St Vincent's Research Precinct

ST VINCENT'S MATER HEALTH SYDNEY

REVISED PREFERRED PROJECT REPORT | APRIL 2010

CONCEPT PLAN | APPLICATION NO. MP 09_0010

St Vincents & Mater Health Sydney

urbis

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Statement of Validity

Submission of Preferred Project Report:

Prepared under Part 3A of the Environmental Planning and Assessment Act 1979.

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In respect of	St Vincent's Research Precinct Concept Plan	

Certification:

We certify that we have prepared the contents of the Preferred Project Report and to the best of our knowledge the information contained in this report is neither false nor misleading.

Signature		
Name	David Hoy	Ian Cady
Date	6/4/2010	6/4/2010

Executive Summary

St Vincent's & Mater Health Sydney (SV&MHS) has been working to further develop its world class medical research precinct in Darlinghurst. The Precinct is already a creative research hub, supporting world's best practice research and technological innovations. The work of the Precinct is driven by its close proximity to St Vincent's Hospital, one of Australia's leading teaching hospitals. This ensures clinical challenges directly drive laboratory research and enable research findings to be rapidly translated into improvements in patient treatment and care.

The Precinct is already home to the Garvin Institute of Medical Research (GIMR) and the 'Lowy Packer' building which houses St Vincent's Centre for Applied Medical Research and the Victor Chang Cardiac Research Institute (VCCRI). To complete the Precinct two other facilities are proposed on the residual Victoria Street and West Street sites (Sites B and A respectively).

The building on the Victoria Street site will be home to the Kinghorn Cancer Centre (the Cancer Centre), which will align the Garvan's internationally acclaimed cancer research with the best practice cancer care at St Vincent's & Mater Health Sydney, with the aim of developing more effective approaches to the prevention, diagnosis and treatment of cancer. Full project approval for the Cancer Centre building was granted by the Minister for Planning on12 January 2010 and construction is expected to commence shortly.

The approval of Concept Plan building envelopes and floor space for the Stage 2 site will provide the certainty required to obtain commitment from another suitable research organization.

The estimated capital investment value of the project is approximately $157.65 million and it will create almost 550 full time jobs.

The project was declared a Major Project by the Minister for Planning on 20 January 2009, who at the same time authorised submission of a Concept Plan. The original Concept Plan Application was submitted in June 2009 and exhibited between 8 July and 7 August 2009. Following consideration of various submissions from public authorities and surrounding residents, various modifications have been made to the Concept Plan, including:

- Victoria Street (Cancer Centre) building reduced in height by two storeys (11 metres).
- West Street building reduced in height by one storey (4 metres).
- Increased setback provided to West and Liverpool Streets
- Total number of car parking spaces been reduced from 400 to 300.
- Additional egress driveway to West Street deleted.

This Preferred Project Report (PPR) documents the revised proposal.

The scope of the Concept Plan Application includes:

- Demolition/tree removal
- Building envelopes
- Land uses
- Floor space
- Car parking numbers
- Vehicle access arrangement
- Street frontage activities
- Subdivision/consolidation of titles

The actual design of the proposed buildings will be subject to separate Project Applications. In the case of the Cancer Centre Project Approval has already been approved (12 January 2010).

In addition to benefits in the field of health, the project will provide the following broader benefits to the city:

- Augmentation of the identified 'magnet infrastructure' function of the hospital, enhancing opportunities for growth and employment in associated industries.
- Enhance the role of Sydney and NSW as a globally competitive centre of excellence in the field of medical research and translational medicine.
- Create a co-ordinated medical research hub capable of attracting the best and brightest organisations, patrons and personnel in the field and delivering world class research.

With regard to potential environmental effects upon the immediate locality, this report concludes that, subject to the implementation of the Commitments made in this application, the project will not have any unreasonable effects in terms of key potential impacts, including:

- Visual bulk and scale
- Heritage
- Streetscape
- Overshadowing
- Traffic and car parking.

This Preferred Project Report has been prepared in response to, and fully addresses the Environmental Assessment Requirements provided by the Director General - Department of Planning.

...solutions are often discovered at the boundaries of what we know and when each specialist discipline works at its boundaries... This process of allowing divergent thinking to occur within the worlds of specialists and those who find this approach more natural generates multiple options, choices and a pool of ideas.

The Art of City Making , Charles Landry (2006)

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Glossary of Abbreviations

SVRP - St Vincent's Research Precinct

SV&MHS - St Vincent's and Mater Health Sydney

GIMR - Garvan Institute of Medical Research

TKCC - The Kinghorn Cancer Centre

NCHECR - National Centre in HIV Epidemiology and Clinical Research

VCCRI - Victor Chang Cardiac Research Institute

01 Introduction

The project involves the consolidation of an integrated medical research precinct comprising the existing GIMR and 'Lowy Packer' buildings, the recently approved Kinghorn Cancer Centre and a new building to West Street to accommodate a future additional research partner..

The St Vincent's Research Precinct (SVRP) comprises most of the street block to the north of the existing St Vincent's Darlinghurst Campus, which houses St Vincent's Hospital, Sacred Heart Hospice, St Vincent's Private Hospital and St Vincent's Clinic.

This Preferred Project Report accompanies a Concept Plan Application under Part 3A of the Environmental Planning and Assessment Act 1979 (the Act).

The scope of the Concept Plan includes:

- Demolition
- Building envelopes
- Land uses
- Floor space
- Car parking numbers
- Vehicle access arrangement
- Street frontage activities
- Subdivision/consolidation of titles

Key steps in the assessment process to date include:

January 20, 2009:	Minister declared the project to be a 'Major Project', to which Part 3A of the Act applies.
February 13, 2009:	Preliminary Environmental Assessment (PEA) was submitted to the Director General in association with a request for the Director General's (DG's) Environmental Assessment Requirements (EARs) for the preparation of this Concept Plan application.
March, 11 2009:	DG issued EARs which dictate the scope of this Preferred Project Report and authorised preparation of a Concept Plan.
June 3, 2009:	Concept Plan Application formally submitted.
June 11, 2009:	Project Application for Cancer Centre formally lodged
July 8, 2009:	Public exhibition of Concept Plan and Project Application for Cancer Centre until August 7 2009
January 12, 2010:	Project Approval granted for Cancer Centre

Following public exhibition of both the Research Precinct Concept Plan and the Cancer Centre Project Application, the timing of the Cancer Centre project progressed In advance of the rest of the project. It was therefore agreed with the Department of Planning to "decouple" the Concept Plan from the Cancer Centre Project Application, allowing the Cancer Centre Project Application to proceed to determination prior to resolution of the final building envelope for the Stage 2 site. Notwithstanding this decoupling and the recent full Project Approval of the Cancer Centre, it is still proposed to progress the Concept Plan as an overarching framework for the co-ordination of the rest of the precinct.

02 Background

2.1 Precinct Participants

The completed precinct is planned to accommodate the following medical research participants.

Existing

2.1.1 St Vincent's & Mater Health Sydney (SV&MHS)

SV&MHS is the NSW arm of St Vincent's Health Australia which, together with its partners, is one of Australia's leading not-for-profit diversified healthcare providers, with more than 6,500 employees working in healthcare, management and support services.

As a major provider of public and private health and aged care services, the group comprises St Vincent's Hospital, St Vincent's Private Hospital, Sacred Heart Hospice, Mater Hospital, St Joseph's Hospital and St Joseph's Village. Collectively, SV&MHS provides a broad range of acute and sub acute services from primary prevention to tertiary level care across community, outpatient and inpatient settings as well as residential aged care. The work of SV&MHS is supported by significant investment in teaching and research in partnership with universities and affiliated research institutes. Together, the facilities provide a comprehensive range of specialties covering; acute medical, surgical, obstetric, mental health, drug and alcohol, sub acute and diagnostic services in conjunction with medical and nursing teaching, research, residential aged care and general community programs.

The facilities have a diverse and rich history. All were founded by the religious congregation of the Sisters of Charity or, in the case of the Mater, the Sisters of Mercy.

2.1.2 St Vincent's Centre for Applied Medical Research

A facility of St Vincent's Hospital Sydney, the Centre for Applied Medical Research in fundamental scientific research in the fields of immunology and cell biology with relevance to cancer, allergy, inflammatory disease, neuro-immunology and HIV/AIDS. The Centre is also involved in the conduct of clinical trials.

2.1.3 Garvan Institute for Medical Research (GIMR)

GIMR is one of Australia's largest autonomous medical research institutions with over 400 scientists, students and support staff. Internationally recognised as a leader in gene-based medical research, GIMR is committed to delivering new insights into major diseases and novel ways to prevent and treat these disorders. The critical mass of leading senior scientists at GIMR ensures that the quality of the research is amongst the best in the world.

2.1.4 Victor Chang Cardiac Research Institute (VCCRI)

VCCRI is an independent research organisation committed to excellence in cardiovascular research and training, as well as in the rapid application of research discoveries to patient care. It's existing facility within the Precinct employs 130 full-time scientific staff who conduct research into the prevention of heart disease. Their discoveries and achievements over the past 13 years have led to significant improvements in patient treatment and care.

Approved

2.1.5 The Kinghorn Cancer Centre (Cancer Centre)

The approved Cancer Centre is an initiative of GIMR and SV&MHS. It will combine GIMR's internationally acclaimed cancer research with the best practice cancer services and care available at the St Vincent's Darlinghurst Campus. Housing 250 scientists, clinicians and support staff, the Centre will aim to:

> "*realise the promise of personalised medicine for cancer patients by creating a world-renowned facility where research findings move quickly into clinical care and clinical challenges drive laboratory research.*"

Full Project Approval for the Cancer Centre was granted by the Minister for Planning on 12 January 2010.

Proposed

The St Vincent's Research Precinct is proposed to be developed to meet St Vincent's research strategy which is being progressively implemented by St Vincent's Hospital Sydney in collaboration with the Garvan Institute of Medical Research, the Victor Chang Cardiac Research Institute and other research entities.

The conduct of research as a means of preventing and managing disease is core to the Mission of the Sisters of Charity. Through St Vincent's Hospital Sydney (SVH), the Sisters of Charity have been instrumental in laying the foundation for what is one of Australia's leading public and private health and medical research precincts.

Types of research conducted within the precinct include:

- Pure basic research – experimental and theoretical work undertaken primarily to acquire new knowledge without looking for long term benefits other than the advancement of knowledge.
- Applied research – original work undertaken in order to acquire new knowledge with a specific application in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new methods or ways of achieving some specific and predetermined objectives.
- Clinical research – research involving clinical patients or tissues samples from patients. It is undertaken to find better ways of identifying and caring for people in ill health.
- Health services research – research into health services to examine ways of improving service delivery.
- Population/Public health research – research involving communities or populations, typically outside health care institutions. Aim is to identify factors that contribute to ill health and ways of influencing these factors to prevent disease.
- Translational research - transforms scientific discoveries arising from the laboratory, clinical, or population studies into clinical applications.

In 1999, the Wills Review, which was a Commonwealth Government initiative, recommended the collocation of Australia's research effort into a limited number of large multi-disciplinary centres of excellence.

The vision set forth in the Wills Review was of a stronger health and medical research sector characterised by:

- high impact fundamental research, world-class workforce and infrastructure;
- priority driven research that contributes directly to population health and evidence based healthcare;
- an industry sector that mutually reinforces the research sector, with an emphasis on biotechnology; and
- increased public investment in a well-managed research sector.

St Vincent's responded to the Wills Review by providing greater collaboration amongst research entities, recognising that great medical institutes – such as St Vincent's – were based on mutually reinforcing links between hospitals, research centres and universities.

St Vincent's Hospital has been pursuing research excellence principally through the progressive development of the St Vincent's Research Precinct to physically collocate and operationally integrate the shared infrastructure of the independent research institutes on the St Vincent's Campus. The objective to be achieved from this initiative is the critical mass required to support quality research, world class research talent and greater research funding. This envisages the formation of a further research entity to create a research institute of sufficient size to both complement and equal the Garvan and Victor Chang institutes.

The focus on complementarity of research effort – rather than duplicative or competitive research - is an important theme of our research strategy, as is linking the research efforts of St Vincent's Hospital with that of the Garvan, Victor Chang and other research organisations.

There are significant synergies and growth to be achieved through closer collaboration facilitated by the collocation of research organisations within the hospital. The Precinct is intended to deliver a number of linked strategic objectives:

- to grow and develop the research capacity and capability of St Vincent's Hospital and its partners, including the Garvan Institute of Medical Research, the Victor Chang Cardiac Research Institute and other research entities;
- to foster research excellence with flow on benefits to clinical care by promoting complementary research across the spectrum from basic, through applied, clinical and population based research;
- to provide modern research and shared infrastructure facilities which will support high quality research, attract the best and brightest researchers and enable the delivery of highly competitive, cost effective research; and
- to maintain the leading position of the St Vincent's Campus through pre-eminence in teaching and research with the Campus being recognised as the leading biomedical research hub in NSW.

The development of the St Vincent's Research Precinct will provide state of the art facilities for high quality, cost efficient research that will support and enhance the clinical, teaching and research agendas of each of the collaborating institutes which underpins our ongoing clinical success.

Upon completion, the Precinct will house around 1,000 researchers and support staff and will be one of the largest research hubs of its kind in Australia, and the premier research campus in Sydney.

2.2 The Proponent and the Consultant Team

The Proponent is St Vincent's & Mater Health Sydney.

The consultant team assisting the Proponent with the Concept Plan comprises:

- Urbis – Statutory Planning and Heritage
- Daryl Jackson Robyn Dyke Architecture – Urban Design
- KJA – Community Consultation
- TEF Consulting – Traffic and Transport
- ARUP – Infrastructure, Drainage, Civil Works & Sustainability

2.3 Community Consultation

KJA Pty Ltd was engaged by the proponent to manage a process of community consultation prior to the preparation of the original Concept Plan. As detailed in KJA's report (Appendix B of the June 2009 Environmental Assessment), this process involved:

- Letterbox Drops
- Community Cocktail Evening
- Twilight Fair
- Community Information Session
- Community Group Briefings
- Agency and Authority Consultation

2.4 Public exhibition - Response to Submissions

The originally submitted Concept Plan was exhibited from 8 July to 7 August 2009, during which time 20 submissions were received from the public, in addition to responses from various public agencies. The proponent's responses to the issue raised are provided below.

2.4.1 Height / bulk

The originally submitted Project Application proposed a height of 11 storeys and a topmost height of RL 91.936 on the Cancer Centre site, and a height of 9 storeys and a topmost height of RL 76.0 on the Stage 2 site.

This approved Cancer Centre height is 9 storeys with a topmost height of RL 80.4 (2 storey / 11 metre reduction). This PRR reduces the West Street height to 8 storeys and a topmost height of RL 72.0 (1 storey / 4 metre reduction).

2.4.2 Design / Character

The current application only seeks approval for building envelopes. The design and architectural character of the proposed building will be determined at Project Application stage.

2.4.3 Traffic / No. of Car Parking

The proposed number of spaces has been reduced from 400 to 300. The 300 spaces proposed are consistent with the parking generation rates of DCP 11 and the Garvan Institute consent conditions (see Section 8.6).

2.4.4 West St Vehicle Access

As detailed at Section 8.6, vehicular access via the existing West Street driveway is proposed because:

RTA guidelines (2002) recommend that vehicle access be provided by the lowest order street frontage of any site, which in this case is clearly West Street.

RTA guidelines (2002) specify a 'desired environmental capacity' of 200-300 veh/h for local streets, such as West Street. Existing peak hour traffic flows in West Street are approximately 40-50 veh/h. The project will double these peak hour volumes to approximately 100-110 veh/h which is still well within the environmental capacity of this street.

A matter raised in the submissions relates to the 'Special Condition' to the Project Approval for the erection of the Lowy Packer building. This condition effectively requires measures to preclude vehicles entering the existing West Street driveway via West Avenue. Whilst the installed traffic islands do not physically prevent vehicles making this movement, the movement is unlawful, and clearly signposted as such.

Traffic counts carried out by TEF Consulting in the course of preparation of the traffic impacts assessment revealed two vehicles performing this movement in order to enter the loading dock during the three hour morning survey period. One such illegal movement was recorded during the four hour afternoon survey period. A review of security camera footage over a three day period in September-October 2009 revealed 15 vehicles performing this manoeuvre. While such movements are highly visible, in terms of overall traffic volumes they have negligible impact upon the capacity of West Avenue.

Chaplin Street is unacceptable as a vehicular access point because:

- Right hand turns into Chaplin Lane would create significant conflicts with the operation of the proximate signalised intersection of Liverpool and Victoria Streets. However, the width, geometry and proximity of Chaplin Lane and Victoria Street effectively prevent the provision of a physical barrier to prevent such movements.
- Assuming that right hand turns into Chaplin Street could be prevented, the majority of vehicles that will be arriving from the north, south or west via West Street would have to circle the block to arrive in any event.
- Chaplin Street is private land (i.e. it is not currently a public road) and it is proposed to be pedestrianised to form an important linkage between research activity within the Lowy Packer building and the TKCC. Noting the need to traverse a subterranean substation required at the northern end of Chaplin Street, vehicle access via Chaplin Street would require a significant ramp structure that would effectively preclude any meaningful pedestrian interface across Chaplin Street.
- Given the proximity of Chaplin Street to the signalised intersection of Victoria and Liverpool Streets, queuing back from this intersection could easily obstruct egress from the site in peak periods.

2.4.5 Number of Driveways

While an additional ingress ramp to the existing loading dock is still proposed as part of the redevelopment of the Stage 2 site to better facilitate the forward ingress and egress of larger vehicles, the proposed reduction in car parking numbers means the formerly proposed additional basement driveway to West Street for cars, motorcycles and bicycles is no longer required (see Section 8.6).

2.4.6 Overshadowing (Residential to east)

As a result of the reduced height of both the Cancer Centre and West Street buildings, all West Avenue residences will receive well in excess of the three hours sunlight required by the Residential Flat Design Code between 9.00am and 3.00pm on the Winter Solstice, with most receiving in excess of five hours. The shadow impacts of the Concept Plan are now therefore clearly consistent with the Planning Principle: Impact on Solar Access of Neighbours set out by the Land and Environment Court in Parsonage V Ku-ring-gai (10225 of 2004).

2.4.7 Previous Masterplan

The 2005 Master Plan is not a matter for statutory consideration in the determination of the current application. It was prepared in 2004, when St Vincent's did not have any clear intentions for either the Cancer Centre site or the Stage 2 site.

In the 6 years since the Master Plan was prepared there have been dramatic changes in gene based therapeutic practice, generating the need for translational approaches to medicine, where clinicians and researchers work together on a daily basis, rather than work from isolated facilities in different parts of the city. These changes have also been reflected in relevant strategic planning documents such as the Draft Inner Sydney Subregional Strategy, which identifies the importance of the proposed facilities being located within the precinct (See Section 3.0) The 2005 Masterplan does not provide sufficient floor space to realise these strategic objectives.

2.4.8 Consultation

As detailed at Section 2.3, extensive community consultation in excess of statutory requirements has been undertaken.

2.4.9 Heritage (Demolition of Pomona)

The demolition of Pomona has been approved - MP09_0011.

2.4.10 Heritage (Surrounding Context)

A HIS dealing with the impact of the proposed building upon the heritage values of surrounding heritage items and conservation areas was submitted with the Concept Plan. An addendum to the HIS addressing the changes made in this Preferred Project Report is included at **Appendix G**. In short, the reduced scale of both buildings, and the additional setbacks to the building envelopes proposed on the Stage 2 site further mitigate impacts on surrounding heritage.

