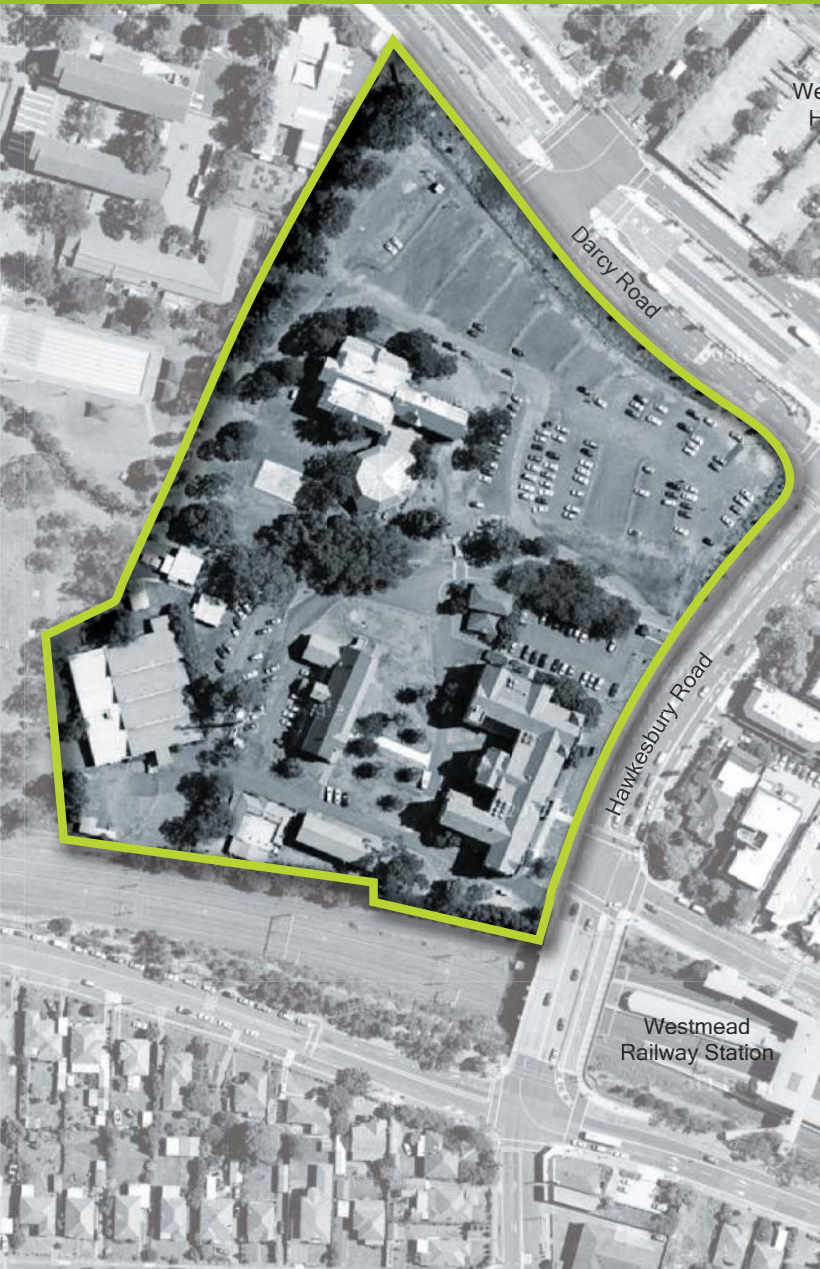
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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Arup Pty Ltd ABN 18 000 966 165

CONTENTS



1.0 INTRODUCTION

- 1.1 Project Background
- 1.2 Purpose
- 1.3 Master Plan Update Approach
- 1.4 Transit-oriented Developments

2.0 CONTEXT ANALYSIS

- 2.1 Regional Context
- 2.2 Local Context
- 2.3 Strategic Planning Context
- 2.4 Previous Scheme

3.0 SITE ANALYSIS

- 3.1 Urban Design Analysis Summary
- 3.2 Existing Land Ownership
- 3.3 Existing Access and Movement
- 3.4 Existing Building Heights
- 3.5 Existing Land Use
- 3.6 Topography and Landmarks
- 3.7 Opportunities and Constraints

4.0 DESIGN PRINCIPLES

- 4.1 Access and Movement
- 4.2 Land Use and Built Form
- 4.3 Public Domain
- 4.4 Interim Options

5.0 INDICATIVE LAYOUT

- 5.1 Illustrative Plan
- 5.2 Interface Relationship
- 5.3 Indicative Character

6.0 PRELIMINARY CONTROLS

- 6.1 Maximum Building Height
- 6.2 Maximum Floor Space Ratio
- 6.3 Land Zoning
- 6.4 Draft Building Controls
- 6.5 Built Form Modulation

Westmead UWS Campus is a strategically significant site, given its location adjacent to a number of public transport options and the Westmead Hospital as well as being in close proximity to Parramatta CBD.

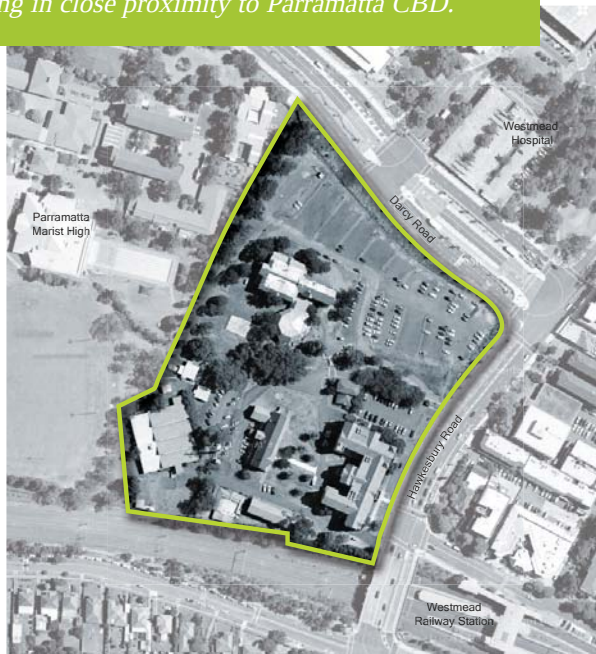


Figure 1. Aerial of the Westmead Campus study site

1.1 PROJECT BACKGROUND

Arup has been engaged by the University of Western Sydney to undertake a review and update of the master plan for their campus at Westmead.

A master plan was developed for this site by BVN for Lend Lease Developments and submitted in February 2008 to the Department of Planning for preliminary assessment as a Concept Plan under Part 3A of the Environmental and Planning Assessment Act 1979.

The site was declared a potential State Significant Site, but with recent changes in legislation, this status has changed. The University has therefore decided to pursue rezoning of the land via a Planning Proposal with Parramatta City Council under the provisions of the draft Parramatta LEP 2010.

1.2 PURPOSE

The purpose of this Master Plan Update is to consolidate and update the work that was previously done in view of:

- changes to the property market,
- changes to the proposed approvals process,
- changes in applicable legislation.

The work of this Master Plan Update will contribute to the Planning Proposal that will be undertaken to achieve a rezoning of the site. Material from this Master Plan Review may also be extracted to contribute to a DCP for the site and potentially a Stage 1 DA.



Figure 2. Local landmark: former St. Vincent Dormitory/School Block

1.3 MASTER PLAN UPDATE APPROACH

The Master Plan Update is based on a review of the site's planning context. A review on previous studies is contained within a separate document, critiquing the previous Master Plan as well as strategic planning work undertaken for the precinct over the past 10 or so years.

Parallel to this review, Arup undertook an independent site analysis to identify the key features of the site and its context and to analyse the key opportunities and constraints that would inform the Master Plan Update.

A series of schematic options were developed to inform key elements of the Planning Proposal that was lodged for the site in October 2011. Based on fundamental urban design principles, a preferred option was identified in December 2011.

1.4 TRANSIT-ORIENTED DEVELOPMENTS

Transit-Oriented Development (TOD) focuses investment and urban growth on public transport infrastructure, intensifying and diversifying activity around it to create mixed-use clusters that bring together multiple activities and services, local employment and diverse housing options.

TODs have the benefit of curbing urban sprawl by encouraging urban consolidation and renewal. It provides a means to preserve natural resources, address global climate change, support the local economy and services, and improve the quality of urban life. This results in a healthier lifestyle, better transportation choice and the creation of urbane and vibrant urban places where the focus is on people rather than cars.

The design of TODs focuses on the quality of the public realm. Intensification and diversification of uses around transport infrastructure means that greater effort needs to be applied to anticipate and mitigate potential land use conflicts during the design stages.

The provision of high quality public domain with a local resident and working population in turn results in activated places that are used at all times of the day, increasing the safety and personal security of people using public transport infrastructure – a frequent challenge in the design of transport stations and interchanges.



Figure 4. Stratford City urban regeneration, a transit-oriented development encouraging urban consolidation and renewal.

Successful TOD design creates vibrant and diverse urban places that encourage and enable residents and workers to drive less and use walking, cycling and mass transit. Global trends of urbanisation, mobility and impermanence require societies to constantly reassess and reinvent settlement patterns to create environments where complex and changing urban communities can flourish.

It is imperative to shift the focus of urban consolidation and renewal from visionary words to actual practice – from making policy to creating actual places. TODs provide the next level of sophistication and intelligence in meeting contemporary challenges and making responsive urban habitats.

Higher density living and working around transport infrastructure requires a high quality public domain to provide places for people to meet, relax and play.



Figure 3. TODs promote a healthier lifestyle, offer transportation choice and create vibrant urban places where the focus is on people.

