06 The Concept Plan

6.1 The Vision

SVMHS 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.

SVMHS seeks to expand the Precinct to include not only the existing St Vincent's Hospital, GIMR and VCCRI, but to also include the GSVCCC and the UNSWVC as indicated in Figure 21.

Figure 21 – Location of GSVCCC and UNSWVC Development Sites

The GSVCCC will align 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.

The UNSWVC will provide a new home for the NCHECR, an existing world leader in HIV treatment and prevention.

This Concept Plan proposes an overarching planning strategy for the entire Precinct to guide separate project applications for each of the GSVCCC and UNSWVC components of the project.

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, specifically the GSVCCC and UNSWVC. 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 Detailed Description of Proposed Development

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

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

The detailed design of the buildings will be subject to subsequent Project Applications.

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 GSVCCC and UNSWVC development sites.

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

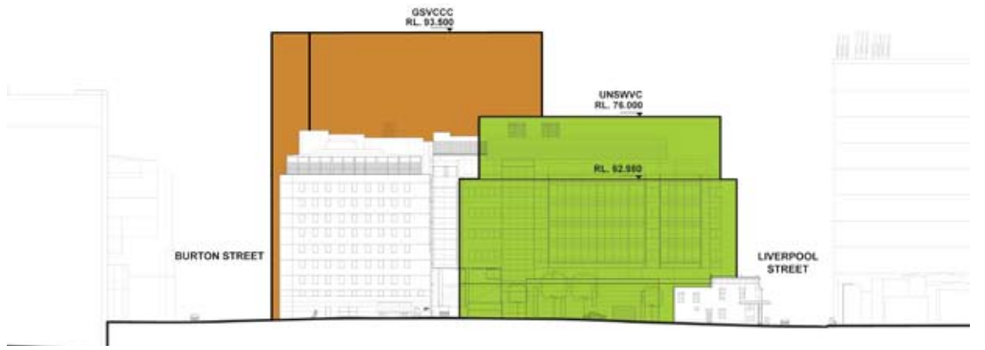
6.3.2 Building Envelopes

The GIMR and VCCRI 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 GSVCCC and UNSW Virology buildings, this Concept Plan does not propose any height or floor space controls upon these buildings.

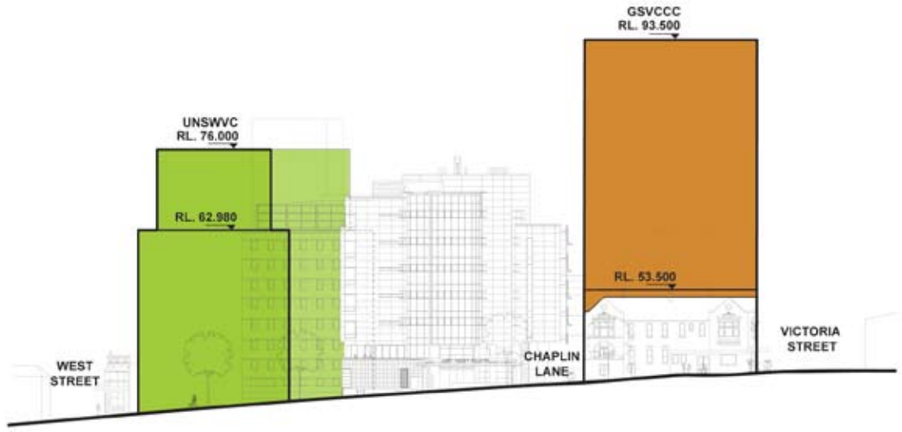
The building envelopes of the proposed GSVCCC and UNSWVC are described in plan and elevation at Figure 23, and included in A3 format at Appendix D.