2.4.11 Impact on Lowy Packer

Noting that the Lowy Packer building is owned by the proponent, it has always been understood that the views and sunlight enjoyed by the recently constructed building would be impacted upon by development of the rest of the Research Precinct. Indeed the proximity, and linkages between buildings in the precinct are key to the concept of an integrated research precinct.

2.4.12 Loss of Landscaping

The submission raising this issue is referring to loss of the garden next to the West Street driveway. However, this garden was constructed as an interim measure pending redevelopment of the Stage 2 site. Retention of such a garden is not feasible or appropriate in the context of comprehensive redevelopment of the site.

2.4.13 Wind

A Wind Effects Report for the Stage 2 site will be submitted at Project Application stage, and will detail measures to ensure ground level wind conditions in the vicinity of the site in accordance with relevant Australian Standards.

2.4.14 Dilapidation Report

Dilapidation reports of immediately surrounding properties will be prepared prior to the commencement of works.

2.4.15 Noise (Plant & Construction)

Noise Management Reports will be submitted with the Project Application for each site.

In terms of plant and construction noise, the Noise Reports will demonstrate compliance with relevant Australian Standards.

In terms of traffic, as detailed at Section 8.6, the proposed traffic volumes are comfortably within RTA environmental goals for various road types.

The loading dock is an existing facility that will not fundamentally change its current operation. Furthermore, development of the Stage 2 site will partially enclose the dock, creating opportunities to mitigate associated noise impacts on surrounding properties.

2.5 Summary of Responses to Submissions

In summary:

- The Cancer Centre has been reduced by 2 storeys (11 metres)
- The building on the Stage 2 site has been reduced by 1 storey (4 metres)
- Increased setbacks are proposed to both West and Liverpool Streets
- As a result all properties to the east will receive at least 3 hours direct sunlight between 9.00am and 3.00pm on the Winter solstice.
- The number of car parking spaces has been reduced from 400 to 300.
- The new driveway to West Street for cars has been deleted (new lane for trucks retained).

Furthermore, the 2005 master Plan is not a matter for statutory consideration, and fails to provide for emerging medical demand.

03 Strategic Justification of the Project

The social and economic wellbeing of Sydney is underpinned by its universally recognised role as a global city. This role is in turn underpinned by Sydney being a home to centres of international excellence in business, culture, services, research and education. To maintain its global status it is critical that Sydney continues to be a 'creative city' that encourages and facilitates the growth and diversity of such centres of excellence.

St Vincent's Hospital and Research Precinct is a centre of excellence in medical research and clinical practice.

3.1 Sydney Metropolitan Strategy

The Sydney Metropolitan Strategy was adopted in 2005 and is the State Government's current policy for the development of the Sydney metropolitan area to 2030.

The Strategy specifically recognises the cluster of health related infrastructure in Darlinghurst.

The Strategy identifies St Vincent's as one of 10 'Major Hospitals' in the Sydney Metro Area.

The Strategy indicates the research precinct as a location for a CRC, or "Co-operative Research Centre", notwithstanding that the project has not been formally declared a CRC. A CRC is a multi-party research centre funded jointly by the Commonwealth Government and participants, for research into a specific applied area. Essential participants in a CRC are an Australian:

- end-user (either from the private, public or community sector); and
- higher education institution (or a research institute affiliated with a university).

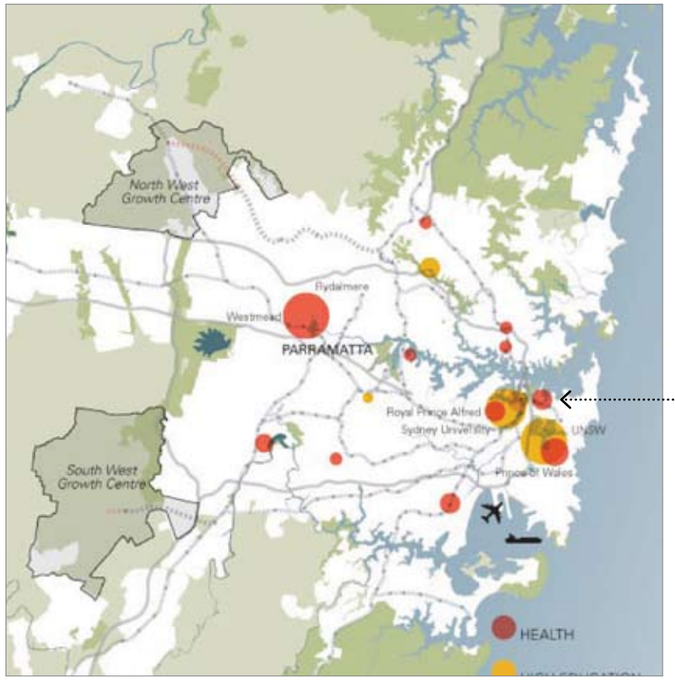


Figure 1 – Clusters of Health and Higher Education (Source: Sydney Metropolitan Strategy)

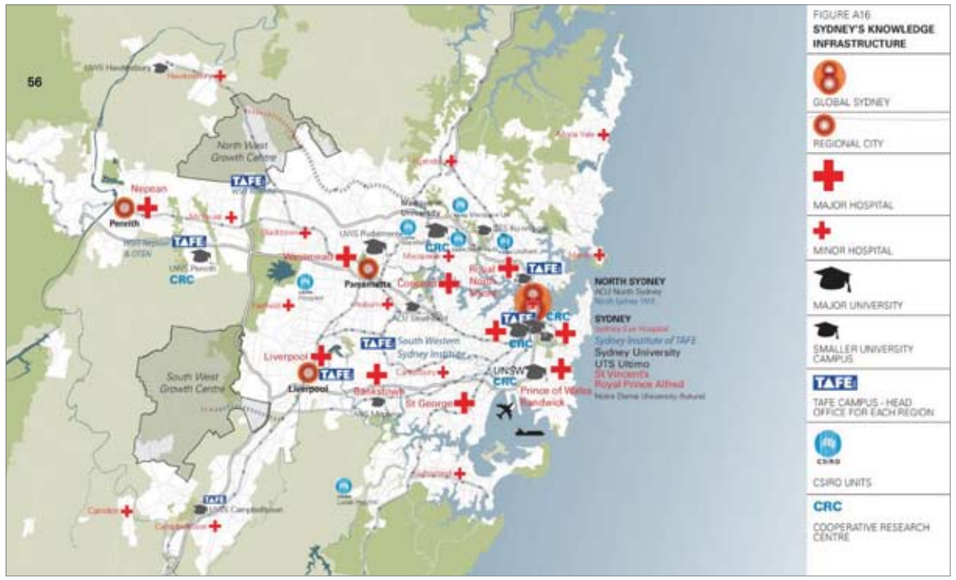


Figure 2 – Sydney's Knowledge Infrastructure (Source: Sydney Metropolitan Strategy)

3.2 Sustainable Sydney 2030 Strategic Plan

Part of the vision for the City of Sydney in the 2030 Strategic Plan is for it to remain Australia's most significant global city containing premium spaces for business activities and high quality jobs to nurture, attract and retain global talent. One of the key strategic directions identified in the Plan is for Sydney to remain a globally competitive and innovative city through investment in strategic economic infrastructure and amenities.

3.3 Draft Inner Sydney Subregional Strategy

Various subregional strategies have been prepared to provide greater detail to complement the Metro Strategy. In July 2008, the Draft Inner Sydney Subregional Strategy was exhibited.

The Draft Subregional Strategy recognises the St Vincent's Hospital, GIMR, VCCRI and the NCHECR as ***"a world class health services cluster".*** The strategy contains the following actions that are relevant to this Precinct (emphasis added):

- *A2.1.3 – "Within the subregion,* ***world class health, medical and biotechnology research activities are located in a cluster around the St Vincent's Hospital*** *in Darlinghurst…".*
- *A2.2 – "For the Department of Health, Department of State and Regional Development and Department of Planning to* ***promote the City East and Sydney Education and Health precincts as centres of excellence in biomedical research and development".***
- *A2.3 – "Magnet infrastructure is generally an asset in the built environment that attracts activities to co-locate with it to form an industry cluster".*

The subregional strategy recognises the cluster of hospital related uses along Victoria Street as key features of "Economy and Employment" within the subregion.

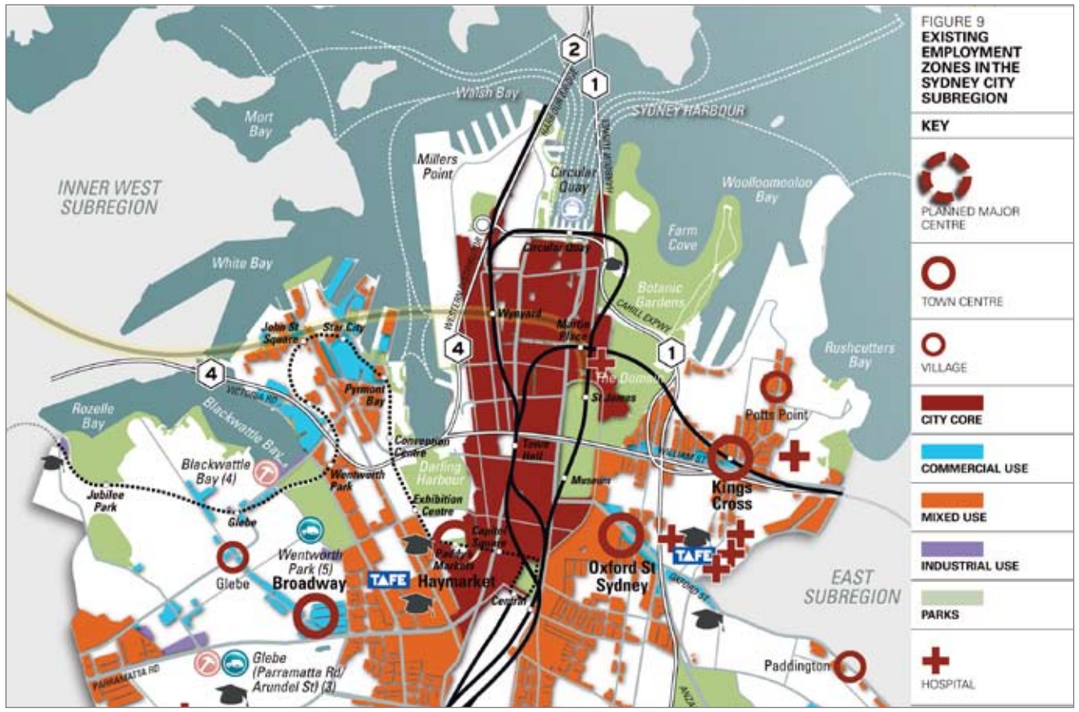


Figure 3 – Existing Employment Zones (Source: Draft Inner City Subregional Strategy)

3.1 South Sydney Development Control Plan 1997

South Sydney Development Control Plan 1997 (DCP 1997) contains the key built form controls applicable in the area.

***"highly visible sites, such as those located along the Kings Cross ridge**, King Street and Riley Street are to be carefully designed to be **in scale with the City's setting, reinforcing skyline characteristics** as shaped by buildings of uniform height, variable height, cluster groups, and tower forms". (p.8)*

Victoria Street / Darlinghurst Road follow the natural ridgeline from Darlinghurst to Potts Point – known as the 'Kings Cross ridge'. As can be seen in **Figures 4-6**, existing tower forms are concentrated along the Kings Cross ridge (as well as along the William Street corridor).

A key objective of the project is to create iconic buildings that befit the prestige and international reputation of such a centre of cooperative research excellence, whilst being responsive to its context within a heritage precinct. Building envelopes are proposed to reinforce the skyline characteristics of the Kings Cross ridge, as envisaged in DCP 1997, by providing buildings of variable heights consistent with those buildings existing on the Kings Cross ridge (**see Figure 4**).

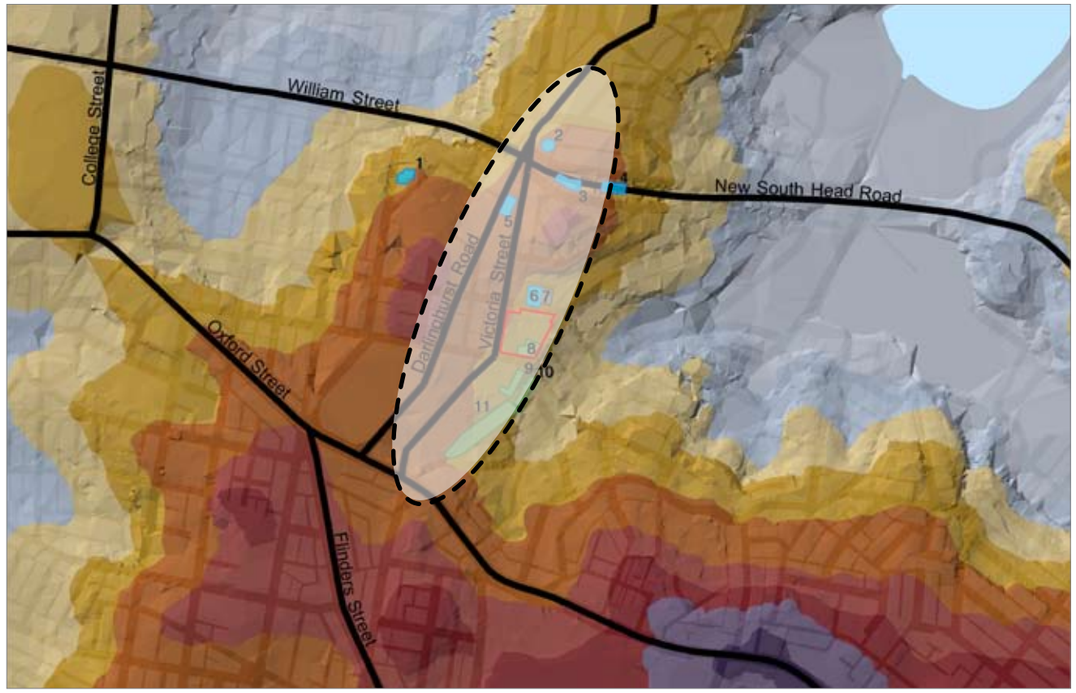


Figure 4 – Kings Cross Ridgeline

KEY: 1- Horizon Apartments 2- Millennium Apartments 3- Élan Apartments 4- Altair Apartments 5- Top of the Town Apartments 6- 320 Liverpool St (Approval) 7- Telstra Exchange 8- O'Brien Building 9- Cahill Building 10- St Vincent's Building

Figure 5 – View along Kings Cross ridge, looking north from the roof of the Lowy Packer building

Figure 6 – Building Heights along Kings Cross ridge (Source: Daryl Jackson Robyn Dyke Architecture)

04 The Site and Context

4.1 The Precinct

The SVRP has an area of 8,150m^2 and comprises most of the street block bounded by Victoria, Liverpool, West and Burton Streets, Darlinghurst, immediately north of the St Vincent's Hospital Campus. The context of the Precinct is identified in **Figure 7**.

The Precinct currently accommodates GIMR, VCCRI, St Vincent's Centre for Applied Medical Research and the University of NSW, via the NCHECR, which is currently housed in the GIMR. In addition there are also a number of smaller buildings and some vacant land, including:

- 362-364 Victoria St (vacant land used as 'beer garden' to the Green Park Hotel).
- 366-368 Victoria St (terrace house group adapted to offices for St Vincent's Hospital)
- 370 Victoria St (altered late Victorian terrace house)
- 372 Victoria St (late Victorian terrace used as offices by St Vincent's – local heritage item)
- 374 Victoria St (altered late Victorian terrace house)
- 376-382 Victoria St (Medical Centre)
- 384-390 Victoria Street (GIMR)
- 405-427 Liverpool Street (Lowy Packer Building and St Vincent's Ancillary Services Building)
- 429 Liverpool Street (two storey Victorian terrace house attached to 431 Liverpool St)
- Chaplin Lane, a private service lane off Liverpool Street, serving the rear of properties to Victoria St.

The Precinct does not include the Green Park Hotel at 360 Liverpool Street (on the corner of Liverpool and Victoria Streets) or the two storey Victorian terrace house at 431 Liverpool Street (on the corner of Liverpool and West Streets). The extent of the Precinct is identified in **Figures 7 & 8.**

A physical survey plan of the Precinct has been prepared by Rygate Surveyors and is included at **Appendix A.**