The UWS Westmead site is a strategically significant site, given its location adjacent to a number of public transport options, the Westmead Precinct and world class medical facilities. It is in close proximity to Parramatta CBD and contains relatively few constraints.

The redevelopment of the UWS Westmead Campus therefore represents an excellent opportunity to create a leading practice transit oriented development.



CONTEXT ANALYSIS

2.0



2.1 REGIONAL CONTEXT

The NSW Government's Metropolitan Strategy classifies Westmead with its three major hospitals as a "Specialised Centre". The Westmead precinct is well connected to transport infrastructure, being located in proximity to the Great Western Highway and the M4 Motorway which link Sydney's CBD with the Blue Mountains.

The North West T-Way bus route from Parramatta to Rouse Hill extends past the study site from Westmead Station along Hawkesbury and Darcy Roads, and the Westmead Railway Station is serviced by the Western and Cumberland rail lines.

2.2 LOCAL CONTEXT

The primary feature of the Westmead Precinct is the Health and Medical Research Centre which comprises three major public hospitals (Westmead Hospital, The Children's Hospital at Westmead and Cumberland Hospital), a private hospital and other medical facilities and support services.

The hospitals are associated with extensive research, medical education and administrative facilities. The Westmead Campus is the largest health services centre in the southern hemisphere.

The UWS Westmead site is a 4 hectare site located within the Westmead Precinct and contains a number of existing buildings, some of which have heritage significance.

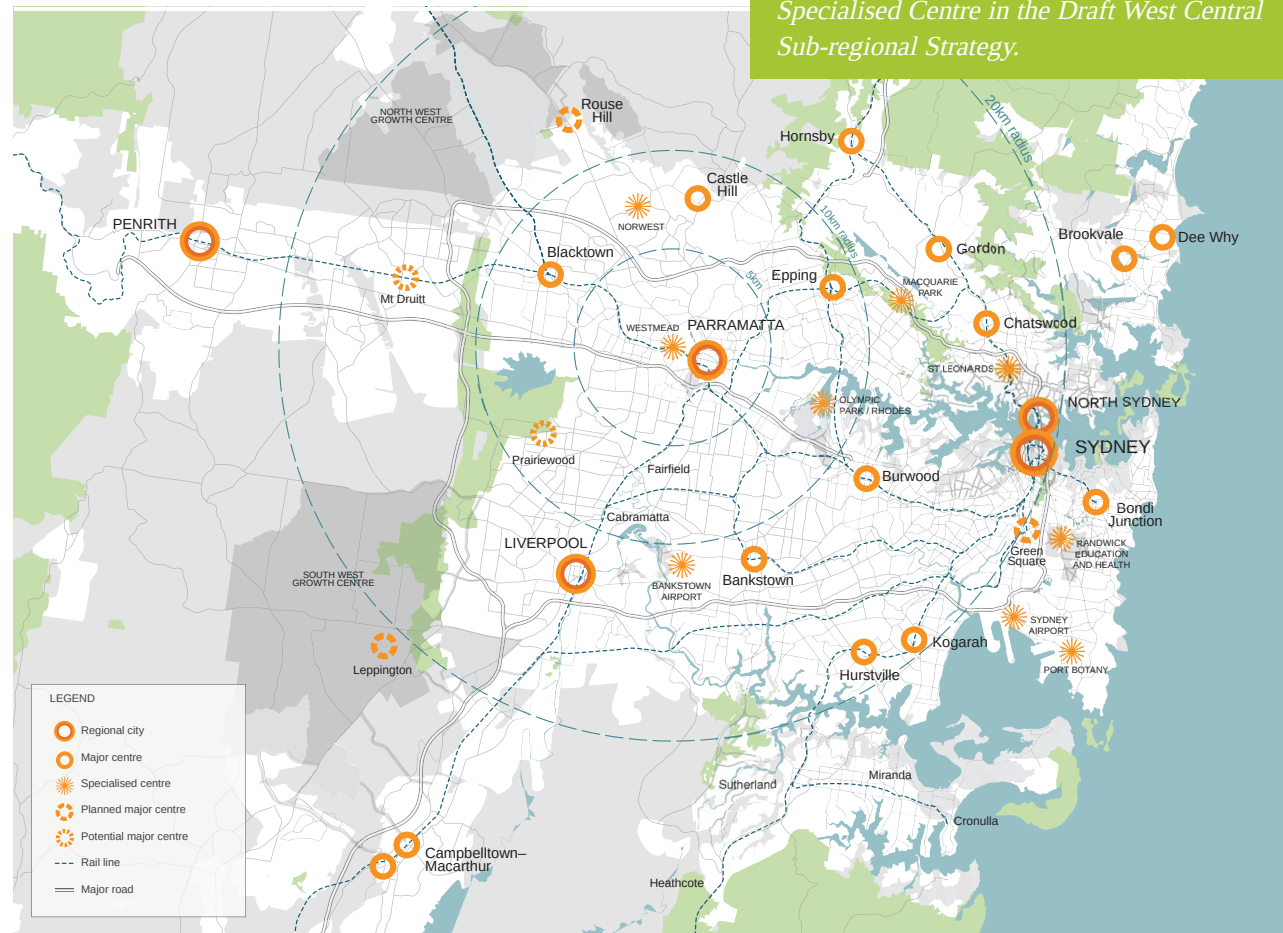


Figure 5. Metropolitan context diagram

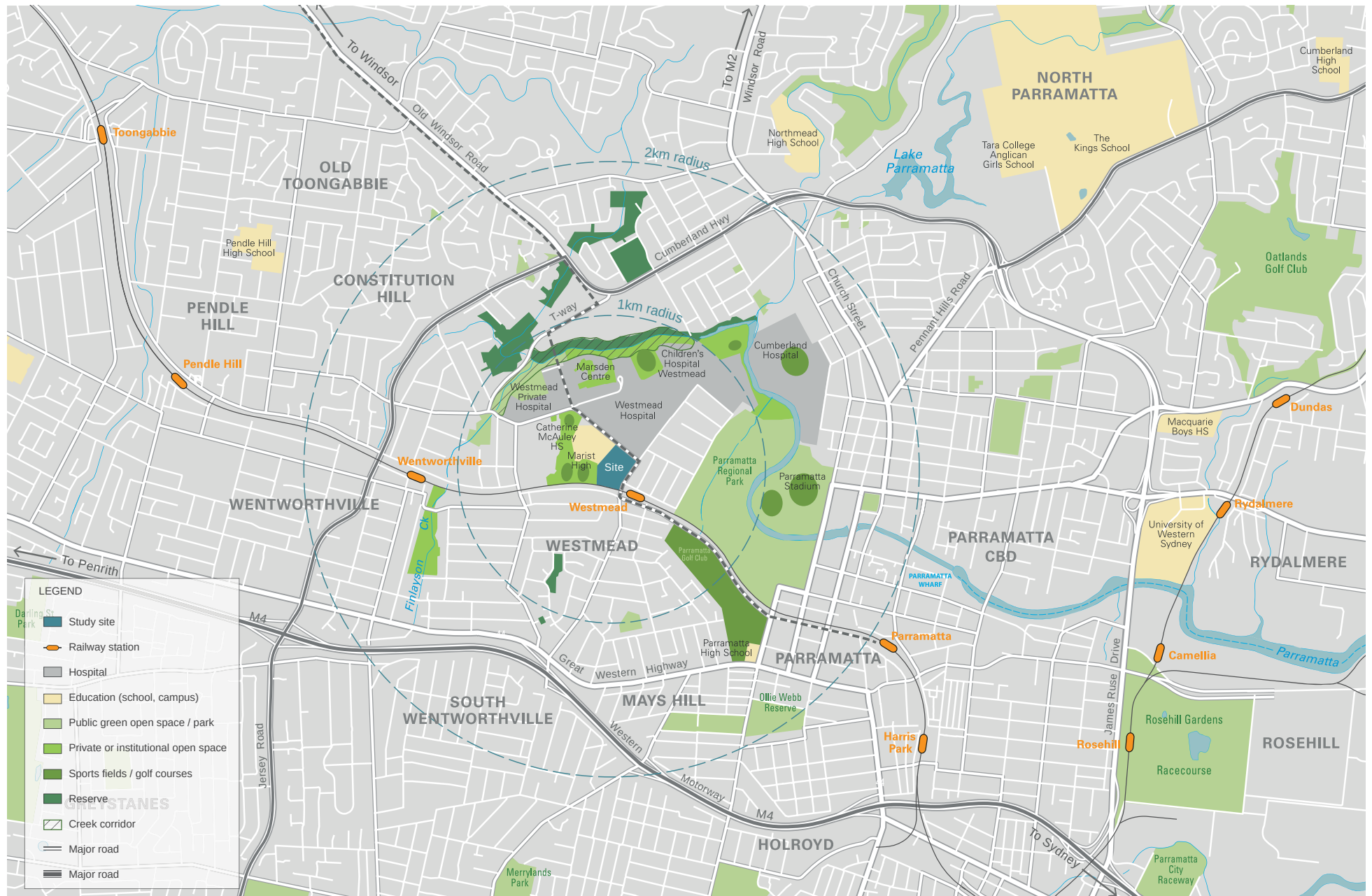


Figure 6. Local context diagram

The UWS Westmead site is a four-hectare site located to the immediate north west of Westmead Railway Station and within the Westmead Precinct, two kilometres west of the Parramatta CBD.