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

West Elevation



East Elevation



North Elevation

Looking north-east

Looking south-east

Looking south-west

Looking north-west

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

	Existing		Additional / Proposed	
	GIMR	VCCRI	GSVCCC	UNSWVC
Site Area (Measured at Level 4)	2,527 m²	1,732 m²	2,006 m²	1,885 m²
GFA[1]				
- Medical Research	17,157 m²	9,354 m²	14,000 m²	8,500 m²
- Car Parking (exceeding DCP requirement)	-	-	4,100 m²	5,500 m²
Floor Space Ratio (excluding all carparking)	6.8:1	5.3:1	7.0:1	4.5:1
Building Height				
- Top Most Point (excluding masts, antennae, flagpoles, exhaust vents and the like)	RL 72.62	RL 72.00	RL 93.50	RL 76.00
- Top Ceiling	RL 62.57	RL 66.18	RL 87.83	RL 70.58
- Lowest Natural Ground	RL 31.09	RL 36.19	RL 38.65	RL 33.77
- Lowest Natural Ground to Top Ceiling	41.53m	30m	49.12m	36.81m
Number of Storeys				
- Above Principal Street Frontage	9	8	11 (incl Plant level)	9 (incl Plant level)
- Basement (Habitable)	4	1	1	1
- Basement (Car parking)	-	1	5	5
Building Footprint	2,345 m²	1,165 m² (1,347m² Typical Floor)	1,750 m²	1,520 m²
Site Coverage	93%	77%	87%	81%
Car Parking Provision (maximum)	Nil	20 (-6 existing)	218	162
Captial Investment Value (CIV)	n/a	n/a	$58.86 M	$75 M

The Gross Floor Areas (GFA) proposed for the GSVCCC 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.

It is noted that, under South Sydney DCP 1997, height in relation to a building means *'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'*.

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

"Gross floor area 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 Staging

Architectural design of the GSVCCC building has commenced and is expected to progress in advance of the UNSWVC building.

Stage 1 – GSVCCC Early Works

The GSVCCC early works will be the first stage of the project and will involve demolition, archaeological investigations and excavation of the GSVCCC site.

Stage 2 – GSVCCC Building Works

The detailed design and construction of the GSVCCC building will be the second stage of the project. While the new building will be confined between Chaplin Lane and Victoria Street, this stage of the project will involve landscape works and linkages into the VCCRI and GIMR buildings, including a basement link into the VCCRI basement carpark and driveway to West Street. This stage of the project will rely upon the vehicular capacity of the existing driveway to West Street.

Stage 3 – UNSWVC Building Works

The detailed design and construction of the UNSWVC building will be the third stage of the project. This stage of the project will involve landscape works and linkages into the VCCRI building, and possibly the existing GIMR building. It will also involve the partial enclosure and expansion of the existing shared loading dock and waste storage facility for the entire Precinct and a new egress only driveway to West Street to facilitate the total volume of car parking in the Precinct.

Figure 25 – Project Staging (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.5 Car Parking, Access, Loading and Transport

Car parking

The Concept Plan provides a total maximum of 400 basement car parking spaces, comprising the following maximums for each building within the Precinct:

- 218 spaces in a basement below the proposed GSVCCC building.
- 162 spaces in a basement below the proposed UNSWVC building.
- 20 spaces (a reduction of 6 spaces) in the basement below the existing VCCRI building.

Vehicular access and loading

The existing Precinct loading dock within the VCCRI building will serve both the existing and proposed buildings. The existing basement car park and vehicular access to West Street will be maintained and relied upon for access by cars, trucks and bicycles to new basement car parks within the proposed GSVCCC building and the existing VCCRI building. An additional truck egress lane immediately north of the existing basement driveway on West Street will provide for forward egress of trucks.

While these arrangements will be sufficient to accommodate the GSVCCC building, as discussed in the Traffic and Parking Report included at Appendix C, the erection of the UNSW Virology building will require an additional egress driveway lane to West Street.

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 light 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 UNSWVC 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 the 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. A conclusion has been made that the Precinct is and will be well provided for in this regard.