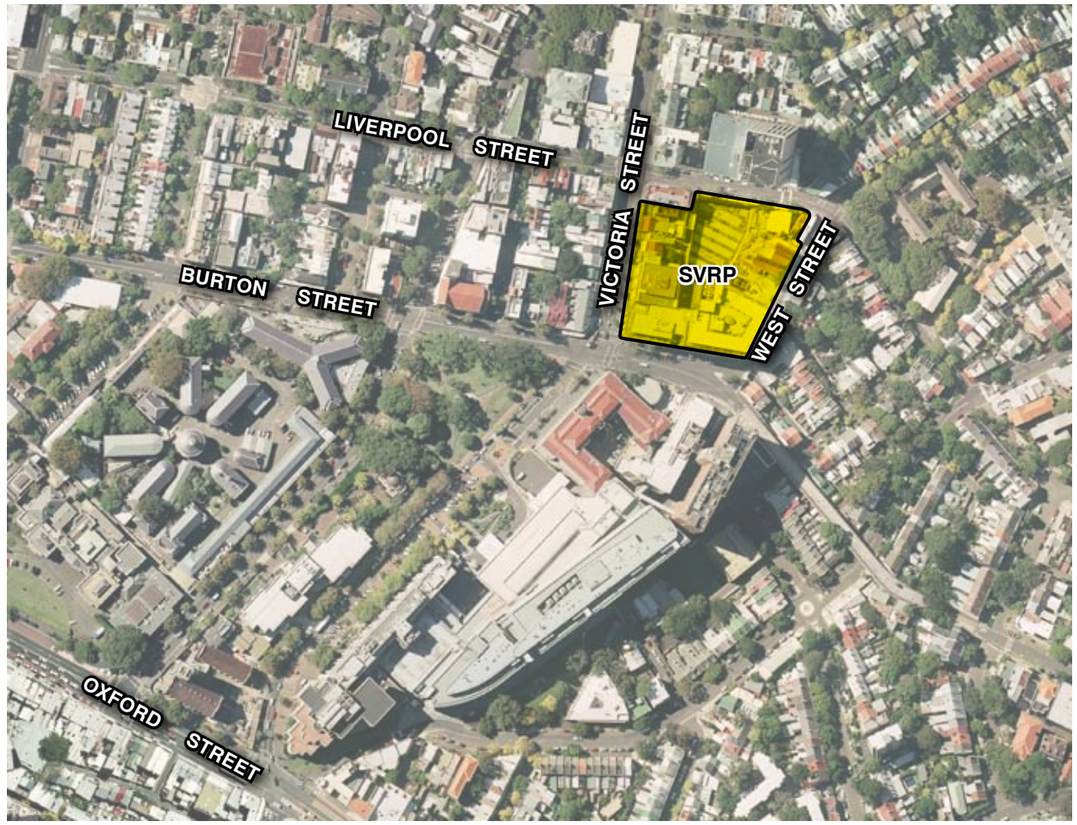


Figure 7 – Local Context

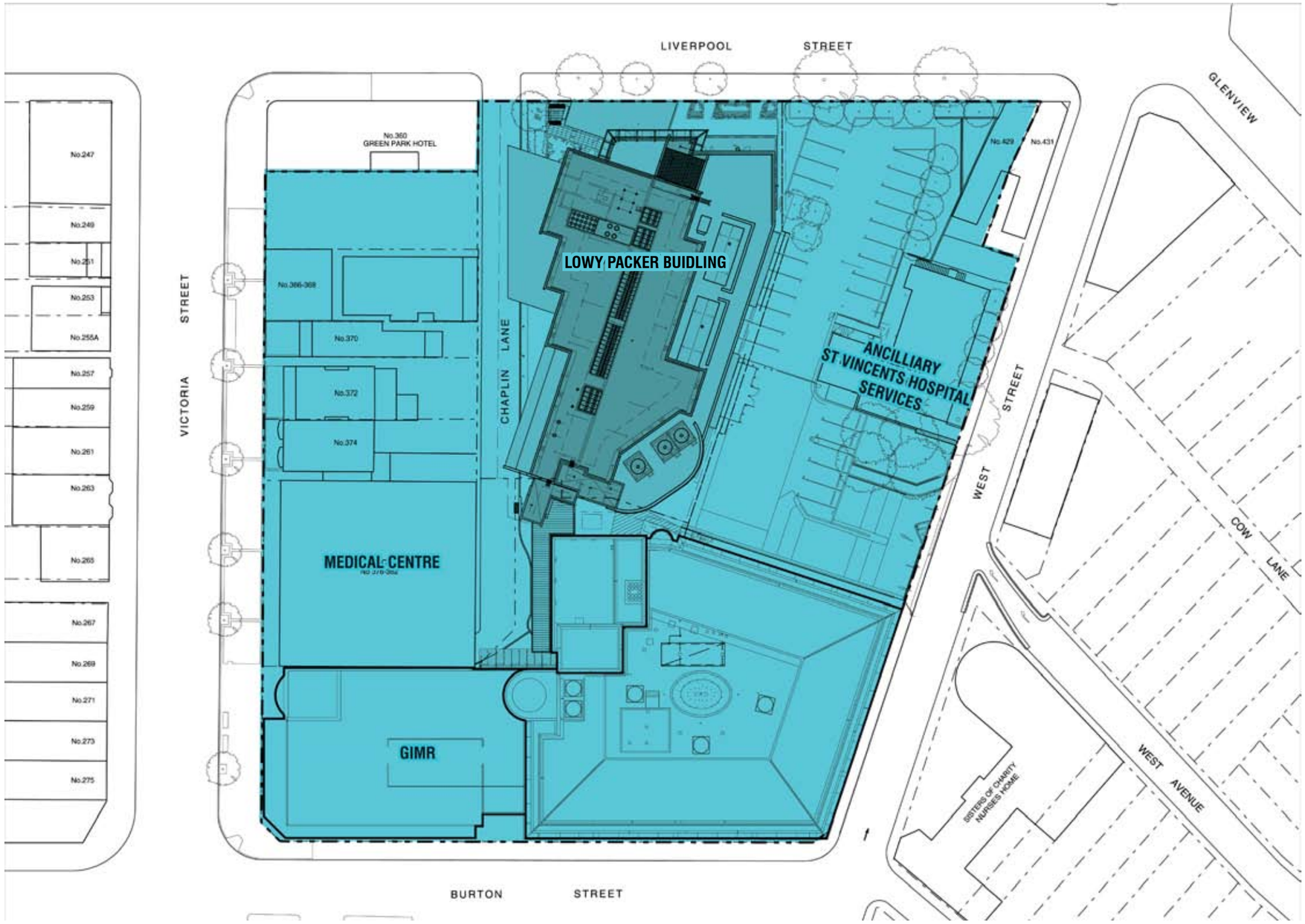


Figure 8 – Extent of St Vincent's Research Precinct

4.1.1 Legal Description

The entire Precinct is owned by the Trustees of St Vincent's and comprises the following parcels of land:

- Lot 22 DP 867249 – 362-364 Victoria Street
- Lot 24 DP 881417 – 366-368 Victoria Street
- Lot 25 DP 881417 – 370 Victoria Street
- Lot 26 DP 881417 – 372 Victoria Street
- Lot 27 DP 881417 – 374 Victoria Street
- Lot 28 DP 881417 – 376-382 Victoria Street
- Lot 10 DP 846558 – 384-392 Victoria Street
- Lot 29 DP 881417 – 405-429 Liverpool Street (including Chaplin Lane)

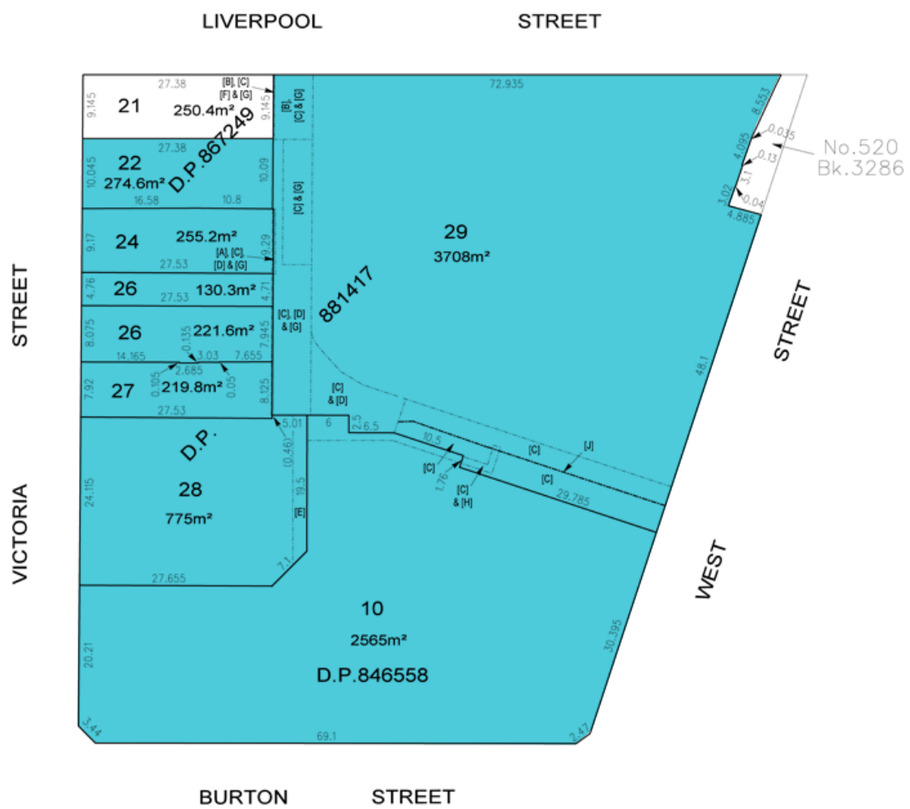


Figure 9 – Existing land titles within the SVRP (Source: Rygate Surveyors)

429 Liverpool Street (note 431 is not within the Precinct)

Lowy Packer car park, St Vincent's ancillary services building and GIMR in background

405-429 Liverpool Street (Lowy Packer)

362 Victoria Street (vacant land used as beer garden to Green Park Hotel and Lowy Packer Building in background)

366-368, 370 and 372 Victoria Street (Lowy Packer in background)

372 & 374 Victoria Street

376-382 Victoria Street (Medical Centre)

384-392 Victoria Street (GIMR)

Figure 10 – Existing development within the Precinct

4.2 Site Analysis

Key features of the site and its immediate surrounds are illustrated in **Figure 11**.

Figure 11 - Site Analysis (Source: Daryl Jackson Robyn Dyke Architecture)

4.3 District Context

The Precinct is located within the eastern side of the suburb of Darlinghurst, which is part of the mixed use area adjoining the eastern side of the Sydney CBD. This area is characterised by the juxtaposition of the remnants of original Victorian suburbs and more modern high-rise infill, particularly along the Kings Cross Ridge. To the immediate east of the Precinct is low rise, high density, predominantly residential Victorian suburb of Paddington. The eastern boundary of the Precinct forms a distinct edge between high rise development comprising the eastern edge of the CBD mixed use fringe, and residential suburbs beyond (**see Figure 12**).

Figure 12 - District Context

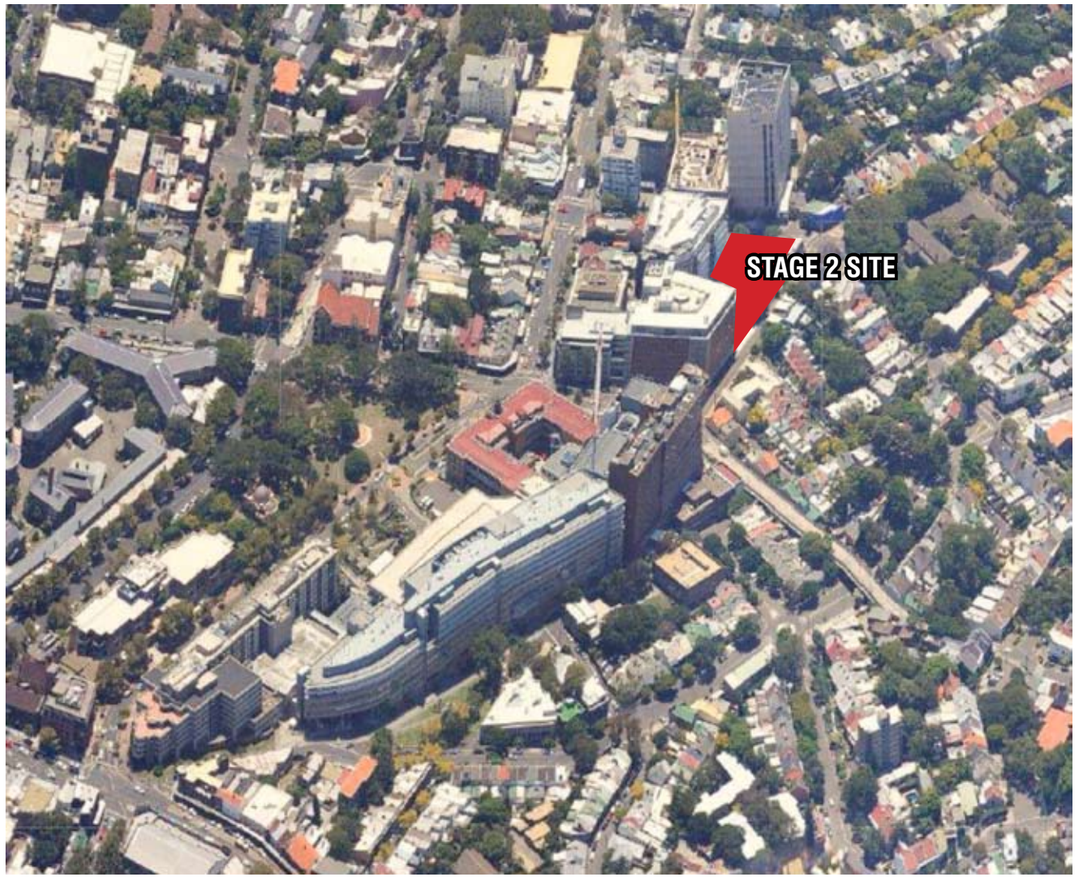


Figure 13 - The distinct eastern edge of high rise development along the Darlinghurst ridgeline

The regional context of the site can therefore be described as CBD fringe, at the interface of the surrounding residential area. It sits on Victoria Street, a major collector road, which radially connects the two CBD arterial roads, William Street and Oxford Street.

4.4 Local Context

At the local level, the Precinct sits between two landmark arterial road junctures, namely Taylor Square and Kings Cross, to the south-west and north respectively. Both are significant evening entertainment and retail precincts, surrounded by high density housing and mixed uses.

Between Taylor Square and the Precinct is an historic institutional precinct characterised by Darlinghurst Courthouse, the former Darlinghurst Gaol (now TAFE) and St Vincent's Hospital. To the immediate west and north of the Precinct is characteristic Darlinghurst development comprising a diverse mix of building forms. To the immediate east is predominantly residential development in the form of Paddington terrace houses.

4.4.1 Development to the West

Development on the western side of Victoria Street comprises predominantly two storey terraces comprising restaurant uses on the ground floor and residential uses above.

Development to the immediate west, across Victoria Street – viewed from Liverpool Street

Development to the immediate west, across Victoria Street – viewed from Burton Street

Figure 14 - Photos of development to the west

4.4.2 Development to the North

Development immediately to the north of the Precinct comprises the Green Park Hotel (360 Liverpool Street, on the corner of Liverpool and Victoria Streets) and a two storey Victorian dwelling house at 431 Liverpool Street (on the corner of Liverpool and West Streets).

Development on the northern side of Liverpool Street comprises two high rise commercial buildings, the Telstra Exchange and, an approved multi-storey, mixed use development which is currently under construction at 320 Liverpool Street and a number of two storey mixed use terraces.

Green Park Hotel – 360 Liverpool Street

431 and 429 Liverpool Street (GIMR and Lowy Packer in background)

Development to the immediate north, across Liverpool Street – viewed Victoria Street

The eastern end of the street block to the north.

Figure 15 - Photos of development to the north

4.4.3 Development to the East

Development on the eastern side of West Street comprises predominantly low rise residential development as well as a some mixed use development and the Sisters of Charity convent.

38 West Street, corner of Liverpool

36 West Street, corner of West Avenue

Sisters of Charity convent (to left)

Corner of West and Burton Streets

Figure 16 - Photos of development to the east

4.4.4 Development to the South

Development on the southern side of Burton Street comprises the St Vincent's Hospital Darlinghurst Campus, with the high-rise Cahill Building (hospital use) being the most prominent building adjacent to the site. The multi-storey O'Brien building (hospital use) is currently under construction between these two buildings

The original (de Lacy) St Vincent's Hospital building (Cahill building in background and recently approved O'Brien building under construction)

View east along Burton Street – O'Brien building under construction on right

Figure 17 - Photos of development to the south

4.5 Transport and Access

A Revised Traffic and Parking Report has been prepared by TEF Consulting (TEF) (**see Appendix B**)

4.5.1 Road Network

The TEF report advises two major arterial routes are located close to the Precinct – Oxford Street (State Road 172) and William Street / Kings Cross Tunnel / Edgecliff Road (State Road 173). These streets provide the main east-west connections between the Sydney CBD and the Eastern Suburbs. Burton Street and Liverpool Street provide secondary east-west routes. Victoria Street and Darlinghurst Road, together with South Dowling Street and Boundary Street cross the above four routes from north to south, thus forming a comprehensive street grid which allows easy access to the area in all directions of travel. Traffic signals with pedestrian crossing facilities are provided at all intersections of the above streets, except the Burton Street / West Street intersection.

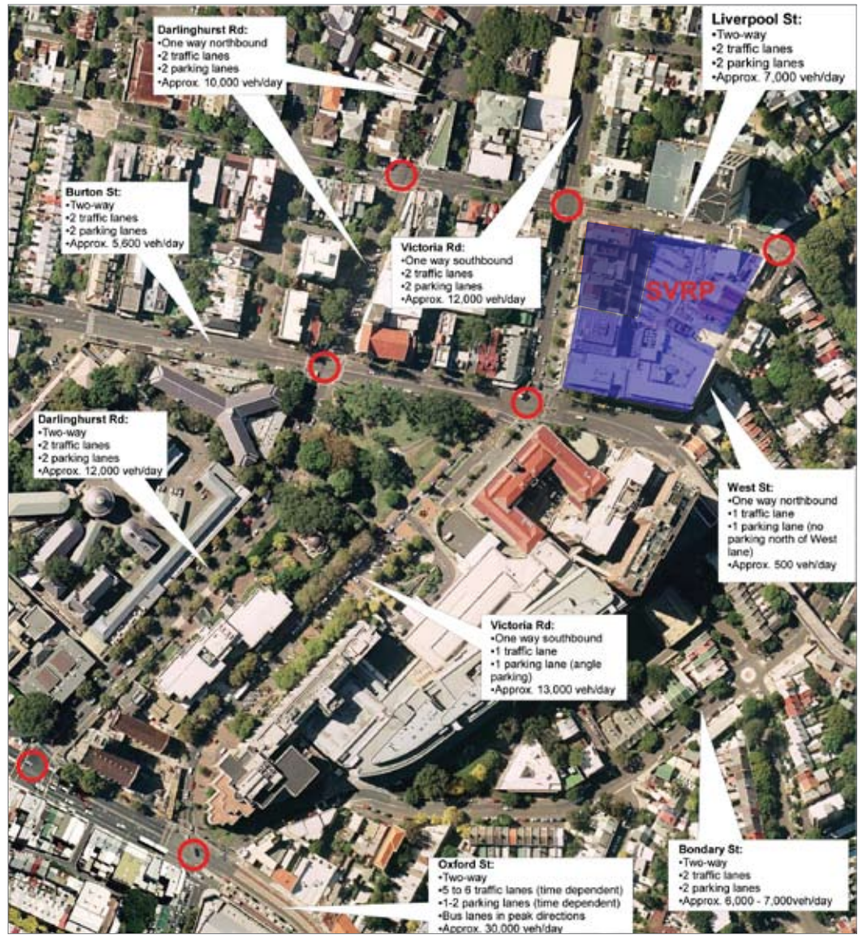


Figure 18 - Street characteristics and traffic controls (Source: TEF Consulting)

4.5.2 Intersection Performance

TEF conducted traffic counts at all key intersections in the vicinity of the Precinct. The commuter peak hours at the intersections occurred between 7:45 am and 8:45 am and from 5:30 pm to 6:30 pm. Operation of the key intersections with the existing traffic volumes has been checked using SIDRA Intersection software (see below), SCATES (for Oxford Street intersections) and Aimsun microsimulation model.

The following SIDRA analysis indicates that all intersections are performing at Level of Service (LOS) A or B (a good level of service) during both peak periods, with the exception of the intersections of Oxford Street with Darlinghurst Road and Victoria Street. The Darlinghurst Road intersection operates at LOS C (Satisfactory) in the PM peak and the Victoria Street intersection operates at LOS D (near capacity) during both peaks. Both the Aimsun and SCATES analysis provided similar results.

Darlinghurst St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Liverpool St	5.3	A	0.35	5.4	A	0.40
2526	Burton St	8.9	A	0.35	8.0	A	0.40
0697	Oxford St	9.7	A	0.75	11.4	A	0.74

Victoria St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0022	Liverpool St	6.0	A	0.41	11.2	A	0.40
0188	Burton St	6.6	A	0.43	20.9	B	0.33
0131	Oxford St	18.0	B	0.89	47.4	D	0.92

Liverpool St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Darlinghurst Rd	8.4	A	0.35	9.1	A	0.41
0022	Victoria St	5.9	A	0.58	5.2	A	0.59
0258	West St	1.9	A	0.20	2.2	A	0.23

Oxford St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0697	Darlinghurst Rd	4.2	A	0.60	3.8	A	0.69
0131	Victoria St	17.7	B	0.81	18.1	B	0.86

Level of service criteria for intersections

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout
A	< 14	Good operation
B	15 to 28	Good with acceptable delays & spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode

Source: RTA (2004)

4.5.3 Public Transport

The Precinct is very well serviced by public transport. Kings Cross railway station is located some 500m from the Precinct (about 5 to 8 minutes walk). Train services run at approximately 5 minute intervals during the peak commuter periods.