Figure 7. Site context diagram

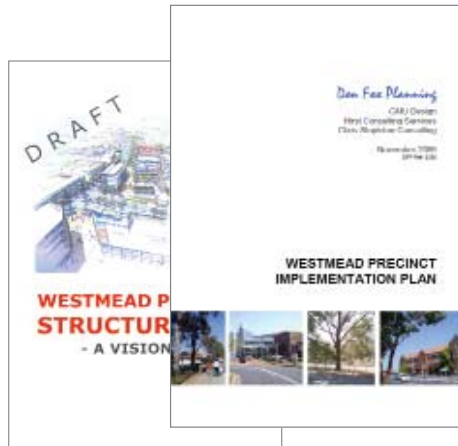


Figure 9. Cover pages of the Precinct Structure Plan (2004) and the Precinct Implementation Plan (2006)

2.3 STRATEGIC PLANNING CONTEXT

Draft Westmead Precinct Structure Plan (2004)
prepared by the NSW Government Architect's Office

The Draft Westmead Precinct Structure Plan (DWPSP) identifies the UWS Campus site as a candidate for mixed use development with intensified land use within walking distance of the railway station, providing a range of complementary uses in the context of high quality public domain.

The DWPSP represents the shared vision of the Westmead Precinct Structure Plan Committee members which are Parramatta City Council, Landcom, Western Sydney Area Health Service, University of Western Sydney and DPNR (now Department of Planning and Infrastructure). The key objectives of the strategy are:

- Provision for growth of health service and medical research.
- Consolidation of the precincts educational role.
- Increased employment opportunities.
- Improvement to pedestrian and vehicle circulation through the precinct and to adjoining areas.
- Identification of opportunities for creating a world class mixed use centre.
- Creation of a common vision for Westmead as part of the future growth of the city of Parramatta.

The document further outlines a number of key principles, such as creating a vibrant precinct and improving permeability and connections, which have been incorporated into this Master Plan Update.

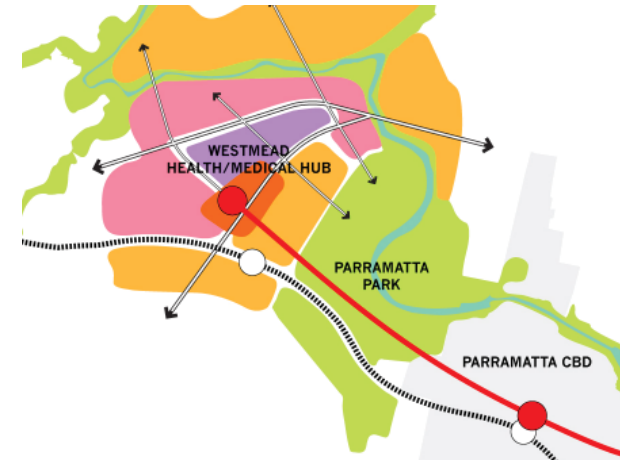


Figure 8. Extract of the draft Westmead Precinct Structure Plan prepared by the NSW Government Architect's Office

Westmead Precinct Implementation Plan (2006)

This study prepared by Don Fox Planning was commissioned by the NSW Department of Planning to prepare a comprehensive implementation plan to direct and facilitate development in Westmead Precinct over the next 25 years. Objectives were to:

- specify a distribution of land uses,
- stipulate development controls,
- incorporate a Transport Management and Access Plan (TMAP),
- provide a basis for specifying and prioritising proposed works and facilities; and
- identify a funding framework for the provision of proposed works and facilities tied to key stages of development.

2.4 PREVIOUS SCHEME

The BVN Master Plan proposed a mix of uses with a total GFA of 121,000sqm and an FSR of 3:1.

The land use mix included 34,000sqm of commercial and retail space located on the two street frontages, including a supermarket and specialist retail shops, a medical centre and consulting rooms.

Some 70,000sqm of residential development in the western half of the site incorporated private apartments, dedicated key worker housing for the health and education sector and aged care units.

It was proposed to adaptively reuse the former St Vincent's former Dormitory/School Block for a 150 room hotel. Other uses included a 90 place child care centre, a town square and parking for 1,600 to 2,200 cars.

Vehicular access to the site was proposed via an existing signalised intersection on Darcy Road, a new connection adjacent to the Marist boundary and a third connection to Hawkesbury Road adjacent to St Vincent's.

Building heights ranged from 3 to 5 storeys on the Hawkesbury Road frontage up to 16 storeys at the south western corner of the site adjacent to the rail corridor.



Figure 10. Location Plan - Previous Master Plan April 2008 (BVN)



Figure 11. Previous Master Plan - Concept - February 2008 (BVN)



Figure 12. Ground Floor Plan RL 35.00 - April 2008 (BVN)



Figure 13. Ground Floor Plan RL 40.00 - April 2008 (BVN)

2.4 PREVIOUS SCHEME

Commentary

The following commentary combines critique of the BVN Master Plan by Arup urban designers as well as comments from Parramatta Council.

These comments along with independence site analysis and investigation of the planning context were used in the establishment of design principles for the Master Plan Update.

Land uses

Generally speaking the proposed land use mix is appropriate for the site. The location of each land use with commercial and retail on the street frontages and residential in the least accessible corner is an appropriate response to the constrained nature of access to the site.

Streetscapes

The BVN Master Plan does not offer optimal streetscapes. There is a lack of attention to the scale of open space and the relationship of built form to the footpath and street. The relationship between different stratum and street levels has been resolved in a way that will result in substandard pedestrian amenity on the footpath.

Detailed comments include:

1. The building on the corner of Darcy and Hawkesbury Roads does not satisfactorily address the corner. It is not known what uses are proposed for the level below RL35, but a driveway crossover suggests there is a car park entry at the lower level and presumably car parking. If this is the case, the master plan will result in insufficient surveillance of the T-Way. It is also questionable whether a vehicular entry is appropriate that close to an intersection. This building does not satisfactorily address the Hawkesbury Road frontage and needs to extend closer to the former St Vincent's Dormitory/School Block to define the street and better contain the open space.
2. The supermarket is a very large floor plate and might be better located buried within the site so that its bulky form does not dominate the north western sector of the site. More active uses should also be located along this frontage to increase the vibrancy, safety and security of Darcy Road and the T-Way.

Built form

There needs to be a tighter relationship between built form and open space. Built form needs to better define open space and the street corridors, especially at Hawkesbury Road. A closer relationship between St Vincent's and a new block edge development extending down to the corner is an opportunity to create a dialogue between existing and new development that reveals and interprets the development of the site over time. A more defined built edge on the UWS side of Hawkesbury Road will contain the street and create a better urban outcome in terms of a town centre/main street for Westmead.

The level change across the site from the highest point at St Vincent's to street level at Darcy Road could be better managed with built form. The slope of the site also presents an opportunity to bury building bulk, ensuring the visual impact of loading and service areas, big box retail, and car parking is minimised.

Attention also needs to be paid to orientation of built form to ensure that open space or development behind is not overshadowed. The relationship of height on site to the surrounding context is also not explicit from the information provided and needs to be better explained in the Master Plan Update.

2.4 PREVIOUS SCHEME

Site access

The provision of three driveway crossovers along the Hawkesbury Road frontage is neither practical nor safe for pedestrians. These should be rationalised.

The provision of two site entries from the Darcy Road frontage is also not practical, safe for pedestrians, nor an efficient use of land. The large signalised intersection into the hospital would be better used as the major site entry to the UWS site as the controlled nature of the intersection will better manage large vehicle movements and potential vehicle/pedestrian conflicts.

An underpass to Westmead Station is provided on the south east corner of the site. The configuration of linkages from surface to the underpass needs to address issues of safety and equity of access in the Master Plan Update. Care needs to be taken especially with the relationship of the underpass access and former St Vincent's Dormitory/School Block.

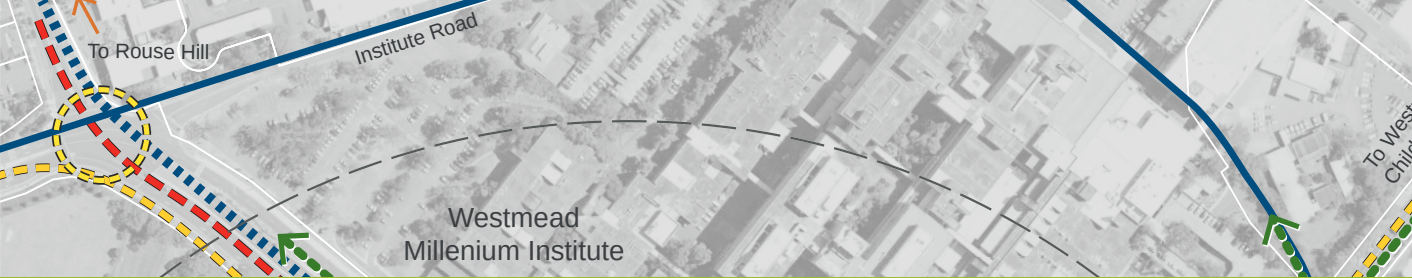
The Master Plan also provides a pedestrian overpass across Darcy Road and the T-Way which lands on Department of Health land as part of a new development on their site. The Master plan Update should be designed to be flexible so that it works with or without the overpass. Investigation should also be given to relocating the overpass landing to existing open space on the Department of Health site so that it is not dependent on the timeframe surrounding development by an adjoining land owner.

Site circulation

There is a relatively large amount of road provided in the Master Plan considering the size of the site. The Master Plan Update will ideally rationalise this, providing a more efficient internal circulation network with clearly defined domains for vehicles and pedestrians.

Open space

Open space needs to be more structured and defined. There is an opportunity to use the character of open space across the site to relate better to the uses in buildings surrounding it and thereby assist in legibility across the site. The sequence of open space should also be directly related to pedestrian movement networks across the site to create better amenity and define pedestrian and cycle routes.