There are a number of bus routes within convenient walking distance from the Precinct. Of these, routes 311 and 389 have bus stops near the site. These services run at 8 to 15 minute intervals during the peak commuter periods and at 15 to 20 minute intervals at other times during the day. Other bus routes along Oxford Street provide high frequency services.

Pedestrians are well provided for with all streets in the vicinity of the site having footpaths. The walking path from Kings Cross station to the Precinct is under shop awnings for most of its length.

4.5.4 Parking

At present, a total of 112 off-street car parking spaces are provided on the SVRP site. Of these, 26 spaces are located on the surface level, 26 spaces are located in the Lowy Packer Building basement car park and 60 are provided in the basement of the existing medical centre.

The existing parking supply within the broader hospital campus is limited, with some 300 cars associated with the Hospital parking in the surrounding area.

4.5.5 Pedestrian and Bicycle Linkages

The development will take advantage of the existing footpath and cycleway network presented in **Figure 19**. Existing linkages have the following characteristics, indicative of a good level of service:

- They are continuous throughout the area
- They have functional width and are in good repair
- Signalised and zebra crossings are provided
- Streets are mostly level, without steep sections
- Trees and awnings provide protection from sun and rain
- Vehicle speeds are low
- Main paths are generally safe due to good lighting, continuous pedestrian traffic demand and high police presence
- Direct pedestrian access is currently provided from Victoria Street to GIMR and from Liverpool Street to the Lowy Packer Building.

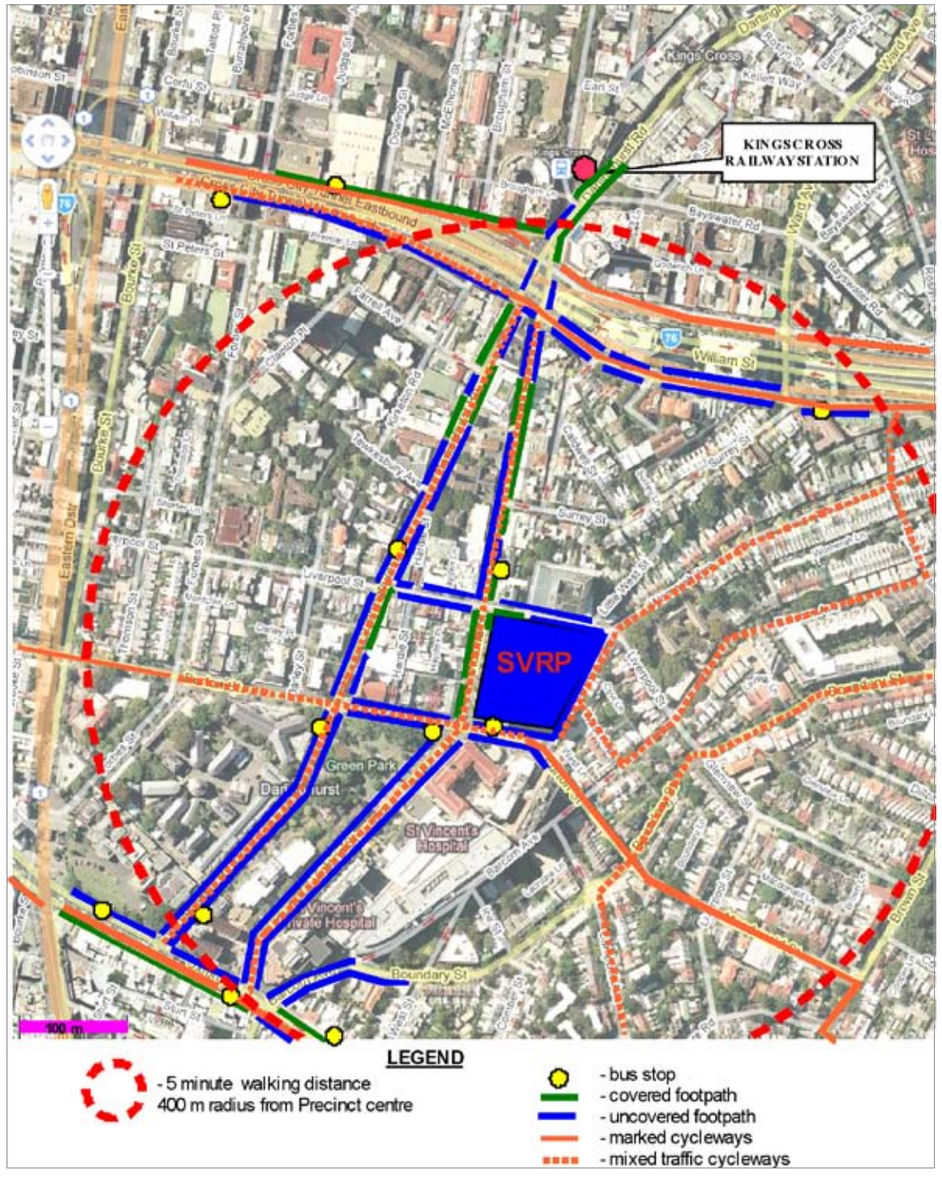


Figure 19 - Pedestrian/Cycle Network (Source: TEF Consulting)

05 Alternatives Considered

The project requires the creation of facilities that are purpose built to accommodate the floor space and operational requirements of viable modern medical research facilities.

The Concept Planning and Environmental Assessment process has therefore involved identification of the requirements of such users, followed by environmental testing to determine whether the precinct can accommodate them.

5.1 Local Contextual Analysis

Analysis of the local context reveals a juxtaposition of two distinct building types, namely:

- A predominantly two storey Victorian terrace house form; and
- A high rise built form (ranging between 8 to 12 storeys) aligned along the Kings Cross ridge, including the Cahill building, Telstra Building, GIMR etc.

Given the functional requirements of the proposed facilities, and the constrained size of the Precinct, a two storey form is clearly not capable of accommodating the required facilities. In 2004/5 a draft master plan was prepared on behalf of St Vincent's that proposed intermediary forms that stepped up from the surrounding two storey forms, to the multi storey forms already on the site (i.e. the Lowy Packer Building and GIMR). However, the resultant varying floor plates were not suitable for laboratory space and provided insufficient floor space to accommodate viable research facilities. This master plan was never formally adopted and has no legal status.

The multi storey form of existing development within the Precinct is the only form capable of accommodating viable modern medical research facilities within the precinct.

5.2 Alternative Locality

The Darlinghurst locality, and specifically a site with immediate proximity to St Vincent's Hospital, has been identified at all levels of strategic urban planning as the preferred locality for expanded medical research facilities. Alternative locations in distant localities would be inconsistent with the Metropolitan and Subregional Strategies, and would severely undermine the translational medical outcomes that are a fundamental driver of collocating researchers and clinicians.

With specific regard to submissions advocating relocation of the formerly proposed UNSW Virology Centre to the Kensington campus of UNSW, continued uncertainty regarding the facilities that the precinct could offer UNSW has resulted in this unfortunate outcome occurring. In order to prevent the loss of other research facilities with potential synergies with St Vincent's, it is critical that Concept Plan Approval of building envelopes be obtained, in order that St Vincent's can approach potential partners with some degree of certainty as what they can offer.

5.3 Other Nearby Sites

While additional land in the immediate locality could potentially allow research facilities to be spread across more land, as can be seen in **Figure 20**, the fundamental constraints of surrounding land in all directions limits the availability of potential sites.

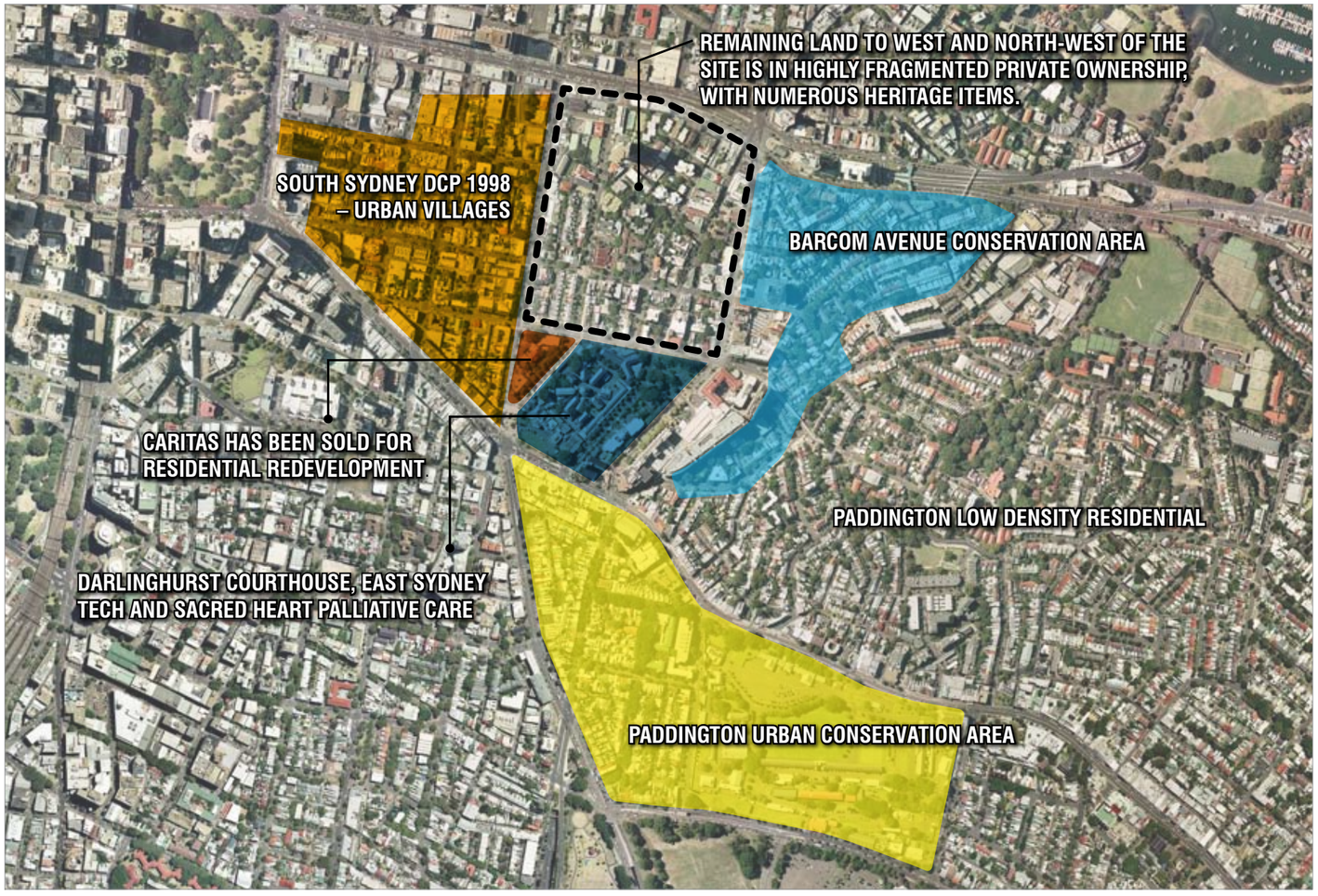


Figure 20 – Land Constraints Map

06 The Concept Plan

6.1 The Vision

SV&MHS seeks to reinforce its world class medical research precinct, a creative hub supporting world's best practice research and technological innovations. The work of the Precinct is driven by its close proximity to St Vincent's Hospital, one of Australia's leading teaching hospitals. This ensures clinical challenges directly drive laboratory research and enable research findings to be rapidly translated into improvements in patient treatment and care.

SV&MHS seeks to expand the Precinct to include not only the existing St Vincent's Hospital, GIMR and Lowy Packer Building, but to also include the approved Kinghorn Cancer Centre and an additional research entity on the Stage 2 site, as indicated in **Figure 21**.

Figure 21 – Location of Cancer Centre and the Stage 2 Development Sites

The Cancer Centre will align the Garvan's internationally acclaimed cancer research with the best practice cancer services and care at St Vincent's Hospital with the aim to develop more effective approaches to the prevention, diagnosis and treatment of cancer.

Provision for an additional research organisation on the Stage 2 site is proposed to further reinforce research and clinical synergies across the precinct.

This Concept Plan proposes an overarching planning strategy for the entire Precinct to guide separate project applications for each of the Cancer Centre and the Stage 2 components of the project.

While the Project Application for the Cancer Centre has proceeded in advance of that for the Stage 2 site and the approval of this Concept Plan, the project Application and Concept Plan have never the less evolved in conjunction with each other, and the Project Application for the Cancer Centre is fully consistent with this Concept Plan.

6.2 Design Philosophy

The following design statement has been prepared by Daryl Jackson Robyn Dyke Architecture:

As part of the development of the concept plan, the proposed building envelopes have been developed to respond to the statutory, urban and planning guidelines as well as providing for the functional requirements of buildings to be developed within the Precinct.

Key design principles incorporated in the development of the building envelope are:

- *Scale of the envelopes developed with reference to the strategic metropolitan imperatives and the broader urban and local context.*
- *Activation and engagement of the street edges of Victoria and Liverpool Streets through responsive design strategies and building articulation.*
- *Acknowledgement of the existing larger scale Precinct buildings and smaller scale residential, retail and heritage buildings such as the Green Park Hotel. This is to be communicated through building height, bulk, and breakdown and articulation of the building form.*
- *Development of a Research Precinct where each building functions and interacts as part of the broader research campus.*
- *Development of outdoor spaces to improve the setting of the Precinct.*
- *To create a sense of address to the Precinct through the public face of the development fronting Victoria Street.*

The Concept Plan envelopes have been developed to incorporate these issues in order to create a framework for the future development of the Precinct. The envelopes indicate a building volume and height from which the individual architecture and articulation of the building form for each site would be developed.

6.3 Changes since Original Concept Plan Submission

The Concept Plan has been modified from that as originally proposed in the June 2009 submission, as follows

- Cancer Centre reduced in height by two storeys (11.5 metres).
- Cancer Centre floor space reduced from 14,000m^2 to 11,486m^2.
- The Stage 2 building reduced in height by 1 storey (4 metres).
- The Stage 2 floor space reduced from 8,500m^2 to 7,500-8,000m^2.
- Increased setback, provided to West and Liverpool Streets
- Total number of car parking spaces has been reduced from 400 to 300.
- Additional egress driveway to the Stage 2 site deleted.

Furthermore, while the originally proposed Stage 2 building envelope provided no setbacks to West or Liverpool Street, the currently proposed envelope has been adjusted as follows to create a more seamless extension of the context established by adjacent buildings.

Liverpool Street Facade

At the street edge to Liverpool Street, the façade adopts the height of, and forms a linking element between the period façade of 431 Liverpool Street and the terracotta clad base element of the Lowry Packer building. Above this base element, the main building bulk to Liverpool Street has been setback 6.49 metres to match the main bulk of the Lowy Packer building. The uppermost plant level is setback a further 8.69 metres.

West Street Façade

At its southern end, the building envelope adopts the street edge form of the adjacent GIMR building for approximately half the West Street frontage, after which it tapers back, parallel to Victoria Street. As West street and Victoria Street are not parallel, this results in a 'chamfering' of the corner of West and Liverpool Streets, such that the whole of the 431 Liverpool Street property sits proud of the proposed building envelope.

The uppermost habitable floor is setback 1.7 metres from the main building façade to reduce the height perceived from nearby properties, and the plant room above is setback a further 3metres.

6.3 Detailed Description of Proposed Development

The Concept Plan defines the following key parameters of the proposed Precinct:

- Demolition/tree removal
- Building envelopes
- Land uses
- Floor space
- Car parking numbers
- Vehicle access arrangements
- Street frontage activities
- Subdivision/consolidation of titles

The detailed design of the Stage 2 building will be subject to separate Project Approval, which has already been obtained for the Cancer Centre building.

6.3.1 Demolition and Tree Removal

As shown in **Figure 22**, the Concept Plan involves the demolition of all existing buildings and structures, and the removal of all existing trees on both the Cancer Centre and the Stage 2 development sites.

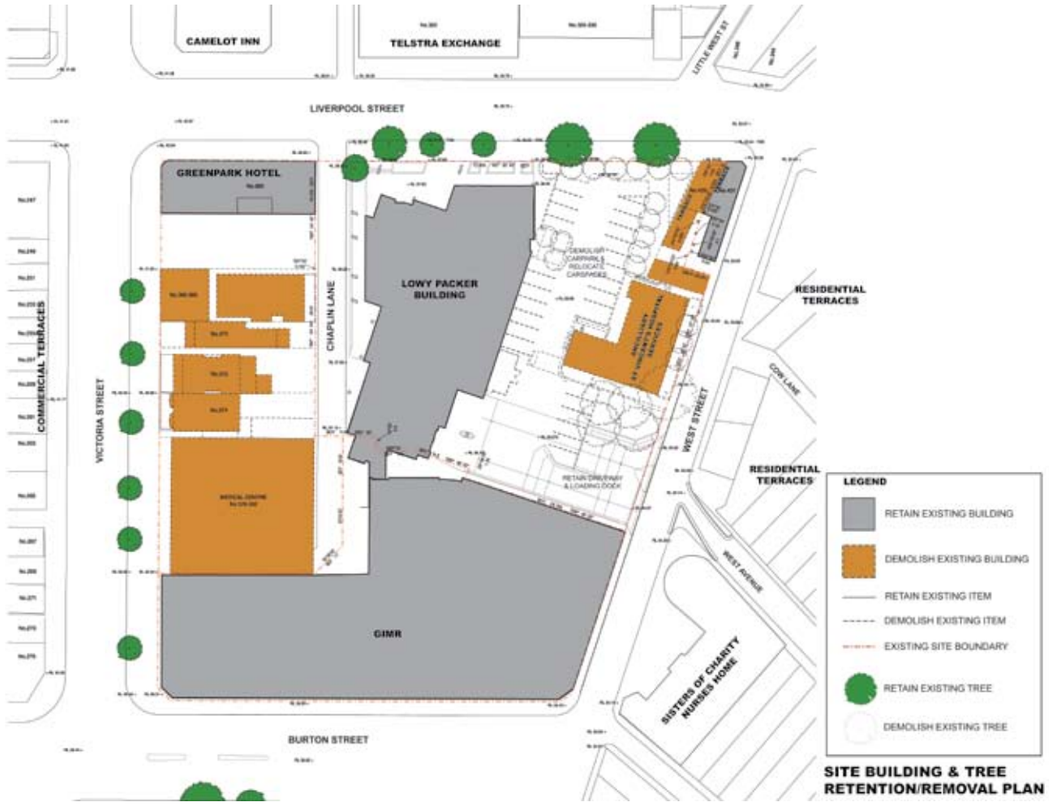


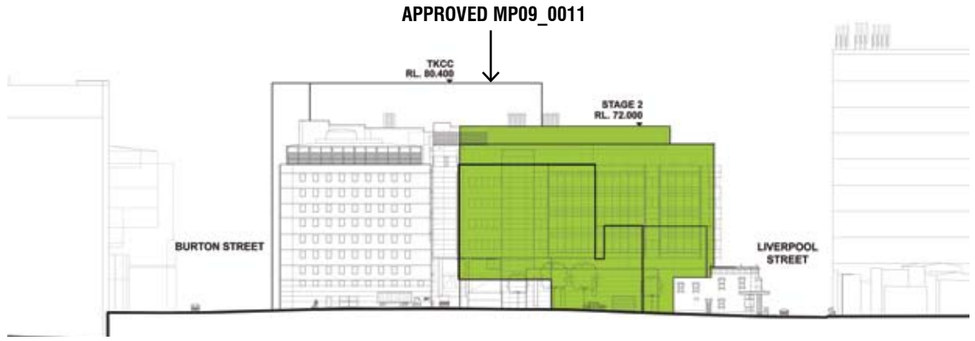
Figure 22 – Proposed Demolition / Retention of Buildings and Trees (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.2 Building Envelopes

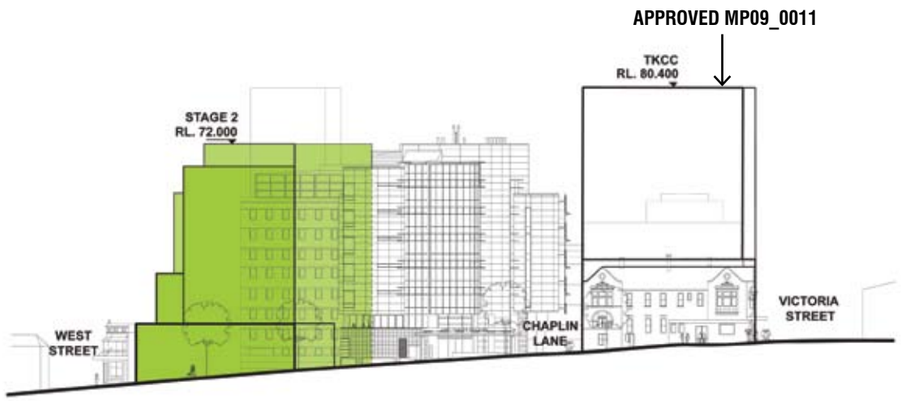
The GIMR and Lowy Packer buildings have already been developed and are not subject to any existing height or floor space controls. While recognising these existing developments, and co-ordinating linkages and interfaces between these and the proposed Cancer Centre and the Stage 2 building, this Concept Plan does not propose any height or floor space controls upon these buildings.

The building envelopes of the proposed Cancer Centre site and the Stage 2 site are described in plan and elevation at **Figure 23**, and included in A3 format at **Appendix C**.

West Elevation



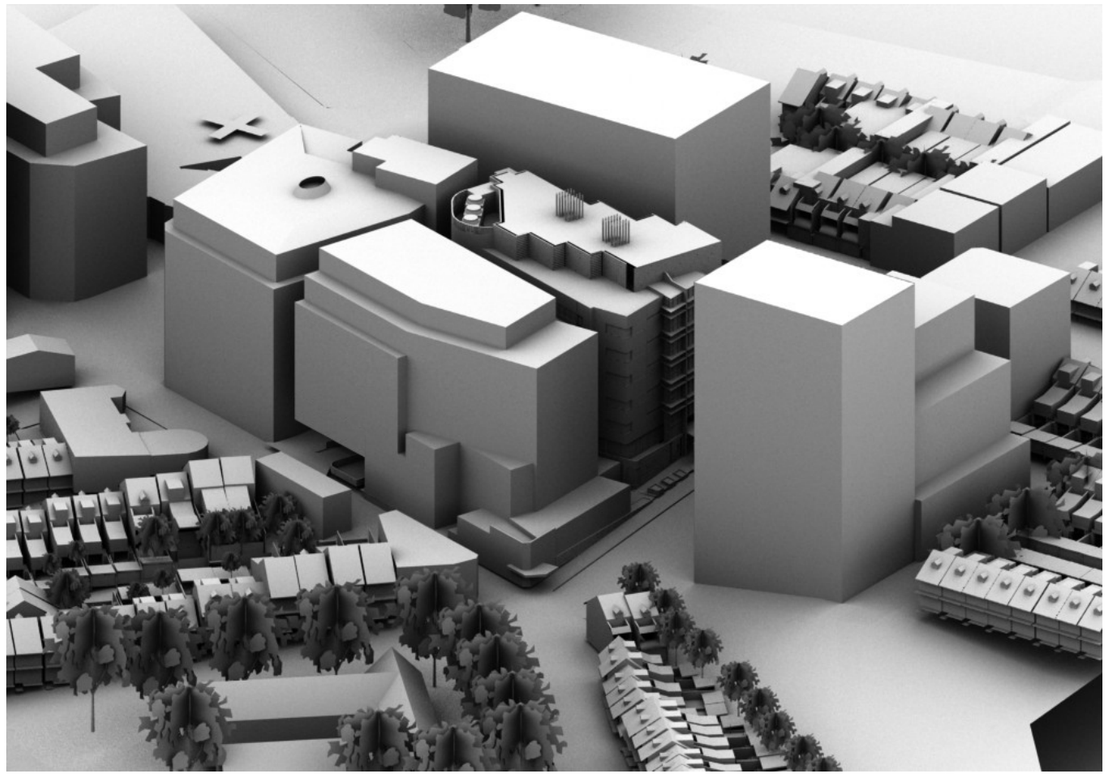
East Elevation



North Elevation

Figure 23 – Concept Plan Building Envelopes (Source: Daryl Jackson Robyn Dyke Architecture)

Aerial view from South-West (The approved Kinghorn Cancer Centre in foreground)



Aerial view from North-East (Stage 2 building in foreground)

Figure 24 – Computer generated images of proposed building envelopes (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.3 Land Use, Floor Space and Development Data

Table 1 – Summary of Proposed Development

	GIMR	Lowy Packer Building	Kinghorn Cancer Centre		Stage 2 Site	
	Existing	Existing	Originally Proposed	Currently Proposed	Originally Proposed	Currently Proposed
Site Area (Measured at Level 4)	2,525 m^2	1,587 m^2	2,153 m^2	2,153 m^2	1,885 m^2	1,885 m^2
GFA1	17,157 m^2	9,354 m^2	14,000 m^2	11,486 m^2	8,500 m^2	7.5-8,000m^2
Building Height						
- Top Most Point (excluding masts, antennae, flagpoles, exhaust vents and the like)	RL 72.62	RL 72.00	RL 93.5	RL 80.4	RL 72.00	RL 72.00
- Top Ceiling	RL 62.57	RL 66.18	RL 87.83	RL 73.3	RL 70.58	RL 70.58
- Lowest Natural Ground	RL 31.09	RL 36.19	RL 38.65	RL 38.65	RL 33.77	RL 33.77
- Lowest Natural Ground to Top Ceiling	41.53m	30m	49.12m	49.12m	36.81m	36.81m
Number of Storeys						
- Above Principal Street Frontage	9	8	11 (incl Plant level)	9 (incl Plant level)	9 (incl Plant level)	8 (incl Plant level)
- Basement (Habitable)	4	1	1	1	1	1
- Basement (Car parking)	-	1	5	5	5	5
Building Footprint	2,345 m^2	1,165 m^2 (1,347m^2 Typical Floor)	1,750 m^2	1,750 m^2	1,520 m^2	1,520 m^2
Site Coverage	93%	77%	87%	87%	81%	79%
Car Parking Provision (maximum)	Nil	20 (-6 existing)	218	148	162	132
Capital Investment Value (CIV)	n/a	n/a	$58.86 M	$58.86 M	$75 M	$75 M

Note: GFA is based upon an assumed efficiency of 85-95% of total floorplate area

The Gross Floor Areas (GFA) proposed for the Cancer and the Stage 2 building have been determined so that they will not entirely fill the proposed building envelopes, leaving allowance for building articulation and the exclusion of external wall thickness, lift shafts, driveways, loading docks and the like from the calculation of GFA.

"Height" in relation to a building, is defined as follows pursuant to South Sydney Development Control Plan 1997: Urban Design:

'the vertical distance expressed in metres between a point on the ceiling of the topmost habitable floor and the natural ground level immediately below that point but does not include an attic elsewhere defined'.

GFA is "Gross Floor Area", which is defined as follows pursuant to South Sydney Development Control Plan 1997: Urban Design:

"the sum of the areas of each floor of a building where the area of each floor is taken to be the area within the outer face of the external enclosing walls as measured at a height of 1.4 metres above each floor excluding:

- *columns, fin walls, sun control devices and any elements, projections or works outside the general lines of the outer face of the external walls*
- *lift towers, cooling towers, machinery and plant rooms and ancillary storage space and vertical air conditioning ducts.*
- *car-parking and associated access needed to meet the requirements of the Council.*
- *space for the loading and unloading of goods"*

6.3.4 Car Parking, Access, Loading and Transport

Car parking

The Concept Plan provides a total maximum of 300 basement car parking spaces, comprising the following maximums for each building within the Precinct:

- 148 spaces (plus 2 small car spaces) in a basement below the Cancer Centre building.
- 132 spaces in a basement below the Stage 2 building.
- 20 spaces (a reduction of 6 spaces) in the basement below the existing Lowy Packer Building.

Vehicular access and loading

The existing two-way basement driveway to West Street will be the sole access into the precinct for cars, motorcycles and bicycles. New basement car parks below both the Cancer Centre and the Stage 2 building will have individual pedestrian access via lifts into the buildings above, but will share vehicular access via the existing Lowy Packer building basement car park. While this will result In more vehicles using the existing driveway, the driveway was designed to accommodate this volume in accordance with relevant Australian Standards (**see Appendix B**).

The existing precinct loading dock is served by a single driveway to West Street, between the GIMR building and the West Street basement car park driveway. As the new facilities will increase the frequency of use of the dock, a second loading dock driveway is proposed to permit more than one vehicle to access the dock at a time. The new driveway will be provided to the immediate north of the West Street basement car park driveway. However, this will not be warranted by loading movements generated by the Cancer Centre alone, and will only be provided as part of the development of the Stage 2 site.

While the northern end of Chaplin Lane and its intersection with Liverpool Street will be maintained, the capacity of this intersection is constrained by its proximity to the signalised intersection of Liverpool and Victoria Streets. It will therefore only be maintained for service vehicles and rear loading to the Green Park Hotel.

In view of the high pedestrian flows and heritage significance of the Victoria Street frontage, and the narrow frontage of the Stage 2 site to Liverpool Street, no vehicular access is proposed to these frontages (see Section 8.6.2)

Bicycle parking

Bicycle parking will be provided at a rate of 1 space per 20 employees in accordance with South Sydney Development Control Plan 11 - Transport Guidelines for Development 1996 (DCP 11). Details of this provision will be provided at Project Application stage.

Access for emergency vehicles

Emergency services are located within close distances from the Precinct. The Emergency Department of St Vincent's Hospital is across the road. A fire brigade station is located within 300m from the site, whilst two police stations are within a few minutes drive. **Figure 26** shows locations of the emergency services and their access routes to the Precinct.

Access for emergency vehicles into the site can be made via the proposed loading dock driveway and also directly from the street frontages.

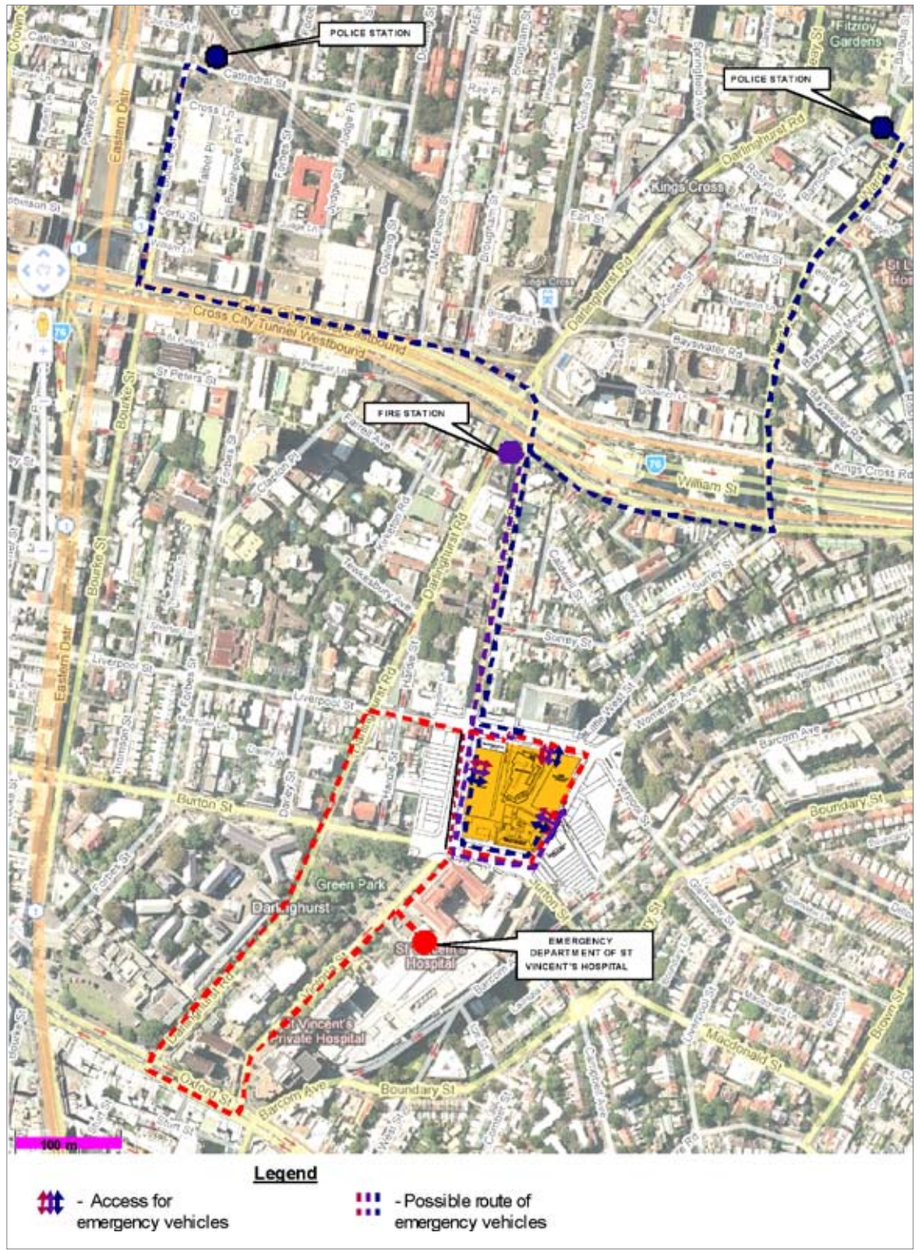


Figure 25 - Emergency Vehicle Access (Source: TEF Consulting)

Measures to promote public transport usage and reduce car usage

The following measures are proposed to promote public transport usage and reduce car usage:

- Develop and produce a Transport Access Guide (TAG). TAG shall include information on public transport and cycleways (including nearest bicycle repair services). Distribute TAG to existing staff. Include TAG into the induction package for all new employees and regular visitors (for example students). Make TAG available at the reception in each facility.
- Introduce a dedicated, readily visible section on public transport access on the websites of SVRP Institutes. Include a direct link to the public transport infoline website www.131500.com.au.
- Make all staff aware and encourage the use of www.131500.com.au by regular emails and by inclusion in TAG.
- Introduce a system which would inform staff members about other staff who reside in their neighbourhood, for the purposes of car pooling. This system should cover staff of all four facilities within the Precinct.
- Prepare and distribute a guide on health benefits of walking and cycling.
- Investigate a possibility of introducing shift times for certain staff, increasing the ratio of work starting and finishing times outside commuter peak periods.

Measures recommended for further consideration

While the following measure are too detailed to be committed to at Concept Plan stage, their feasibility will be explored further at individual Project Application stage.

- Employ a Travel Plan coordinator in charge of monitoring, development and implementation of measures to reduce car use.
- Provide a bicycle repair service on site (one for the whole Precinct).
- Develop and implement a system of teleworking, setting a benchmark for minimum teleworking time for each staff member.
- Approach one of the existing car share service providers (for example GoGet or FlexiCar) regarding possible cooperation and installation of a car share parking space near or within the Precinct.
- Implement a reverse incentive system of monetary reward, whereby a small amount is added to the staff member's wages on a daily basis but deducted at the end of the day this staff member's car was recorded as exiting the car park. This system had a considerable rate of success in the UK.
- Introduce cash based incentives, for example discounted travel passes, for staff.
- Implement a real time electronic display information system informing staff about the nearest times of bus and train departures. The system should incorporate service disruptions. As an extension, make this system available on the intranet for easy access from each workplace and accessible on mobile/smart phones.

6.3.5 Street Activation and Pedestrian Access

As detailed at **Figure 26**, both the Victoria and Liverpool Street frontages are proposed as 'active' street edges, with development along these frontages providing direct visual connection to the street.

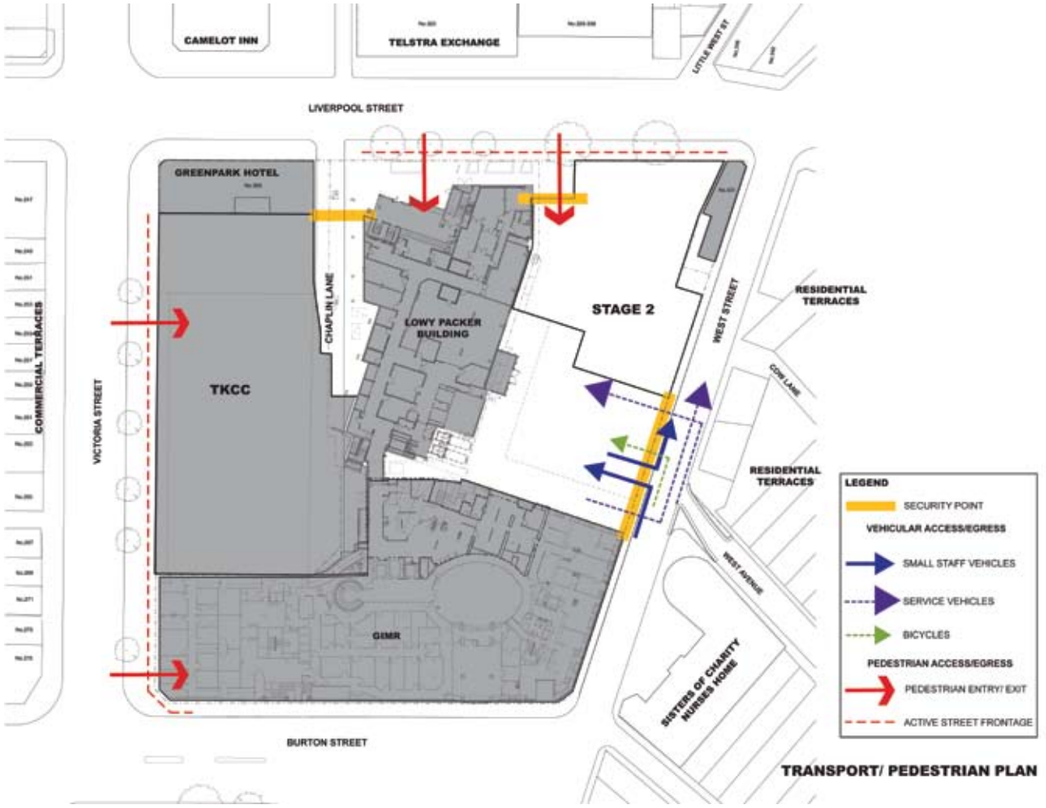


Figure 26 – Pedestrian and Vehicular Access (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.6 Internal Connectivity

A fundamental principle of the Precinct is the optimisation of opportunities for translational medical outcomes arising through the collocation of researchers and clinicians from various medical fields. This will be assisted by optimising the ease of access between, and the likelihood of incidental meetings of different practitioners/researchers.