SITE ANALYSIS

3.0





Figure 14. Existing Access and Movement (extract)



Figure 15. Existing Building Heights (extract)

3.1 URBAN DESIGN ANALYSIS SUMMARY

Access

The site has constrained vehicular access with only two street frontages, one of which has a large level change and the other, that is also the route of the T-Way. These street frontages also experience fairly high traffic volumes which further constrain access.

Ease of access for pedestrians are also fairly constrained by the T-Way, hospital entry and high traffic volumes.

The site has a high degree of choice and proximity to public transport. The Master Plan Update will aim to optimise ease of access to public transport and reduce demand for access via private vehicle.

Safety, security and ownership issues need to be resolved. The site creates the opportunity to allow for pedestrian links or connectivity opportunities. Consideration of alternatives (e.g. second on-grade pedestrian crossing at Hawkesbury Road) needs to be given in case these issues cannot be resolved.

Site circulation

Site circulation is constrained due to the large cross fall combined with a fairly large level change to Darcy Road. Consideration is to be given to earthworks/building works that may help resolve the level changes.

Access to the rail corridor at the south west corner of the site needs to be maintained in the Master Plan Update.

Interface/links/connections

The interface with Marist College will need to address privacy and overlooking issues. The interface with the railway will need to address potential acoustic impacts. Configuration of potential links to Westmead Hospital should accommodate the present condition as well as consider long term plans for the corner site at Hawkesbury & Darcy Roads.

Heritage

The former St Vincent's Dormitory/School Block on the crest of the hill on the south east corner of the site is visually prominent and forms a terminating vista to Railway Parade. Remnant cultural landscapes at the rear of this building are also a prominent feature of the site. Redevelopment options will need to suggest appropriate adaptive reuses for this building and its associated landscape elements.

The location and size of Bayley's Cottage setback from the Hawkesbury Road frontage presents challenges to successful adaptive reuse and will need to be carefully considered in the Master Plan Update.

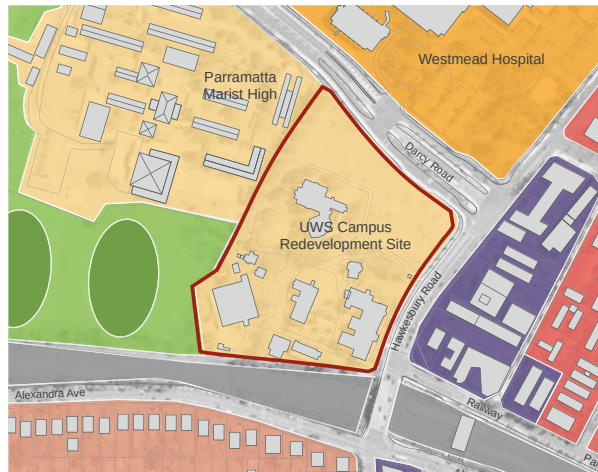


Figure 16. Existing Land Uses (extract)

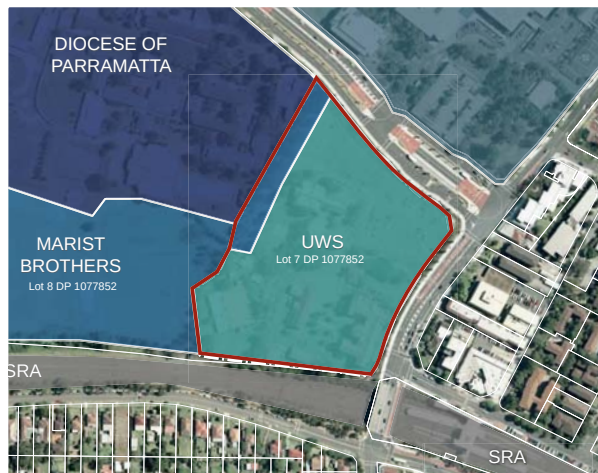


Figure 17. Existing Land Ownership (extract)

Land uses

Consideration will be given to a mix of land uses that will augment services provided by Westmead town centre and complement Westmead Hospital.

Viability of various land uses and mixes will be confirmed by the market analysis, but options could include retail; commercial such as medical support services, specialist rooms; medical education; serviced short stay accommodation targeted at family members of hospital patients, nurses/hospital staff accommodation, and hotel style accommodation.

The development will aim to provide a range of uses on the site to augment current offerings in Westmead town centre. These may include a wider range of retail offerings, community and/or civic space, open space, commercial space to suit a range of tenants.

Built form

Built form will be designed to address the interface with heritage elements and neighbours, as well as provide appropriate heights and setbacks to street frontages to improve the quality of the public realm in Westmead town centre.

Built form fronting Hawkesbury and Darcy Roads will locate active uses on the ground floor to increase the vibrancy of the town centre.

Long hours uses on street frontages will also be considered to increase surveillance of the public realm, particularly at night.

Height will be distributed across the site to take account of orientation, overshadowing, heritage interfaces and access to potential views/vistas to Parramatta Park to the east.

Transit oriented development

The highly strategic location of this site at Westmead Station and adjacent to the T-Way suits it to the creation of a transit oriented development which allows for greater intensity of uses to optimise the advantage of available transport infrastructure and augment the choice of services offered by Westmead town centre.

The proximity of Westmead Hospital further enhances the strategic nature of this site as a unique opportunity to tailor development to complement the Hospital, thereby fulfilling the objectives of the Metropolitan Plan which identifies Westmead as a specialised centre.

The fact that this site is in a single land ownership also enhances the opportunity to create a model transit oriented development.

3.2 EXISTING LAND OWNERSHIP



Figure 18. Existing Land Ownership

3.3 EXISTING ACCESS AND MOVEMENT

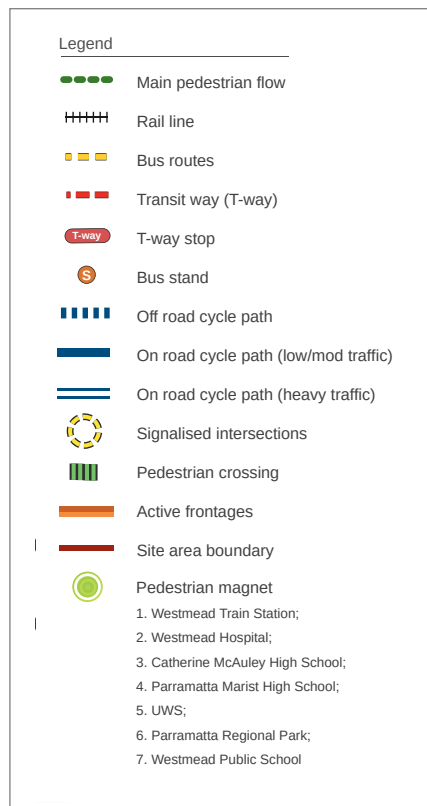


Figure 19. Existing Access and Movement

3.4 EXISTING BUILDING HEIGHTS



Figure 20. Existing Building Heights

3.5 EXISTING LAND USE



Figure 21. Existing Land Use

3.6 TOPOGRAPHY & LANDMARKS



Figure 22. Topography and Landmarks

3.7 OPPORTUNITIES AND CONSTRAINTS



Figure 23. The former St Vincent's Dormitory/School Block on the crest of the hill is visually prominent and forms a terminating vista to Railway Parade.



Figure 24. The location and size of Bayley's Cottage setback from the Hawkesbury Road frontage presents challenges to successful adaptive reuse

Access

The site has constrained vehicular access. There are only two street frontages, one of which has a large level change and the other, a short stretch that is also the route of the T-Way. These street frontages also experience fairly high traffic volumes which further constrain access.

Ease of access for pedestrians are also fairly constrained by the T-Way, hospital entry and traffic volumes.

The site has a high degree of choice and proximity to public transport. The Master Plan Update will aim to optimise ease of access to public transport and reduce demand for access via private vehicle.

Safety, security and ownership issues need to be resolved if a pedestrian underpass is to be retained in the Master Plan Update. Consideration of alternatives (e.g. second on-grade pedestrian crossing at Hawkesbury Road) needs to be given in case these issues cannot be resolved.

Site Circulation

Site circulation is constrained due to the large cross fall combined with a fairly large level change to Darcy Road. Consideration is to be given to earthworks/building works that may help resolve the level changes.

Access to the rail corridor at the south west corner of the site needs to be maintained in the Master Plan Update.

Interface / links and connections

The interface with Marist College will need to address privacy and overlooking issues.

The interface with the railway will need to address potential acoustic impacts.

Configuration of potential links to Westmead Hospital should accommodate the present condition as well as consider long term plans for the corner site at Hawkesbury & Darcy Roads.

Heritage

The former St Vincent's Dormitory/School Block on the crest of the hill on the south east corner of the site is visually prominent and forms a terminating vista to Railway Parade. Remnant cultural landscapes at the rear of this building are also a prominent feature of the site. Redevelopment options will need to suggest appropriate adaptive reuses for this building and its associated landscape elements.

The location and size of Bayley's Cottage setback from the Hawkesbury Road frontage presents challenges to successful adaptive reuse and will need to be carefully considered in the Master Plan Update.

3.7 OPPORTUNITIES AND CONSTRAINTS



Figure 25. The site has a high degree of choice and proximity to public transport such as the T-way bus service.

Land uses

Consideration will be given to a mix of land uses that will augment services provided by Westmead town centre and complement Westmead Hospital.

Viability of various land uses and mixes will be confirmed by the market analysis, but options will include retail; commercial such as medical support services, specialist rooms; medical education; serviced short stay accommodation targeted at family members of hospital patients, nurses/hospital staff accommodation, and hotel style accommodation.