To this end, the spaces on either side of the existing Lowy Packer Building are proposed as secure courtyards that connect the ground level of each of the four facilities within the Precinct. In addition, upper level bridge links may provide secure, private connections between various laboratory and office facilities and convenient access to facilities such as the 'De Novo' café on the top floor of the existing GIMR building. At lower ground level, 'back of house' functions of the new buildings will extend across and connect into the adjacent buildings, optimising opportunities for the co-ordination and sharing of support infrastructure.

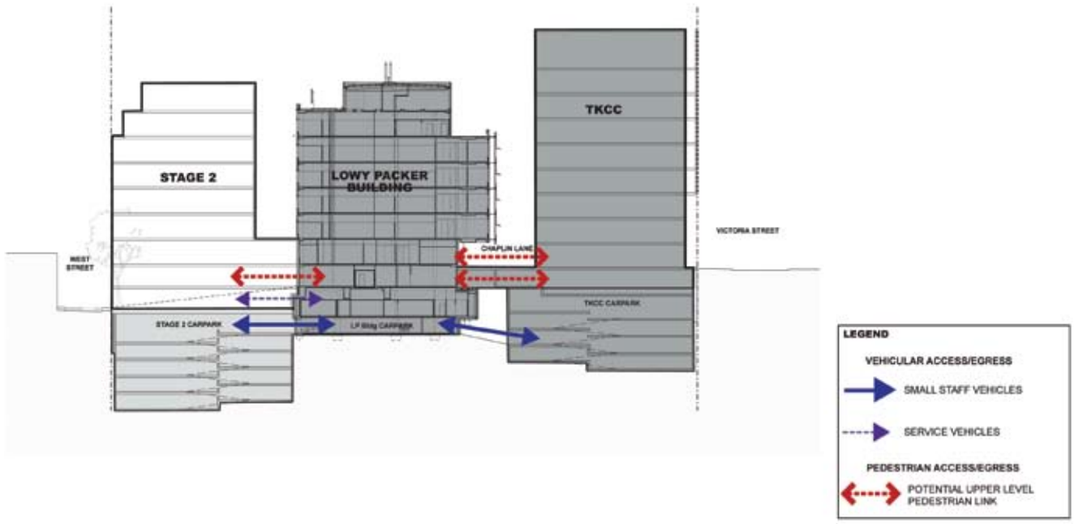


Figure 27 – Internal Connectivity (Source: Daryl Jackson Robyn Dyke Architecture)

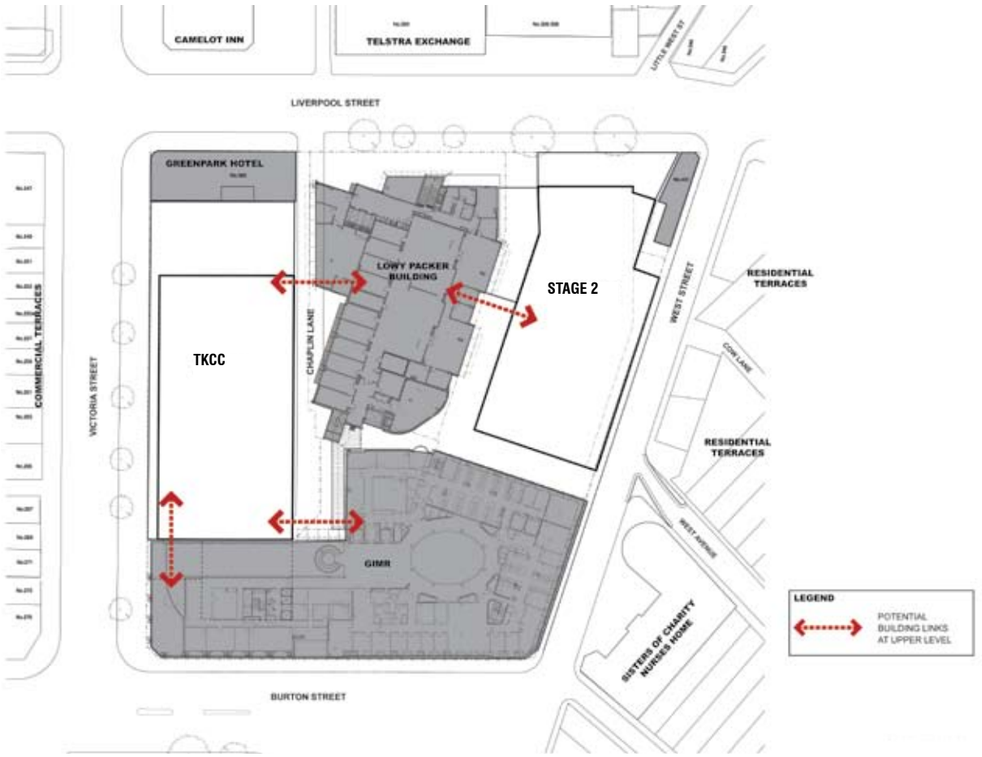


Figure 28 – Potential Upper Level Connections (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.7 Landscaping and Public Domain

The Concept Plan involves an urban built form with buildings to the street edge. The landscape external to the Precinct will be defined by existing public domain works and street trees. Works in the public domain will involve the retention of existing street trees and the making good of any footpath damage in accordance with the standard requirements of the City of Sydney. Internally, the Precinct will accommodate two setback areas to either side of the existing Lowy Packer Building. Both areas will be formally landscaped to provide courtyard spaces linking the Lowy Packer Building to the proposed the Stage 2 site and Cancer Centre buildings respectively . The landscape within these spaces will be defined by decoratively paved surfaces and low planting set amongst seating.

The courtyard spaces will have secured access at the front building line of the existing Lowy Packer Building to prevent anti-social use of the spaces. Security will be provided by way of visually permeable fencing, with swipe card or similar secured access to permit staff entry. The public domain will extend into Chaplin Lane to the southern boundary of the Green Park Hotel to maintain rear access to this property.

The existing security roller door to the Lowy Packer Building basement car parking will remain. Given its height and width, the ground level loading dock to West Street is not intended to be secured, other than by CCTV surveillance.

Detailed landscape plans for each proposed building will be provided at Project Application stage

Figure 29 – Landscape Concept Plan (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.8 Property Titling

With the exception of 431 Liverpool Street and the Green Park Hotel, which do not form part of the Precinct, the entire street block is owned by the Trustees of St Vincent's, whose consent to lodgment of the application has been submitted under separate cover. All parts of the site, and buildings thereon are intended to remain the property of the Trustees of St Vincent's.

However, to rationalise the existing plan of subdivision, the Concept Plan involves the consolidation of the site into four titles, reflecting the four occupants of the Precinct as illustrated in **Figure 30.**

Easements will be created to expand on and facilitate the use of shared infrastructure within the Precinct.

A full copy of the proposed Subdivision Plan prepared by Rygate Surveyors is included at **Appendix D**.

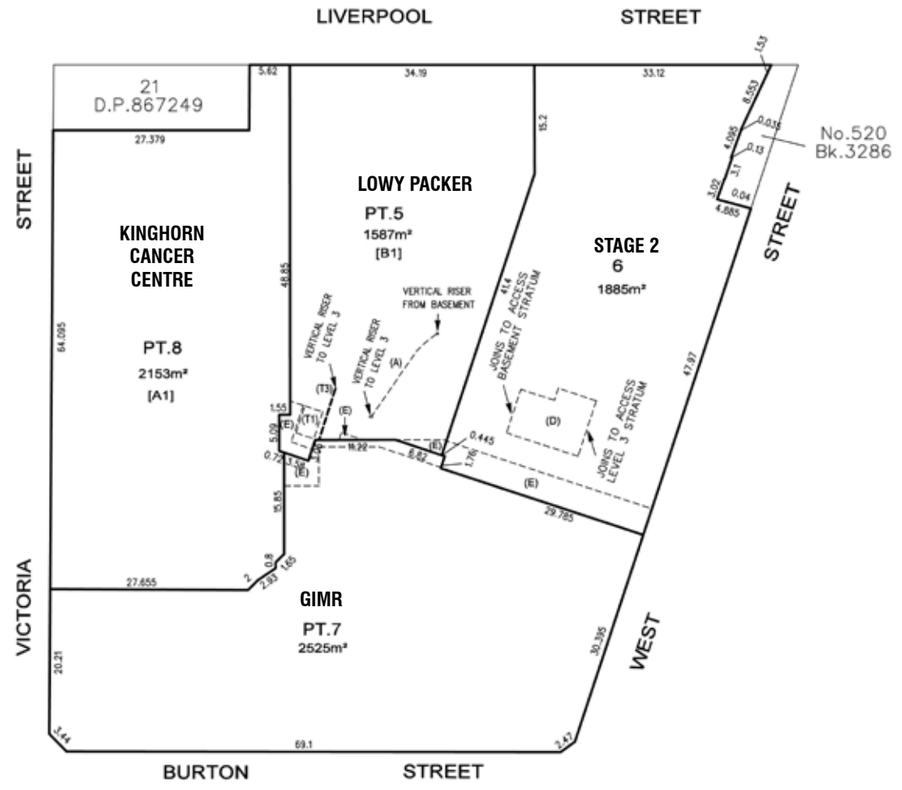


Figure 30 - Proposed Subdivision Extract (Source: Rygate Surveyors)

6.1 Statement of Commitments

A Final Statement of Commitments is included at **Appendix E**. It forms part of the Concept Plan and is proposed to ensure that subsequent applications detail measures to adequately mitigate potential adverse environmental impacts during both the construction and operational stages of the development.

The Statement of Commitments includes commitments in the follow regards:

- Transport Management
- Dilapidation Surveys of Adjoining Properties
- Heritage & Archaeology – Archival Recording
- Energy Performance (ESD)
- Safety Management Plan
- Construction Hours
- Construction Management
- Landscape Plans
- BCA Compliance
- Lighting Standards
- Car Parking and Loading Area Design Standards
- Augmentation of Utilities
- Remediation/Disposal of Contamination
- Noise Mitigation

07 Director General's Environmental Assessment Requirements

Table 2 provides a summary of the DG's EARs issued by the Department of Planning on 11 March 2009 and identifies where each requirement has been addressed in this report.

A copy of the DG's EARs is included at **Appendix A** of the Environmental Assessment report.

Table 2 – Director General's Environmental Assessment Requirements Checklist

DG's EA Requirements		Relevant Section of this Report
General Requirements	The Environmental Assessment (EA) must include (1) An executive summary;	**Executive Summary**
	(2) Detailed description of the project including the: (a) strategic justification for the project; (b) description of the site including cadastral and title details; (c) various precincts and staging (including infrastructure staging); (d) alternatives considered.	 **Section 3** **Section 4.1.1** **Section 6.3.4** **Section 5**
	(3) Consideration of the following with any variations to be justified: (a) all relevant State Environmental Planning Policies, (b) South Sydney LEP 1998; (c) Metropolitan Strategy City of Cities document; (d) Draft Sydney City Subregional Strategy.	 **Sections 8.3.1 - 3** **Section 8.3.4** **Section 3.1** **Section 3.3**
	(4) Draft Statement of Commitments, outlining commitments to public benefits including State and local infrastructure provision or contributions, environmental management, mitigation and monitoring measures and clear indication of responsibilities;	**Section 6.4**
	(5) Signed statement from the author of the EA confirming that the information is neither false nor misleading; and	**Title Page**
	(6) Report from a quantity surveyor identifying the capital investment value of the Concept Plan.	**Under Separate Cover**
Key Assessment Requirements	1. Ownership and Title Land title and ownership details for all parcels of land to form part of the development site.	**Section 4.1.1**
	2. Site Analysis Site and context analysis plan that identifies the relevant natural and built environmental features within and adjoining the site. Survey Plan including site boundaries, levels, buildings to be retained and easements.	 **Section 4** **Appendix A**
	3. Land Use Identify proposed precincts, stages, timing, uses to be contained in each precinct, road and pedestrian networks. Table listing different land uses, FSR, development yield, site coverage for each use and total GFA for the development.	 **Section 6.3** **Section 6.3.3**
	4. Urban Design and Built Form Establishment of appropriate development controls including: – Floor space ratios – Land use distribution – Building footprints – Height and massing Indicative plans, elevations and sections for the Concept Plan area to detail the urban design, height, density, bulk and scale, setbacks of the proposal in relation to the surrounding development, topography, streetscape, buildings to be retained, permeable spaces, car parking and view corridors. Details of the proposed landscaping and open space areas. Consideration of safety and security issues for those using the site, and in adjoining public areas. Pedestrian circulation diagram showing main pedestrian routes within the site and linkages to adjoining future development and the locality. Photomontages and artists impressions of key elements of the proposal including street frontages.	 **Section 6** **Section 6.3.2** **Section 6.3.1** **Section 6.3.5** **Section 6.3.8** **Section 8.4.2** **Section 6.3.6/7** **Section 8.5.3**
	5. Environmental and Residential Amenity Address visual privacy and acoustic privacy and provide a view analysis of significant views and vistas that would be impacted on by the proposal including photomontages. Detail how the precinct will achieve a high level of environmental amenity within the subject site and amenity for adjoining properties. Shadow diagrams showing impact of proposed buildings within the development site and on adjoining land.	**Section 8.5**

DG's EA Requirements		Relevant Section of this Report
	6. Traffic and Transport Traffic Study in accordance with the Roads and Traffic Authority's *Guide Traffic Generating Developments*, with particular regard to: – Existing road capacity, traffic conditions, expected impacts and any upgrade requirements; – Daily and peak traffic movements and impacts on intersections; – Access arrangements to and within the site; – Delivery, servicing and loading arrangements; – Pedestrian and bicycle linkages to and within the site; and – Access for emergency vehicles. Transport Management and Accessibility Plan (TMAP) for the entire site, in accordance with the Ministry of Transport's *Interim TMAP Guidelines,* including measures to optimise the opportunity provided by the projects sites proximity to public transport Measures to promote public transport usage and reduce car usage. Proposed car parking arrangements. Demonstrate a minimalist approach to car parking provision based on the accessibility of the site to public transport. Provision of car parking for Victor Chang Institute in accordance with Conditions of Approval for MP 05_0050.	**Section 8.6**
	7. Heritage Demonstrate how the Concept Plan site will not compromise the heritage significance of the retained buildings and the area as a whole; Prepare a Heritage Management Strategy that identifies the heritage values of the precinct including its archaeological potential for Indigenous and non-Indigenous resources; Prepare a Heritage Impact Statement (HIS) considering impacts of the proposed developments on buildings and heritage items on or in the vicinity of the site, including the streetscape and justify the demolition of any listed heritage items.	**Section 8.7**
	8. Ecologically Sustainable Development Demonstrate how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development, including water sensitive urban design measures, energy efficiency, water demand management, recycling and waste disposal.	**Section 8.8**
	9. Geotechnical and Contamination The potential for contaminated material and management and mitigation measures. The geotechnical suitability of the site for its proposed use.	**Section 8.10** **Section 8.9**

DG's EA Requirements		Relevant Section of this Report
	10. Utilities and Infrastructure Utility and infrastructure servicing, demonstrating development can be adequately serviced for water supply, wastewater, stormwater, electricity, gas and communications.	**Section 8.11**
	11. Drainage, Stormwater and Groundwater Management Identify drainage, stormwater and groundwater management issues including topography, on site stormwater detention, water sensitive urban design and drainage infrastructure	**Section 8.12**
	12. Developer Contributions / Voluntary Planning Agreement Scope and justification of developer contributions or a voluntary planning agreement between the proponent and the Council.	**Section 8.13**
	13. Draft Statement of Commitments Proposed mitigation and management of residual impacts. A Statement of Commitments detailing measures for environmental management and mitigation measures and monitoring for the project.	**Section 6.4**
Consultation Requirements	Written evidence shall be submitted to demonstrate that an appropriate level of consultation has been undertaken with the following relevant parties during the preparation of the Environmental Assessment having regard to previous consultation. a) Agencies and other authorities: City of Sydney Council; NSW Ministry of Transport; NSW Roads and Traffic Authority; and All relevant utility providers. Document all community consultation undertaken to date or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy. The consultation process and the issues raised should be described in the Environmental Assessment.	**Section 2.3**

08 Environmental Assessment

The following environmental assessment addresses the matters identified in the Director General's Environmental Assessment Requirements (DG's EARs) for the Concept Plan.

8.1 Environmental Planning and Assessment Act 1979

Part 3A of the Environmental Planning and Assessment Act 1979 (the Act) requires that major projects obtain approval from the Minister for Planning.

Development is defined as a 'Major Project' to which Part 3A applies either by being identified within a State Environmental Planning Policy or by order of the Minister published in the Gazette. The Minister has formally declared the project a 'Major Project' and authorised the submission of a Concept Plan (see Appendix A of the Environmental Assessment report).

The Major Project approval process provides for the Minister for Planning to undertake a coordinated 'whole of government' assessment of the merits of a proposal that has significance to the State or region.

8.2 Consistency with Strategic Planning Policy

As discussed in Section 3, the project is consistent with the Metropolitan Strategy, Sydney 2030 and the Draft Sydney City Subregional Strategy. The establishment of the Research Precinct is a specific action identified for implementation under those strategies.

8.3 Consistency with Statutory Planning Policy

8.3.1 SEPP (Major Development) 2005

All components of the project conform to the Group 19 (Medical Research and Development Facility) class of development identified in Schedule 1 of SEPP Major Development. Furthermore, as each component of the project have an approximate capital investment value in the order of $82.65 million (Cancer Centre) and $75 million (Stage 2), each project exceeds the $15 million threshold.

The Minister for Planning was therefore requested to confirm that both the Cancer Centre and the Stage 2 site components of the Darlinghurst Research Precinct as 'Major Projects' pursuant to the SEPP. On 11 March 2009 the Minister declared both components of the project as 'Major Projects' for which the Minister is the consent authority.

8.3.2 SEPP (Infrastructure) 2007

SEPP (Infrastructure) 2007 includes two parts of relevance to this application:

Division 10 - Health Services Facilities; and,

Division 17 - Traffic Generating Development.

Division 10 allows for specific hospital related development to be carried out under certain parameters. However, s.10 of SEPP (Major Projects) 2005 provides the following:

> *10 Exclusion of certain exempt or complying development*
>
> *(c) … the particular development is not carried out as part of or in conjunction with other development that is a project to which Part 3A applies*

The exempt development provisions under SEPP (Infrastructure) 2007 are therefore not available to the proponents of this project.

The project, having a combined Gross Floor Area greater than 10,000m2, require a referral to the Roads and Traffic Authority (RTA) under this Policy.

8.3.3 SEPP 55 – Remediation of Land

Under this SEPP, prior to the issue of any development consent, the consent authority needs to be satisfied that the Precinct is suited to its intended purpose in terms of any potential soil or ground water contamination.

The issue of potential ground contamination is discussed below with respect to the Key Assessment Requirements (see Section 8.10). In summary, only limited localised potential for contamination exists, and a Draft Statement of Commitment is proposed to ensure a Remediation Action Plan is implemented if contamination is found.

8.3.4 South Sydney Local Environmental Plan 1998

South Sydney Local Environmental Plan 1998 (SSLEP) is the principle statutory planning instrument applying to the site. Under the SSLEP, the Precinct is zoned 5 Special Use (Hospital). This zone permits 'hospitals' including associated research facilities with consent.

It is noted that the LEP does not contain any development standards which restrict building height, FSR or the like for development within the Special Use (Hospital) Zone.

8.1 Urban Design and Built Form

The envelope of each building is proposed to the height established by existing larger scale buildings in the immediate context.

Specifically, the street edge of the Stage 2 building has been determined by that of the existing GIMR building to the immediate south. Upper levels have been setback in a similar manner to the plant levels of the GIMR building.

Similarly, the height of the proposed Cancer Centre building reflects (but is slightly lower than) the parapet height of the existing Cahill Building within the St Vincent's Campus.

8.4.1 Landscaping and Open Space

The urban landscape context of the site will be consistent with the rest of the larger hospital precinct. The open space demand generated by additional staff within the Precinct will be satisfied in part by the two proposed courtyards within the Precinct, but also by the adjacent Green Park, which has ample existing capacity during lunch periods when staff demand will peak.

8.4.2 Safety and Security

Given the inner urban location of the Precinct and the proximity of evening entertainment uses in Taylor Square and Kings Cross, safety and security is an important consideration.

The proposed built form is generally built to the street to optimise passive street surveillance and street edge activity, particularly to Victoria Street, and the elimination of hiding spaces and ambiguous publicly accessible areas.

While the courtyard areas between the existing Lowy Packer Building and the two proposed buildings are proposed to be landscaped as accessible outdoor areas, these areas will be secured.

The existing GIMR and Lowy Packer Lowy Packer Building facilities implement active security management plans which will be expanded to ensure personal safety and security within the proposed new facilities. A commitment in this regard is included in the Statement of Commitments attached at **Appendix E**.

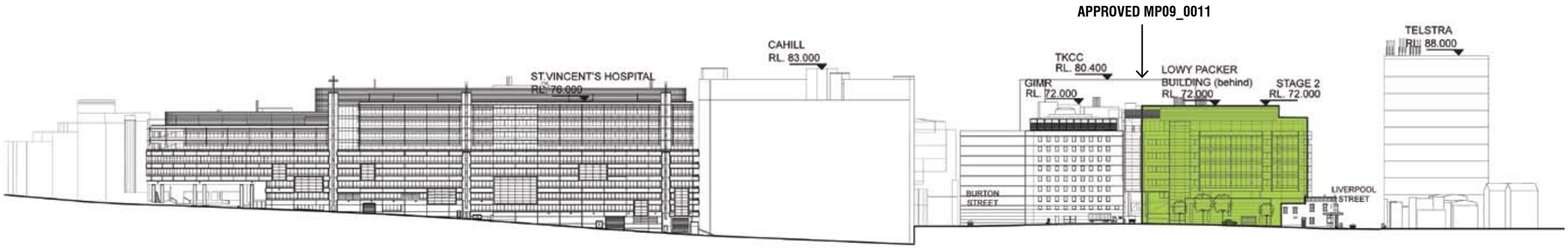


Figure 31 – Relationship of proposed and surrounding building heights (Source: Daryl Jackson Robyn Dyke Architecture)

8.5 Environmental and Residential Amenity

8.5.1 Visual Privacy

While the proposed Stage 2 building will overlook residential areas to the east, this area is already overlooked in a very similar manner by the existing GIMR, Lowy Packer Building and the St Vincent's Hospital buildings. Furthermore, the Stage 2 building will be a purpose built medical research facility, and other than possible café use at ground floor, no balconies will face residents to the east. Additionally, the building will operate much in the manner of a commercial office building, in the sense that staff will principally work typical office hours, such that the times when overlooking occurs (i.e. generally 8.00am - 6.00pm weekdays) will not conflict with hours when residents are more sensitive to privacy.

8.5.2 Acoustic Privacy

Principal sources of potential noise impacts of the proposed buildings relate to plant noise and vehicular access/loading movements on West Street.

Plant Noise

External plant will be generally located on top of or within the upper levels of the proposed buildings, well above surrounding residential development. It will be relatively simple to acoustically shield such plant so that noise it generates will not adversely effect surrounding residences.

Vehicle Noise

The Traffic Report included at **Appendix B**, and considered at Section 8.6, establishes that peak traffic volumes within West Street will be in the order of 180-190 vehicles per hour (vph), which is well within the RTA Environmental Capacity Criteria of 300 vph for local streets, such as West Street. Traffic speeds are also low in West Street.

Loading Dock Noise

While the amount of floor space served by the existing Lowy Packer Building loading dock will be increased by the proposed Concept Plan, the new development will comprise very similar uses. Therefore, when a medical waste collection truck arrives, it will be collecting more waste but will not necessarily require more truck movements. Similarly, deliveries of liquids and gases used in medical research (e.g. liquid nitrogen) will involve the delivery of larger quantities in a single delivery but not necessarily any additional deliveries. While the Concept Plan will lead to some additional loading movements and associated noise, such increase will not be proportional to the scale of the proposed increase in floorspace.

Furthermore, partial enclosure of the loading dock within the proposed Stage 2 building will increase opportunities for acoustic mitigation measures.

Acoustic reports will be submitted with each project application to demonstrate that the buildings have been designed to ensure the mitigation of potential noise sources in accordance with relevant guidelines.

8.5.3 View Analysis

The proposed buildings are large relative to the lower scale of Victorian terrace houses to the east, in Paddington. However, this is reasonable as:

- The locality is characterised by a juxtaposition of low scale heritage buildings and modern multi-storey buildings.
- The Precinct forms part of a discrete area of high rise building associated with St Vincent's Hospital.
- The eastern boundary of the Precinct sits along a distinct urban boundary between low rise Paddington and high rise Darlinghurst. As seen in **Figures 12, 13 and 32** when viewed from the east, the Concept Plan will be infilling a gap in the existing high rise wall along the eastern side of southern Darlinghurst.
- When viewed from more distant locations to the east, the proposed buildings will appear relatively small in the context of taller building further to the east and the high rise backdrop of the Sydney CBD (**see Figure 32**).

Figure 32 – District Scale Photomontage: View from Oxford Street Paddington, looking west (Source: Daryl Jackson Robyn Dyke Architecture)

8.5.4 Overshadowing

The Residential Flat Design Code (RFDC) adopts the standard sunlight access requirement that living rooms and private open spaces should generally receive a minimum of three hours direct sunlight between 9.00am and 3.00pm in mid winter, but that in dense urban areas a minimum of two hours may be acceptable.

Commercial, retail and medical properties are less sensitive to overshadowing. Public open spaces in urban areas (i.e. Green Park) are sensitive to overshadowing during the 10.00am to 2.00pm period when they are used for lunch time activities.

Hourly shadow diagrams from 9.00am to 3.00pm on the winter solstice (21 June - the shortest day of the year) are included at **Figure 35** and reproduced at a larger scale, along with corresponding drawings on both equinoxes, at **Appendix F.** The winter solstice is the shortest day of the year and represents the worst case situation for overshadowing.

Green Park

As can be seen in the 10.00am Winter Solstice Shadow Diagram at **Figure 33**, early morning shadows cast by the proposed Cancer Centre building will affect Green Park and commercial premises on Victoria Street. However, these shadows will have moved entirely off Green Park by 10.00am. All other morning shadowing will largely fall within the Precinct itself and the Hospital buildings.

Figure 33 - Shadow Diagram - 10.00am Winter Solstice

Residential Areas to the East

Notwithstanding that the Darlinghurst / Paddington interface is clearly a dense urban area, as can be seen in the shadow diagrams at **Figure 34**, no existing or proposed building within the Precinct will overshadow the residential area to the east before noon, providing the required three hours of winter sunlight between 9.00am and 3.00pm. At noon, additional shadowing in mid winter will only affect the (Sisters of Charity) convent on West Street, which is owned by St Vincent's, and a small corner of the apartment building at 36-38 West Street.

By 1.00pm No. 36 West Street is already overshadowed by existing development. While the rear courtyard of 15 West Avenue will be overshadowed by the proposed Stage 2 building envelope by 1.00pm, all other shadows fall upon the roofs of residential buildings or the Sisters of Charity convent.

Figure 34 - Shadow Diagram - Noon Winter Solstice

Figure 35 - Shadow Diagram - 1.00pm Winter Solstice

While the rear courtyard of 21 West Avenue will be overshadowed by 1.30pm (**see Figure 36**), as a result of the shadows cast by the existing Telstra Building, it is not until 2.15pm (**see Figure 37**) that the rear courtyards of properties on the northern side of West Avenue will be overshadowed by the proposed Stage 2 building, by which time they will already have enjoyed over 5 hours of direct sunlight on this shortest day of the year.

Figure 36 - Shadow Diagram - 1.30pm Winter Solstice

Figure 37 - Shadow Diagram - 2.15pm Winter Solstice

Summary

In summary, Green Park will maintain full sun access shortly after 10.00am on the shortest day of the year and all West Avenue residences will receive well in excess of the 3 hours sunlight required by the Residential Flat Design Code between 9.00am and 3.00pm on the Winter Solstice, with most receiving in excess of 5hrs. The shadow impacts of the Concept Plan are therefore clearly consistent with the Planning Principle: Impact on Solar Access of Neighbours set out by the Land and Environment Court in Parsonage V Ku-ring-gai (10225 of 2004).

8.5.5 Environmental Amenity

While the Precinct will comprise quite closely spaced buildings, suitable individual and collective amenity for these buildings will be achieved as:

- Each building will have a significant street frontage providing distant outlook and access to natural light and air.
- The principal building separations either side of the existing Lowy Packer Building are oriented to the north, optimising their exposure to sunlight and daylight, particularly during the midday lunch period, when the amenity of these spaces is most significant.
- All of the buildings will have similar medical research functions and the underlying concept of the project is integration within the Precinct. While sightlines will exist between adjacent buildings, these will engender a sense of precinct cohesion, rather than the privacy intrusion that would be perceived by unrelated uses in such proximity.
- The close proximity and physical connections between the various buildings will optimise opportunities for inter-connectedness and the sharing of facilities and resources.

8.6 Car Parking, Access, Traffic and Transport

A Revised Traffic and Parking report has been prepared by TEF Consulting and is included at **Appendix B**.

8.6.1 Car Parking

There are no specific requirements for medical research facilities in South Sydney Development Control Plan 11 - Transport Guidelines for Development 1996 (DCP 11). The generic DCP rate of 1 car parking space per 125m^2 of Gross Floor Area (GFA) applicable to office buildings is the most comparable to the proposed uses. There is also a rate of two spaces per effective full time doctor for medical centres and one space per 50 m^2 for retail (small shops). Bicycle parking Is required at a rate of one space per 20 staff.

	PROPOSED	DCP 11 CAR PARKING REQUIREMENT
Lowy Packer	9,354m^2 office/commercial use	75
GIMR	17,157m^2 lab/office	80 (by previous approval)
Cancer Centre	8,525 m^2 office/commercial use	68
	4 to 15 EFT doctors medical centre	29
	230 m^2 retail (small shop)	5
Stage 2 Site	7.5-8,000m^2 office/commercial use	64
Total Precinct	300 car parking spaces	321

The 300 spaces proposed within the Precinct are consistent with the 321 spaces calculated in accordance with the maximum rates of DCP 11 and previous approvals.

8.6.2 Vehicular Access

Access via the existing West Street driveways is proposed because:

- RTA guidelines (2002) recommend that vehicle access be provided by the lowest order street frontage of any site, which in this case is clearly West Street.
- RTA guidelines (2002) specify a 'desired environmental capacity' of 200-300 veh/h for local streets, such as West Street. Existing peak hour traffic flows in West Street are approximately 40-50 veh/h. While the project will increase volumes In the peak hour to approximately 130-150 veh/h this volume is still well within the environmental capacity of this local urban street.

A key issue raised in the great majority of submissions relates to the 'Special Condition' to the project approval for the erection of the Lowy Packer building. This condition effectively requires measures to preclude vehicles entering the existing West Street driveways via West Avenue. Whilst we acknowledge that the installed traffic islands do not physically prevent vehicles making this movement, the movement is nevertheless unlawful. Furthermore, the movement occurs in very limited numbers.

Traffic counts carried out by TEF Consulting in the course of preparation of the traffic impacts assessment revealed two (2) vehicles performing this movement in order to enter the loading dock during the 3-hour morning survey period. One (1) such illegal movement was recorded during the 4-hour afternoon survey period. Camera footage over a three day period In September-October 2009 revealed a total of 15 vehicles performing this manoeuvre.

Chaplin Street is unacceptable as a vehicular access point because:

- Right hand turns into Chaplin Lane would create significant conflicts with the operation of the proximate signalised intersection of Liverpool and Victoria Streets. However, the width, geometry and proximity of Chaplin Lane and Victoria Street effectively prevent the provision of a physical barrier to prevent such movements.
- Assuming that right hand turns into Chaplin Street could be prevented, the majority of vehicles that will be arriving from the north, south or west will have to circle the block to arrive via West Street in any event.
- Chaplin lane is private land (i.e. it is not currently a public road) and it is proposed to be pedestrianised to form an important linkage between research activity within the Lowy Packer building and the TKCC. Noting the need to traverse a subterranean substation required at the northern end of Chaplin Street, vehicle access via Chaplin Street would require a significant ramp structure that would effectively preclude any meaningful pedestrian interface across Chaplin Street.
- Given the proximity of Chaplin Street to the signalised intersection of Victoria and Liverpool Streets, only a small amount of queuing back from this intersection would obstruct egress from the site in peak periods.

West Street is the most logical point of vehicular access to the Precinct, and objective traffic analysis indicates that West Street has ample environmental capacity to accommodate the proposed additional traffic.

8.6.3 Traffic impacts

A survey of staff of the VCCRI and GMIR by TEF Consulting in October 2008 (see **Appendix B**) indicates the preferred modes of travel to work are public transport and modes other than private car (i.e. walking, cycling).

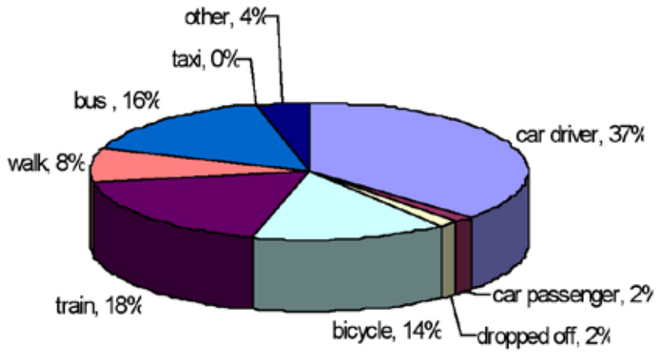


Figure 38 – Modal Transport Split (Source: TEF Consulting Traffic and Parking Report)

Road capacity

Most surrounding streets, except those directly adjoining the Precinct, will carry essentially the same volumes of traffic before and after the proposed development of the Precinct. The estimated increase in traffic volumes in the area is between 1% and 7%.

The notable exception is West Street, which will increase from an existing peak hour flow of 40-50 veh/h, to a peak hour flow of 130-150 veh/h after development of the precinct. However, West Street is defined by the RTA as a 'local' street, for which an 'environmental capacity' of 200-300 veh/hr is specified. West Street will remain well within this capacity.

However, the efficiency of urban road networks is defined more by the efficiency of intersections than midblock capacities. The following SCATES analysis of surrounding intersections was prepared by TEF (see **Appendix B**).

Darlinghurst St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Liverpool St	5.3	A	0.35	5.4	A	0.40
2526	Burton St	8.9	A	0.35	8.0	A	0.40
0697	Oxford St	9.7	A	0.75	11.4	A	0.74

Victoria St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0022	Liverpool St	6.0	A	0.41	11.2	A	0.40
0188	Burton St	6.6	A	0.43	20.9	B	0.33
0131	Oxford St	18.0	B	0.89	47.4	D	0.92

Liverpool St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Darlinghurst Rd	8.4	A	0.35	9.1	A	0.41
0022	Victoria St	5.9	A	0.58	5.2	A	0.59
0258	West St	1.9	A	0.20	2.2	A	0.23

Oxford St	Existing						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0697	Darlinghurst Rd	4.2	A	0.60	3.8	A	0.69
0131	Victoria St	17.7	B	0.81	18.1	B	0.86

Darlinghurst St	with 248 additional spaces						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Liverpool St	7.0	A	0.35	7.3	A	0.41
2526	Burton St	12.6	A	0.35	11.2	A	0.39
0697	Oxford St	13.5	A	0.72	16.1	B	0.72

Victoria St	with 248 additional spaces						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0022	Liverpool St	6.0	A	0.43	11.0	A	0.43
0188	Burton St	6.4	A	0.43	20.1	B	0.33
0131	Oxford St	18.0	B	0.89	49.2	D	0.94

Liverpool St	with 248 additional spaces						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Darlinghurst Rd	8.7	A	0.32	9.2	A	0.36
0022	Victoria St	6.6	A	0.60	6.5	A	0.62
0258	West St	2.4	A	0.21	4.4	A	0.28

Oxford St	with 248 additional spaces						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0697	Darlinghurst Rd	4.2	A	0.61	3.8	A	0.69
0131	Victoria St	18.1	B	0.81	18.5	B	0.87

Level of service criteria for intersections

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout
A	< 14	Good operation
B	15 to 28	Good with acceptable delays & spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode

Source: RTA (2004)

Darlinghurst St	with 300 additional spaces						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Liverpool St	5.3	A	0.35	5.5	A	0.42
2526	Burton St	9.1	A	0.36	8.1	A	0.41
0697	Oxford St	9.7	A	0.75	11.5	A	0.75

Victoria St	with SVRP 300						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0022	Liverpool St	6.0	A	0.43	11.0	A	0.44
0188	Burton St	6.4	A	0.43	19.9	B	0.34
0131	Oxford St	18.0	B	0.89	49.6	D	0.94

Liverpool St	with SVRP 300						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0024	Darlinghurst Rd	7.8	A	0.33	8.2	A	0.37
0022	Victoria St	6.0	A	0.62	6.5	A	0.64
0258	West St	2.2	A	0.21	4.4	A	0.30

Oxford St	with SVRP 300						
TCS	Intersection	AM			PM		
		AVD	LOS	DS	AVD	LOS	DS
0697	Darlinghurst Rd	4.2	A	0.61	3.8	A	0.69
0131	Victoria St	18.1	B	0.81	18.6	B	0.87

The results indicate that, even with estimated additional traffic increased proportionally to the full car parking capacity of 300 cars, intersections will continue to operate at the same Levels of Service as at present, with minimal increases in average delays and queuing. TEF Consulting therefore concluded that the existing road and intersection network in the vicinity of the site can accommodate the proposed development of the Precinct without any significant adverse effects.

8.6.4 Loading/Unloading

The existing Precinct loading dock has two bays suitable for large trucks (one of them is occupied by a recently acquired waste compactor) and two spaces for vans and cars. This arrangement operates satisfactorily. While some suppliers are requested to deliver at certain times to avoid congestion, this is a normal arrangement. It is noted that the current traffic generation by the loading dock is greater than normal due to the fit-out works being undertaken for the Lowy Packer Building at the time of the survey, which results in additional deliveries of equipment (sometimes large items). Most of the deliveries to the stores are made by Medium Rigid Vehicles (i.e. MRV - size of a typical garbage truck) or smaller (i.e. Small Rigid Vehicles, vans and cars). Heavy Rigid Vehicles (i.e. HRVs, 12m long) are used only for collection of contaminated waste (once daily on weekdays) and when large equipment is delivered.