The Master Plan Update will aim to provide a range of uses on the site to augment current offerings in Westmead town centre. These may include a wider range of retail offerings, community and/or civic space, open space, commercial space to suit a range of tenants.

Built Form

Built form will be designed to address the interface with heritage elements, as well as provide appropriate heights and setbacks to street frontages to improve the quality of the public realm in Westmead town centre.

Built form fronting Hawkesbury and Darcy Roads will locate active uses on the ground floor to increase the vibrancy of the town centre.

Long hours uses on street frontages will also be considered to increase surveillance of the public realm, particularly at night.

Height will be distributed across the site to take account of orientation, overshadowing, heritage interfaces and access to potential views/vistas to Parramatta Park to the east.

Transit Oriented Development

The highly strategic location of this site at Westmead Station and adjacent to the T-Way suits it to the creation of a transit oriented development which allows for greater intensity of uses to optimise the advantage of available transport infrastructure and augment the choice of services offered by Westmead town centre.

The proximity of Westmead Hospital further enhances the strategic nature of this site as a unique opportunity to tailor development to complement the Hospital, thereby fulfilling the objectives of the Metropolitan Plan which identifies Westmead as a specialised centre.

The fact that this site is in a single land ownership also enhances the opportunity to create a model transit oriented development.

IDENTIFIED CONSTRAINTS

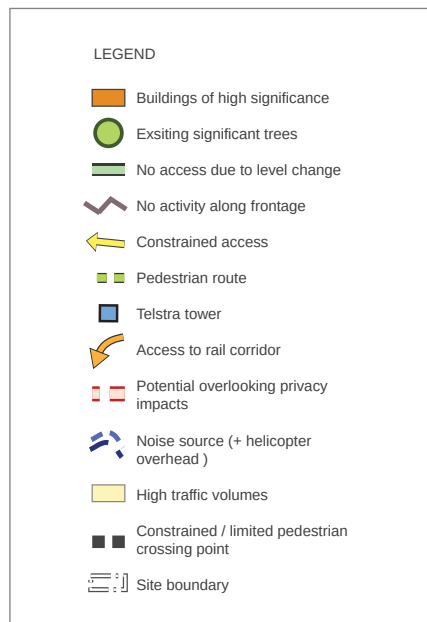


Figure 26. Identified Constraints

IDENTIFIED OPPORTUNITIES

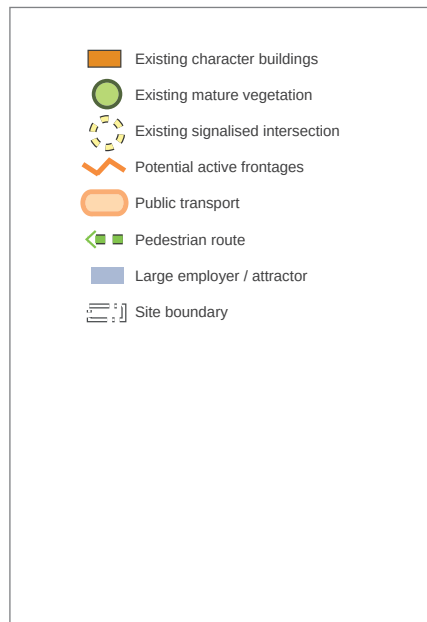
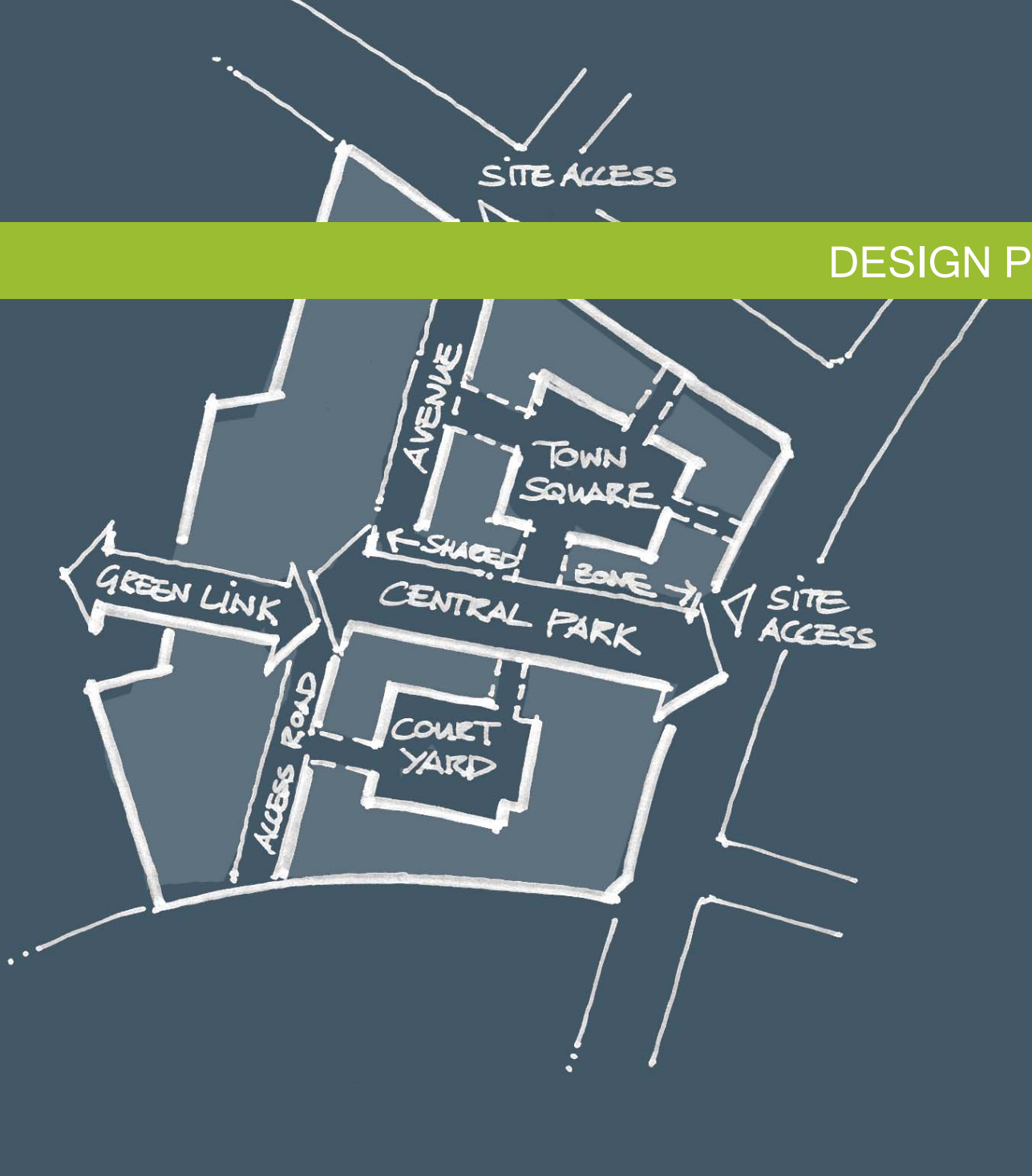


Figure 27. Identified Opportunities

DESIGN PRINCIPLES

4.0



4.1 ACCESS AND MOVEMENT

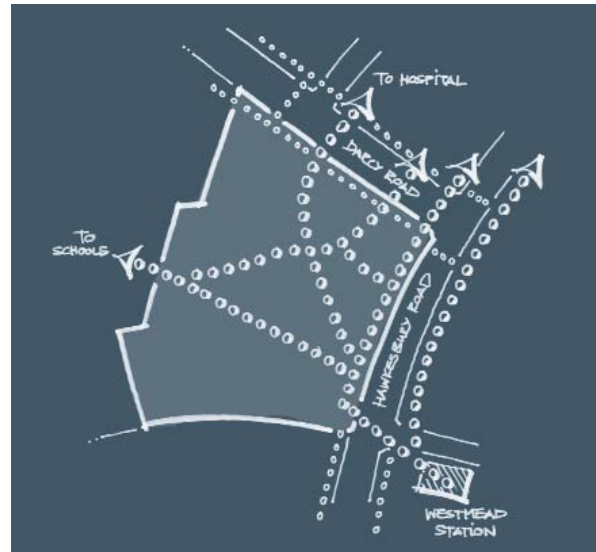


Figure 28. Incorporating pedestrian desire lines

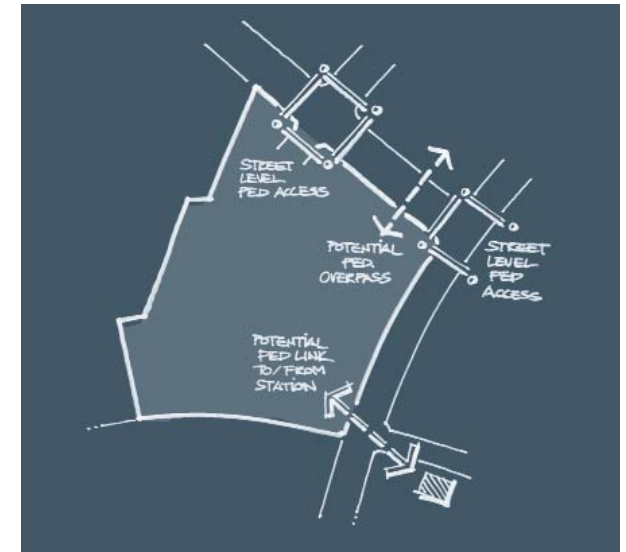


Figure 29. Convenient pedestrian access

Pedestrian Access and Movement

Improve precinct permeability by introducing through site links for vehicles, pedestrians and bicycles that will activate the internal parts of the site and connect the railway station to adjoining schools and hospitals.

Provide surface access for pedestrians to the site via signalised intersections across Darcy and Hawkesbury Roads as well as via an underpass from Westmead Station.

Consider an overpass over Darcy Road. Ensure that the layout works with or without the overpass.

Ensure that site access and internal circulation is designed in such a way as to mitigate potential conflicts between cars, bicycles and pedestrians. Utilise the principle that pedestrians have priority when evaluating conflict mitigation measures.

4.1 ACCESS AND MOVEMENT

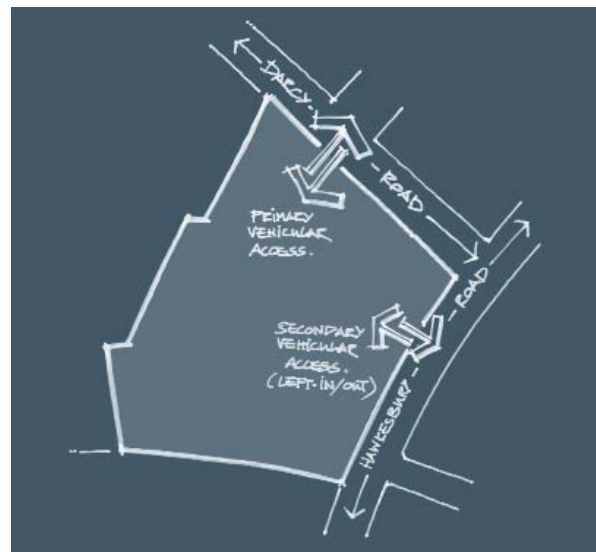


Figure 30. Utilising existing vehicular access points

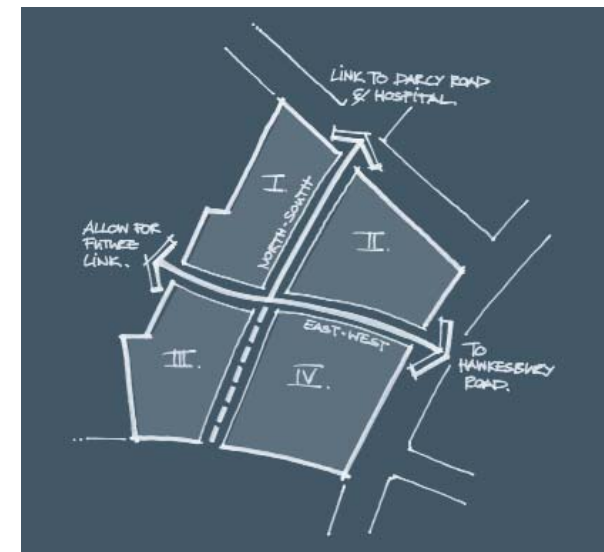


Figure 31. Efficient road network

Vehicular Access and Movement

Provide primary vehicular site access from Darcy Road with secondary access/egress onto Hawkesbury Road – potential left in left out only.

Ensure that site access and internal circulation is designed in such a way as to mitigate potential conflicts between cars, bicycles and pedestrians. Utilise the principle that pedestrians have priority when evaluating conflict mitigation measures.

Provide an efficient internal road network with public roads where ever possible.

Parking

Parking provision is to take into account the proximity of the site to a range of public transport options.

Innovative shared parking arrangements are to be investigated to make the most efficient use of available parking spaces and optimise the land/floor space take given over to car parking.

Investigate / consider on-site car share schemes and unbundling car parking from specific land uses.

4.2 LAND USE & BUILT FORM

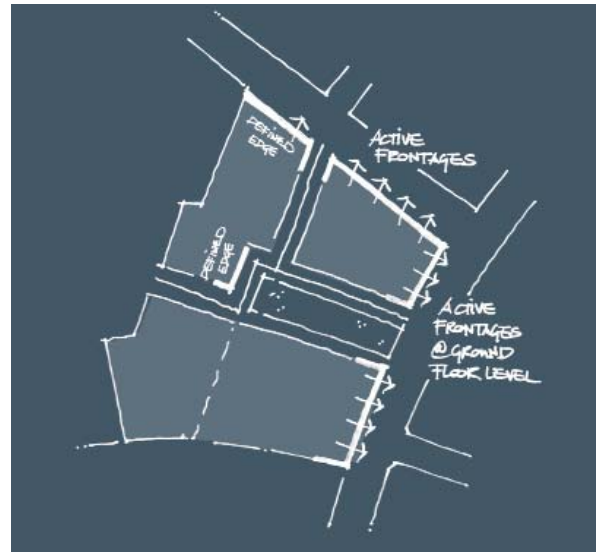


Figure 32. Defined edges and active ground level uses

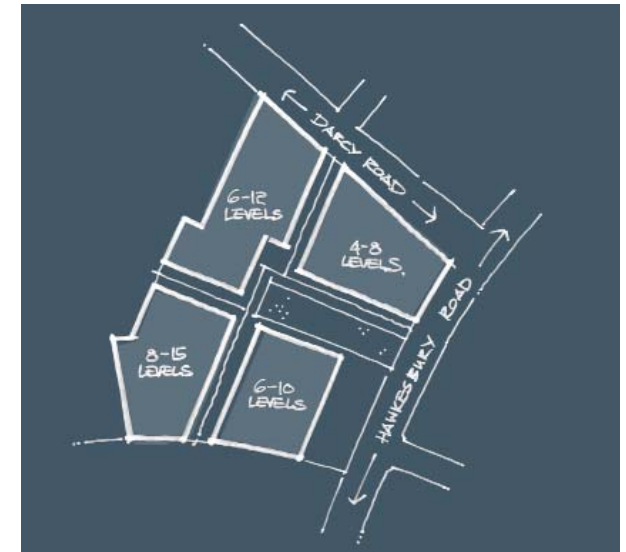


Figure 33. Indicative building heights

Built Form

Maximise activated frontages at ground level, especially along the footpaths of Hawkesbury and Darcy Roads for good passive surveillance of streets, public transport infrastructure and open space.

Utilise built form to define and contain the street corridors, street corners and open spaces on the site. Consider appropriate proportion (building heights) in particular towards Hawkesbury and Darcy Roads.

Carefully consider built form bulk & scale to minimise overshadowing of other buildings or public open space. Minimise impact of built form by locating high buildings towards the railway land (south-west of the site).

Utilise the slope across the site to bury potential bulky built form, thereby minimising its visual impact on streetscapes and surrounding public domain.

Provide a strong address to Hawkesbury Road and Westmead Station. Provide a continuous street edge and articulated facades.

4.2 LAND USE & BUILT FORM

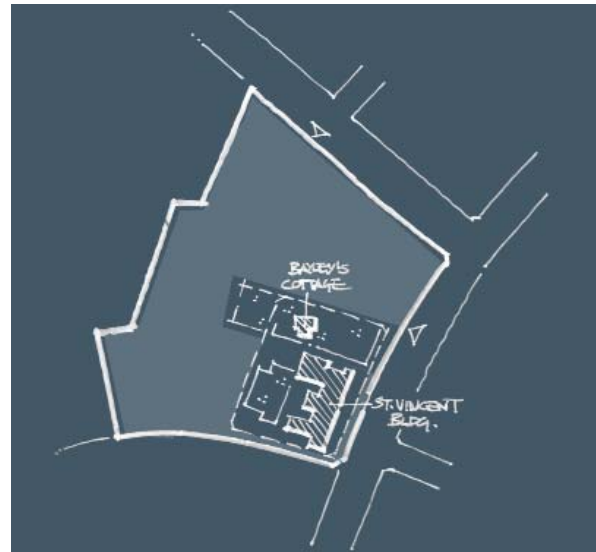


Figure 34. Retaining significant heritage



Figure 35. Potential land use distribution

Heritage

Retain former St Vincent's Dormitory/School Block and Bayley's Cottage. Adaptively reuse with a compatible future use that is compatible with both the building fabric and the surrounding land uses.

Ensure that the character of built form adjacent to heritage items does not mimic historic details but is contemporary in style and complementary to the historic buildings, such as transitions in scale and setback, alignments of parapets, ridgelines, eaves lines etc.

Land Use

Provide a mix of land uses that augment and complement the Precinct's role as a specialised centre focusing on world class medical, educational and research facilities.

Land use mix use should combine retail, commercial (including medical specialist and support services, illness foundations, medical professional associations etc), residential, short stay residential/hotel, open space and potential civic functions (e.g. branch library), community facilities such as child care and/or community centre.

4.3 PUBLIC DOMAIN

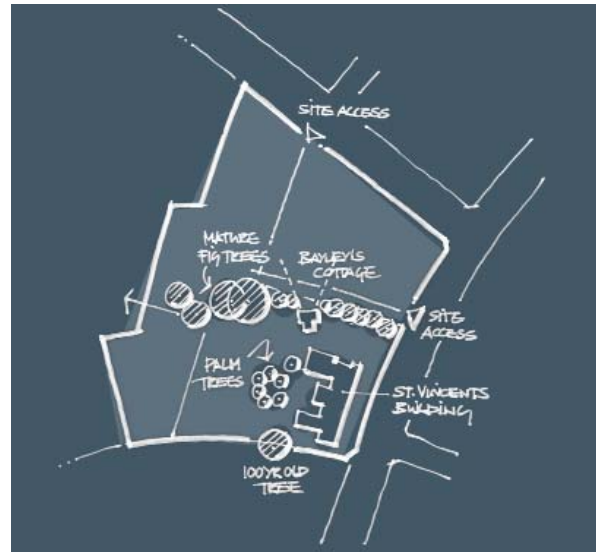


Figure 36. Important site features



Figure 37. Sequence of places

Public Domain

Retain and enhance important site features where possible, such as the remnant cultural landscape of palm trees to the rear of the former St Vincent's Dormitory/School Block, the mature fig trees and other significant trees including the mature tree on the south eastern corner of the site that is likely to be more than 100 years old.