Some HRVs currently reverse into the loading dock from West Street. This situation can be tolerated with the existing very low traffic volumes in West Street. However, after the proposed development it will be necessary to ensure HRVs enter and exit in a forward direction. This is proposed by providing separate entry and exit driveways to enable through truck movements.

A number of designs have been considered and an entry driveway on the northern side of the existing basement car park entry is proposed. The existing two-way driveway to the loading dock is proposed to become an exit only driveway. In terms of the number of bays, one additional truck bay suitable for an HRV and two additional spaces for vans/cars are proposed to cater for the proposed development.

8.7 Heritage

A Heritage Impact Statement (HIS) for the Concept Plan has been prepared by Urbis and is included at **Appendix I** of the Environmental Assessment report. An Addendum to this report has been proposed to address the revised scheme detailed in the Preferred Project Report. This addendum is included at **Appendix G.** The key findings of the statement (and addendum) are summarised below.

Prior to European settlement, the Womerah group of the Eora Aboriginal people occupied the area between Sydney Cove and Botany Bay. Thomas West was granted land in the area in 1812 and named his estate Barcombe Glen. He received a further land grant in 1844 which included a quarry site. The eastern part of the Precinct is this part of West's estate. An 1853 grant (the government land adjacent to the quarry) to William Barker was later absorbed into Edward Riley's land holdings. The western section of the Precinct contains part of Block 13 of Riley's Estate.

By 1865 most of the Precinct sites along Liverpool Street, West Street and Victoria Street were developed, with detached dwellings, rows of terraces and the Green Park Hotel on the corner.

During the 20th century, St Vincent's Hospital gradually acquired the ownership of all but two of the sites in the Precinct, and many buildings (particularly in the centre of the Precinct) were demolished. By 1943 the corner of Burton Street and West Street had been altered by the straightening of Burton Street. By the early 21st century, much of the site had been cleared and redeveloped with the GIMR building, a medical centre in Victoria Street and a large car park in Liverpool Street (the site of the current Lowy Packer Building). The lane had been terminated in the centre of the Precinct and a new access way created into West Street.

In 2008 the Lowy Packer Building was officially opened.

As indicated in **Figure 37**:

- The only heritage item on the site is 372 Victoria Street
- The Cancer Centre site forms part of the Victoria Street heritage streetscape area.
- The Precinct is in the vicinity of 360 Victoria Street (Green Park Hotel) and Darlinghurst Public School, which are both locally listed heritage items.
- The site adjoins, but is not part of the Barcom Avenue Conservation Area.

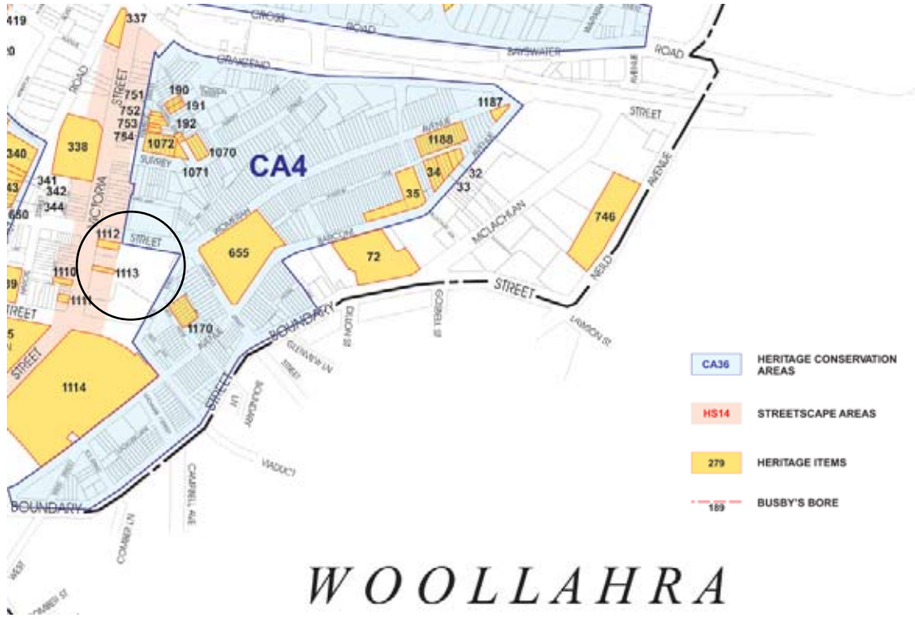


Figure 39 – Heritage Listings (Source: South Sydney LEP 1998)

8.7.1 Demolition of Heritage Items

One listed and one unlisted building of heritage significance is proposed to be demolished.

372 Victoria Street – "Pomona"

The demolition of Pomona has been approved - MP09_0011.

429 and 431 Liverpool Street – terraces

Whilst No. 431 Liverpool Street is not owned by the Trustees of St Vincent's and is not proposed to be altered, No. 429 Liverpool Street is proposed to be demolished. The two terraces are a remnant pair which once formed part of a greater row along Liverpool Street between Chaplin Street and West Street. Whilst they are representative of the late Victorian terraces that form much of the inner city area, they do not reach the threshold for individual significance on any criteria. Whilst the buildings contribute to the character of the area, they have lost their streetscape context.

Neither building is included in a conservation area and neither is listed as a heritage item under South Sydney LEP 1998.

8.7.2 Victoria Street Heritage Streetscape

The Kinghorn Cancer Centre on Victoria Street has been approved MP09_0011.

8.7.3 Impact on Heritage Items and Conservation Areas

No. 360 Liverpool Street (Green Park Hotel) and Darlinghurst Public School are listed heritage items and the Precinct adjoins, but is not part of the Barcom Avenue Conservation Area.

360 Victoria Street – Green Park Hotel

The Trig survey of 1865 shows that the corner site was already developed by that time. It comprised a narrow building flush to the pavements on both its Victoria Street and Liverpool Street frontages. In the yard behind was a small outhouse set on the Liverpool Street frontage. By 1884 the building had been extended along Liverpool Street and had become the Green Park Hotel. It was remodeled in 1893.

The Statement of Significance for 360 Liverpool Street is:

Fine example of a Federation style hotel located on a prominent corner.

The Concept Plan mediates the interface between the proposed Cancer Centre and the two storey Green Park Hotel by incorporating a low rise element that reflects the height and the width of the Green Park Hotel frontage to Victoria Street. Given the corner location of the hotel, the proposed low rise section will allow the hotel to maintain visual prominence notwithstanding the high rise elements beyond. In this regard, the hotel already reads as a low scale element set before the existing high rise forms of the Lowy Packer and GIMR buildings (**see Figure 33**). The proposed low rise element will allow the hotel to remain visually separated from this high-rise backdrop.

350 Liverpool Street - Darlinghurst Public School Group

The school site is located diagonally opposite the north east corner of the Precinct. It comprises a two storey Victorian Romanesque style main building and single storey play centre, c1883, two storey Inter-War buildings, c1923, sandstone pillars, stairs and associated landscaping. Its Statement of Significance is:

"Darlinghurst Public School has historical significance as one of the first large schools built as a result of the Public Instruction Act 1880 and an example of the large schools that were built in densely populated areas and designed to be an impressive expression of the status and value of government education. It has significance as being a good example of a Victorian Romanesque style School, and an example of the work of a private architect, one of three schools in the metropolitan area designed by Charles Mayes. The school has social significance for being the first school in the State to provide special education for migrants between 1939 and 1942."

Its visual setting does not include the Precinct and there are no significant views to and from the school that would be impacted by development within the Precinct.

Barcom Avenue Conservation Area

The Barcom Avenue Conservation Area has a dense urban character predominantly comprising 1 - 3 storey terrace housing.

The Statement of Significance is:

"The Barcom Glen Estate was a predominantly industrial and rural area until the nineteenth century, subdivided for residential development later than surrounding districts. It therefore has historical significance for its ability to evidence the industrial history of Darlinghurst. The area also has high aesthetic values for its fine coherent streetscapes representing middle class, residential development of the late Victorian period and early Federation. The topography and street plantings enhance the picturesque qualities of the highly intact streetscapes."

The current buildings within the Precinct, with the exception of the remnant Victorian terraces in Victoria and Liverpool Street` bear no relationship to the aesthetic qualities of the conservation area.

8.7.4 Archaeology

An Archaeological Assessment was conducted by Cultural Resources Management in 2005 in association with the proposal to develop the Lowy Packer Building (included at Appendix I of the Environmental Assessment report). The assessment related to the entire Precinct. The findings included:

Statement of Significance

> *The study area encompasses land from two of the largest early nineteenth century estates in East Sydney…*
>
> *The evidence of the built and cultural environments is unlikely to be rare but it is representative of a community and the potential archaeological resource has the ability to address the historical profile of this site…*
>
> *The potential archaeological resource of this place is assessed to have high cultural value of particular significance to the local community and for general scientific research values…*

Mitigation: Archaeological Strategy and Objectives

> *The level of significance of the relics likely to be contained within the site is not sufficient to warrant consideration of in-situ conservation of structures as a means of preserving evidence. There are standing structures that provide permanent examples of the more substantial types of buildings likely to be recorded here and the more ephemeral buildings are likely to be identified by deposits that are impossible to maintain, such as post holes.*
>
> *The evidence of culture and environment in association with this built environment is the more significant aspect of the resource and generally as difficult to conserve as ephemeral structures. It is a more appropriate option to investigate, record and interpret the archaeological evidence, transferring this data to stable and more accessible forms, plans, sections, photographs etc as well interpreting it in light of the primary archival resource and evidence from comparable sites.*
>
> *This action would entail a comprehensive salvage excavation with the objective of documentation and examination of specific issues or research questions prior to the redevelopment of the site. These overall objectives should provide the basis for a research design for the site. A research design accompanies the application for an excavation permit. The research design is essentially a specification of archaeological works that details how the site will be investigated and what the expected outcome of that excavation will be with respect to the information gathered during its investigation".*

In accordance with the recommendations of the Archaeological Report, the Statement of Commitments (**see Appendix E**) includes a commitment to undertake further archaeological investigations, including comprehensive open area excavation and recording with the objective of providing an archival record of the information now preserved in the ground with reference to specific aspects and issues of community and scientific relevance. All archaeological work will be undertaken in consultation with the NSW Heritage Branch and Archaeological Assessment Guidelines 1996 (as amended).

8.8 Ecologically Sustainable Development

ARUP Pty Ltd have advised that while the following guidelines and ESD rating schemes variously apply to different components of each project within the Precinct, none apply universally across the Precinct:

- Green Star Health Care Pilot.
- NABERS Energy.
- TS-II.

The proponent therefore commits (**see Appendix E**) that each Project Application will be accompanied by an ESD Performance Report that investigates the above guidelines and rating schemes (together with other international guidelines such as LEED for Health Care, Green Guide to Health Care, Labs 21) and adopts from each the most appropriate targets. This will become the basis against which the design, construction and ongoing operation phases of each building will be assessed. Each report will identify specific strategies in relation to:

- Energy Efficient Design.
- Indoor Environmental Quality.
- Water-Sensitive Urban Design Measures.
- Commissioning.
- Materials, Recycling and Waste Disposal.
- Landscape and Site Ecology.
- Transport.

8.9 Geotechnical Conditions

A preliminary Geotechnical Assessment of the proposed development sites has been prepared by Golder Associates (see Appendix J of the Environmental Assessment report).

The report advises that the Precinct is located along the eastern side of a broad north-notheast trending ridge comprised of Hawkesbury Sandstone formations, overlain to an indicative depth of 1.5 metres with sand (Aeolian sand) and clayey sands (residual sandstone soil).

The report considers the geotechnical feasibility of basement excavation of up to nine storeys and both high and low level tunnel connections under the existing Lowy Packer Building to potentially link the Cancer Centre and the Stage 2 basements.

The report concludes that it is technically feasible to construct such basement, and we note that only six basement levels are proposed.

8.10 Contamination

Previous retail, commercial and residential uses of the site raise limited potential for localised contamination. Given that the entire area of both proposed development sites is proposed to be excavated into rock to a depth of 6 storeys, any potential contamination will be removed by these works. Contamination issues therefore relate to questions of the manner in which any potentially contaminated material is identified, removed, and disposed of.

The Statement of Commitments (**see Appendix E**) therefore includes a commitment to undertake Phase 1 Site Investigations and implement a Remedial Action Plan (RAP), if found to be required, prior to the commencement of any work.

8.11 Utilities and Infrastructure

A Utilities and Infrastructure Services Capacity Report has been prepared by ARUP (see Appendix K of the Environmental Assessment report).

8.11.1 Water Supply

The ARUP report advises that Victoria Street has a 200mm CICL water main that should provide sufficient hydraulic and fire flows to the Cancer Centre, and the West Street has a 150mm UPVC water main that should provide sufficient hydraulic and fire flows to the proposed Stage 2 building.

The existing GIMR is served by a 150mm DICL water main in Burton Street and the existing Lowy Packer Building is served by a 150mm CICL water main in Liverpool Street.

A combined hydraulic and fire flow rate of 56 litres/second will be required to the Cancer Centre and ARUP assume a similar flow rate will be required for the Stage 2 building.

ARUP's load estimates of the building indicate there is sufficient capacity in the authorities water mains to cater for the additional loads of the new buildings. However Sydney Water conditions may require Section 73 applications to be submitted to determine the exact impact the additional buildings will have on the surrounding infrastructure, and any amplification requirements.

8.11.2 Wastewater

The ARUP report advises that there are existing sewer mains in Victoria, Burton, West, Chaplin and Liverpool streets of sufficient capacity to service the existing and proposed buildings.

The existing GIMR building drains to an existing 225mm PVC sewer main in Chaplin Lane and this drain eventually drains to West Street. The existing Lowy Packer Building drains to a 300mm PVC sewer drain located in the link between Chaplin Lane and West Street.

ARUP recommend that the sewer drainage from the proposed Stage 2 building drain directly to the authorities 225mm VC sewer drain in West Street, but note that there will be sufficient capacity in the 300mm sewer drain from Chaplin Lane to West Street. The proposed Cancer Centre building will also need to drain to the existing Chaplin Lane 225mm VC sewer and this drain has sufficient capacity to cater for the additional load of the new building.

ARUP's preliminary load estimates of the buildings indicate there is sufficient capacity in the authorities sewer mains to cater for the additional loads of the new buildings, but that Sydney Water conditions may require Section 73 applications to Sydney Water to determine the exact impact the additional buildings will have on the surrounding system, and any amplification requirements.

8.11.3 Electricity

The ARUP report advises that Energy Australia have indicated that the additional load required from their network for the ultimate precinct would likely require high voltage upgrade works to be undertaken.

Application to Energy Australia is required to confirm the extent of these required works and associated costs. This will be undertaken at design development stages.

The existing precinct substations currently serving the GIMR and the Lowy Packer Building are not adequate to service the new the Stage 2 and Cancer Centre buildings. New substations will therefore be required to provide the low voltage power requirements for each facility.

8.11.4 Gas

The ARUP report advises that there are existing gas mains in Victoria, Burton, Chaplin, West and Liverpool streets. Victoria Street has a 110mm Nylon 300kPa gas main which should be sufficient for the proposed Cancer Centre building. Liverpool Street has a 200mm 1050 kPa secondary gas main and has a 110mm Nylon 300 kPa gas main. Both of these gas mains should have capacity to service the proposed Stage 2 building.

8.11.5 Telecommunications

The ARUP report advises that existing telecommunications services are adequate for the future requirements of the Cancer Centre and the Stage 2 building. Upgrades to the existing GIMR telecommunications lead-in cables and telephone tie-cable links to the Cancer Centre and the Stage 2 building may be provided, or new Cancer Centre and Stage 2 building lead-in cables may be provided to each building independently, depending on the interconnection requirements of the buildings. An application will be made to Telstra (or other service provider) account manager currently servicing the GIMR site for these new telephone connections.

All backbone cabling for the Cancer Centre and the Stage 2 building may be connected into the precinct LAN via multi-core fibre optic cabling with the GIMR as the central point in the star topology. Additional equipment and upgrade works are required within the GIMR to the enable the interconnectivity of these proposed buildings.

8.12 Drainage, Stormwater and Groundwater Management

A Utilities and Infrastructure Services Capacity Report has been prepared by ARUP (see Appendix K of the Environmental Assessment report). The report advises that there are existing stormwater mains in Burton, Chaplin, West and Liverpool streets. A 450mm stormwater drain located between Chaplin Lane and West Street has been installed during the construction of the Lowy Packer Building and this drain currently collects drainage from the Lowy Packer Building and Chaplin Lane. This 450mm drain will be required to drain the proposed Cancer Centre building and the majority of the proposed Stage 2 building.

ARUP's preliminary calculations indicate that the 450mm drain has sufficient capacity for the additional proposed buildings. The authority's stormwater in West Street and Burton Street will need to be at least 450mm diameter as this drain will drain all four buildings.

Water Sensitive Urban Design principles such as rainwater harvesting will be implemented to minimise flows to the stormwater system as an alternative to stormwater onsite detention.

The ARUP report advises that groundwater to the perimeter of the under ground car park can be directed to pump stations at the lowest level and pumped out to gravity stormwater systems.

ARUP also advise that the entry into Chaplin Lane from Liverpool Street will require modification to ensure overland flow from Liverpool Street is not diverted into Chaplin Lane during periods of heavy rainfall.

8.13 Developer Contributions

The City of Sydney Development Contributions Plan 2006 currently specifies a contribution rate of $1,498.07 per worker in the 'Eastern Precinct'. However, Section 2.14 provides for the exemption of development that provides a clear community benefit on a not-for-profit basis. SV&MHS, GIMR, VCCRI and the Kinghorn Cancer Centre and all associated entities are 'not-for-profit' organisations, and the proposed medical research activities and outcomes will provide clear public benefits.

It is therefore proposed not to provide any development contributions.

09 Conclusion

The outputs of medical research have global implications and co-locating world leading cancer , cardiology and other medical research facilities with a major clinical hospital will provide significant benefits in terms of translational medical outcomes. Translational medicine is current world best practice in linking research breakthroughs with clinical implementation. As specifically envisaged in all relevant State planning strategies, the creation of a 'hub' of these facilities around the existing St Vincent's Hospital will reinforce the 'magnet infrastructure' function of the hospital and act as a key driver of economic development not only for the locality but for the State of NSW.

The proposed new cancer research and care centre is clearly a desirable facilities for the city and the State, and will provide many public benefits at both a local and an international level. While the dense urban environment of Darlinghurst requires the creation of tall buildings in close proximity to residential buildings with a low scale heritage character, the juxtaposition of such diverse forms is already a defining feature of the Darlinghurst environment, and the proposed buildings will by no means be the largest or the tallest in the local environment.

Furthermore, our analysis of potential visual, traffic, car parking, overshadowing, heritage and noise impacts has identified no unreasonable adverse environmental effects likely to arise as a result of the proposed development.

Analysis of alternative development options for the research facilities has identified that alternative or additional sites are not available within the immediate proximity of the Precinct, and transferring the facilities to a distant locality would undermine the fundamental concept of co-locating research and clinical functions from which translational medical outcomes are derived.

We therefore conclude that the relatively minor and localised impacts of the scale of the proposed buildings is far outweighed by the significant benefits of the project to the State.

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