Provide an open space network that facilitates pedestrian access/circulation and which creates a sequence of spaces across the site, assisting way-finding.

Orientate public domain so it provides good solar access and views and vistas to different parts of the site, both internally and externally.

4.4 INTERIM OPTIONS

Option 1: The initial option established the road and open space network for the site. It assumed that the Trades Building at the rear of the former St Vincent's Dormitory/School Block would be demolished. Approximately 91,500sqm of floor space was provided achieving an FSR of 2.27:1 with a maximum building height adjacent to the rail corridor of 15 storeys.

Option 2: similar to Option 1 but demonstrated that the basic structure plan could support the retention of the Trades Building, should that be required.

Option 3: this option increased the floor space on the site to just over 120,000sqm with an FSR of 3:1 which is consistent with the floor space provision of the Lend Lease Master Plan. This was a 25% increase on the floor space provided in Options 1 and 2 with a minor increase in height (up to 16 storeys) and some additional building footprints. It demonstrated that the proposed structure plan could support increases in floor space, without major redesign.

Option 4: was selected as the preferred interim option and assumes the potential for new development at the Trades Building site, ensuring that the former St Vincent's Dormitory/School Block and Bayley's Cottage are appropriately incorporated into the precinct regarding built form heights, proportion and scale.



Figure 38. Option 1 Concept Sketch



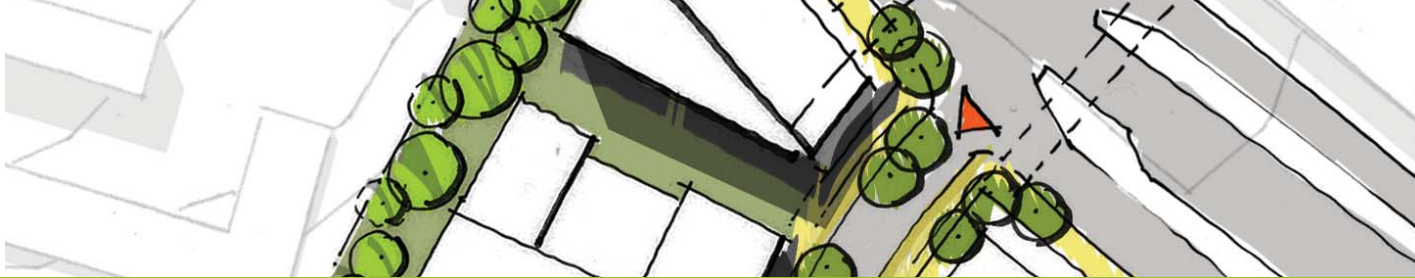
Figure 39. Option 2 Concept Sketch



Figure 40. Option 3 Concept Sketch



Figure 41. Option 4 Concept Sketch



INDICATIVE LAYOUT

5.0



5.1 INDICATIVE LAYOUT - ILLUSTRATIVE PLAN



5.2 INTERFACE RELATIONSHIP



Figure 44. Section Key

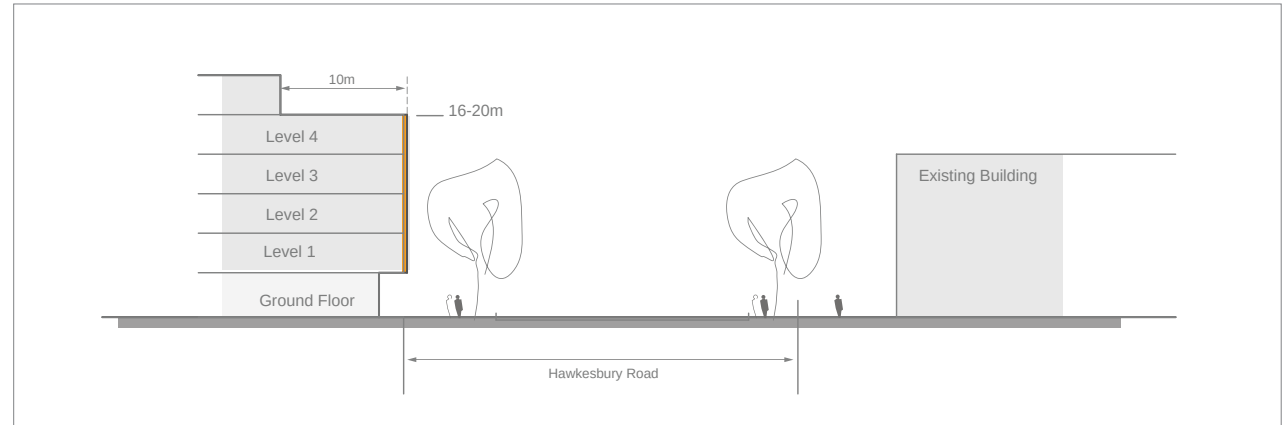


Figure 42. Indicative Street Section Hawkesbury Road



Figure 43. Indicative Street Section Darcy Road

5.2 INTERFACE RELATIONSHIP

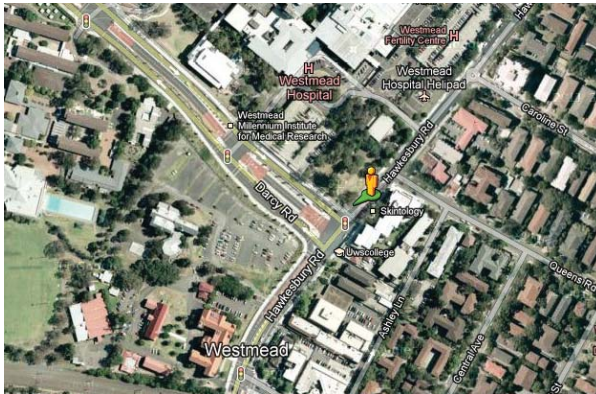


Figure 45. View along Hawkesbury Road - location plan



Figure 46. View showing indicative built form massing along Hawkesbury Road with lower buildings around the former St Vincent's Dormitory/School Block

5.3 INDICATIVE CHARACTER



Figure 47. Artist's impression showing generous central parklands, indicative new development and retained heritage buildings (former St Vincent's Dormitory/School Block and Bayley's Cottage).

6.0



6.1 MAXIMUM BUILDING HEIGHT

Maximum Building Height (m)

E	6
J1	9
J2	9.2
J3	9.5
K	10
L	11
M	12
N1	13
N2	14
O1	15
O2	16
P1	17
P2	18
Q	20
R	21
T1	25
T2	28
U1	31
U2	34
W	40
Y	52
	48
	Refer to table in CI 4.3(2A)



Figure 48. Maximum Building Height map

6.2 MAXIMUM FLOOR SPACE RATIO

Maximum Floor Space Ratio (n:1)

A	0.33
D	0.5
F	0.6
J	0.8
K	0.89
N	1.0
O	1.1
P	1.2
R	1.4
S1	1.5
S2	1.7
S3	1.75
T1	2.0
T2	2.1
V	3.0
W	3.5
X	4.0
AA	6.0



Figure 49. Maximum FSR map

6.3 LAND ZONING

Zone	
B1	Neighbourhood Centre
B2	Local Centre
B4	Mixed Use
B5	Business Development
B6	Enterprise Corridor
E2	Environmental Conservation
E3	Environmental Management
IN1	General Industrial
IN2	Light Industrial
IN3	Heavy Industrial
R1	General Residential
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
RE1	Public Recreation
RE2	Private Recreation
SP1	Special Activities
SP2	Infrastructure
W1	Natural Waterways
W2	Recreational Waterways



Figure 50. Land Zoning map

6.4 DRAFT BUILDING CONTROLS

- | | | | |
|---|---|----------|---|
|  | Building Zone | A | Max. Building Height: 28m
(4-8 Storeys) |
|  | Town Square | B | Max. Building Height: 31m
(6-10 Storeys) |
|  | Heritage Buildings to be retained | C | Max. Building Height: 48m
(8-15 Storeys) |
|  | Green Link | D | Max. Building Height: 40m
(6-12 Storeys) |
|  | Vehicular Site Access | | |
|  | Built to Line | | |
|  | Ground Floor Setback (2m) | | |
|  | Min. Building Setback to Boundary (3.5m) | | |
|  | Min. Building Setback to Road (3.5m) | | |
|  | Views to Heritage Buildings | | |
|  | Landscape Setting of Heritage Building | | |
|  | Entry Road (min. 20m road reserve) | | |
|  | Link Road (final road alignment to be determined) | | |
|  | Access Road (min 16m road reserve) | | |
|  | Entry Lane (min. 8m road reserve) | | |
|  | Potential Pedestrian Link | | |

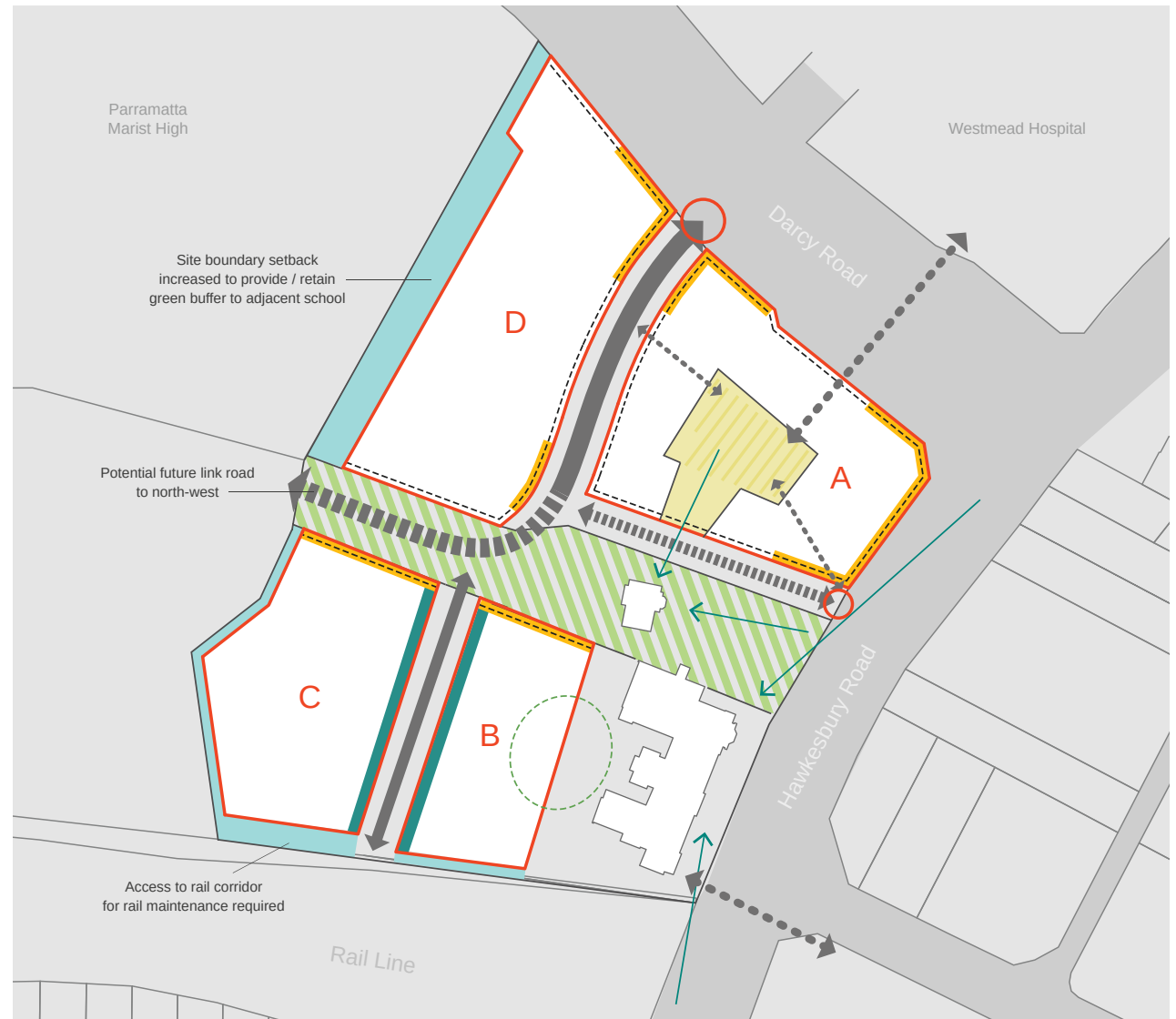


Figure 51. Draft Building Controls map

6.5 BUILT FORM MODULATION

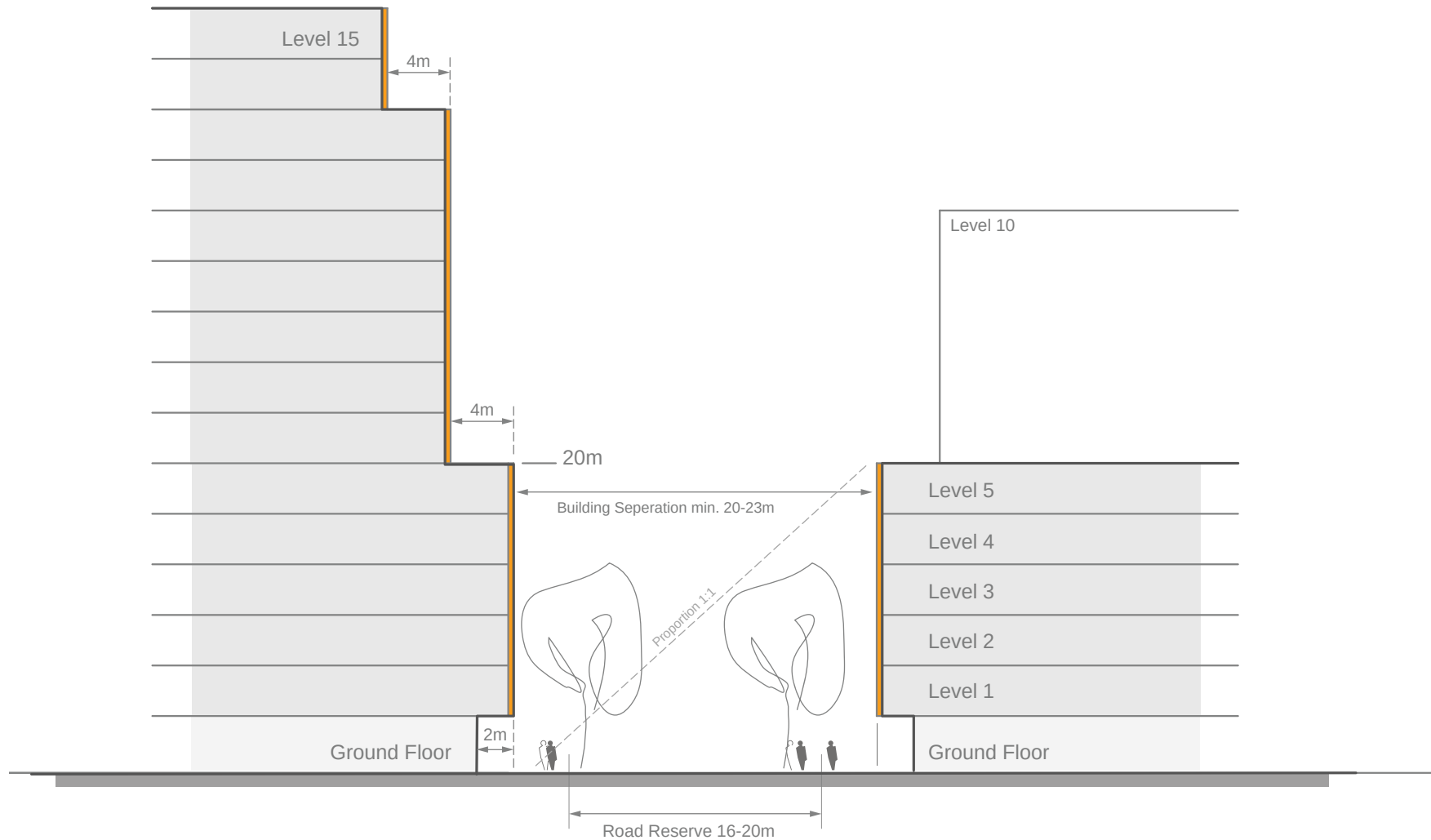


Figure 52. Draft Generic Section

LIST OF FIGURES

Figure 1. Aerial of the Westmead Campus study site	4	Figure 38. Option 1 Concept Sketch	32
Figure 2. Former St. Vincent Dormitory/School Block	4	Figure 40. Option 3 Concept Sketch	32
Figure 4. Stratford City urban regeneration	5	Figure 39. Option 2 Concept Sketch	32
Figure 3. TODs visualisation	5	Figure 41. Option 4 Concept Sketch	32
Figure 5. Metropolitan context diagram	7	Figure 44. Section Key	35
Figure 6. Local context diagram	8	Figure 42. Indicative Street Section Hawkesbury Road	35
Figure 7. Site context diagram	9	Figure 43. Indicative Street Section Darcy Road	35
Figure 9. Cover pages Planning Documents	10	Figure 45. View along Hawkesbury Road location plan	36
Figure 8. Extract of the draft Westmead Precinct Structure Plan	10	Figure 46. View showing indicative built form massing	36
Figure 10. Location Plan - Previous Master Plan (BVN)	11	Figure 47. Artist's impression	37
Figure 12. Ground Floor Plan RL 35.00 (BVN)	11	Figure 48. Maximum Building Height map	39
Figure 11. Previous Master Plan Concept (BVN)	11	Figure 49. Maximum FSR map	40
Figure 13. Ground Floor Plan RL 40.00 - April 2008 (BVN)	11	Figure 50. Land Zoning map	41
Figure 14. Existing Access and Movement (extract)	15	Figure 51. Draft Building Controls map	42
Figure 15. Existing Building Heights (extract)	15	Figure 52. Draft Generic Section	43
Figure 16. Existing Land Uses (extract)	16		
Figure 17. Existing Land Ownership (extract)	16		
Figure 18. Existing Land Ownership	17		
Figure 19. Existing Access and Movement	18		
Figure 20. Existing Building Heights	19		
Figure 21. Existing Land Use	20		
Figure 22. Topography and Landmarks	21		
Figure 23. Former St Vincent's Dormitory/School Block	22		
Figure 24. Bayley's Cottage	22		
Figure 25. T-way bus service	23		
Figure 26. Identified Constraints	24		
Figure 27. Identified Opportunities	25		
Figure 28. Incorporating pedestrian desire lines	27		
Figure 29. Convenient pedestrian access	27		
Figure 30. Utilising existing vehicular access points	28		
Figure 31. Efficient road network	28		
Figure 32. Defined edges and active ground level uses	29		
Figure 33. Indicative building heights	29		
Figure 34. Retaining significant heritage	30		
Figure 35. Potential land use distribution	30		
Figure 36. Important site features	31		
Figure 37. Sequence of places	31		