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

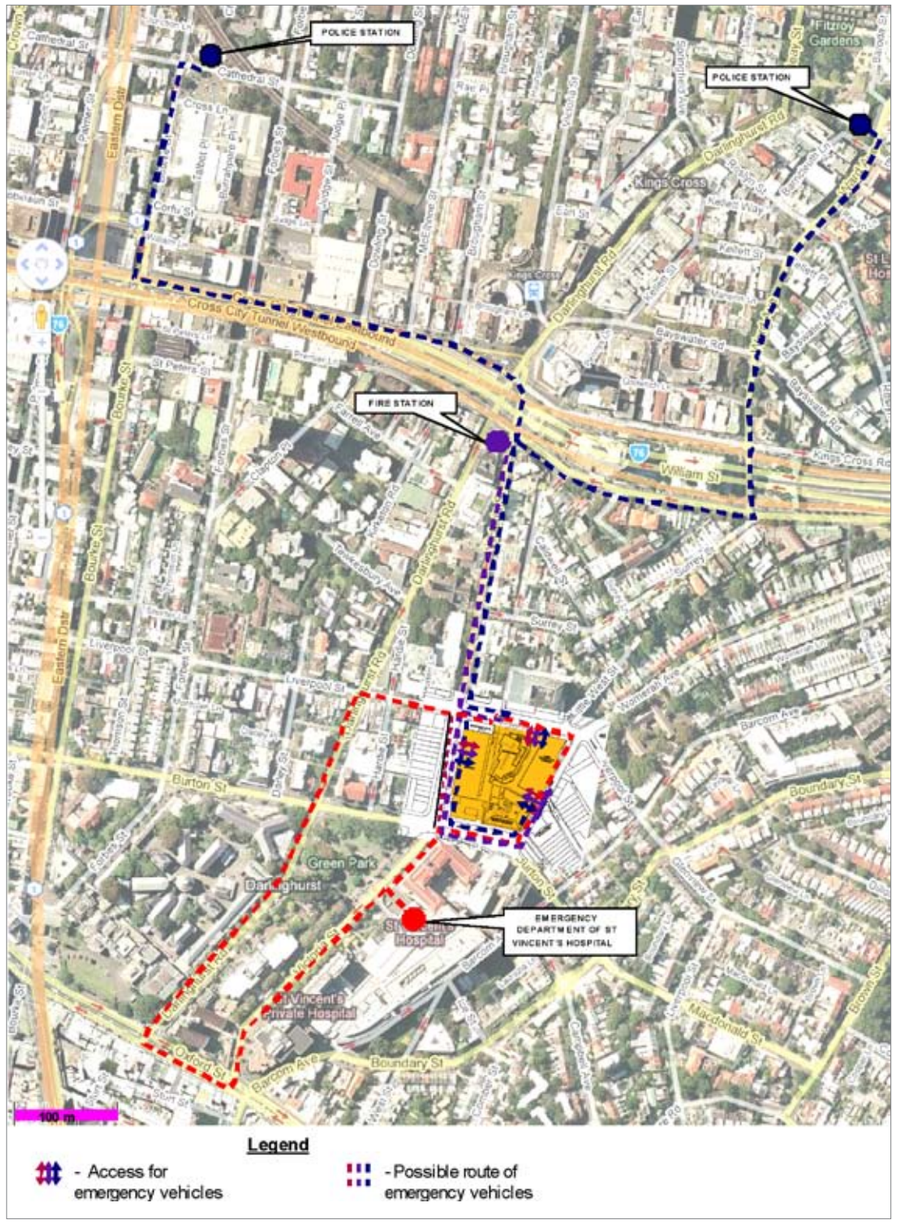


Figure 26 - Emergency Vehicle Access (Source: TEF Consulting)

Measures to promote public transport usage and reduce car usage

The proposed measures and the underlying principles and analysis will be included in a separate Transport Management and Accessibility Plan (TMAP). A summary of the measures is provided below. The measures are separated into those recommended for implementation and those recommended for further consideration.

Measures recommended for implementation:

- Provision of on-site bicycle parking/storage facilities, together with adequate number of lockers, changing facilities and showers. The minimum number of bicycle parking places is to comply with the requirements of DCP 11 for the Precinct.
- 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 all 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 each facility. 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 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.
- Develop and implement a system of teleworking, setting a benchmark for minimum teleworking time for each staff member.

Measures recommended for further consideration:

- Investigate a possibility of introducing shift times for certain staff, increasing the ratio of work starting and finishing times outside commuter peak periods.
- Introduce cash based incentives for staff (e.g. discounted travel passes, interest free loans for purchasing discounted season tickets).
- Employ a Travel Plan coordinator in charge of monitoring, development and implementation of measures to reduce car use.
- 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.
- 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.

6.3.6 Street Activation and Pedestrian Access

As detailed at Figure 27, both the Victoria and Liverpool Street frontages are proposed as 'active' street edges, with development along these frontages providing direct pedestrian access and visual connection between the street and the ground, and if possible the first level of the proposed buildings.

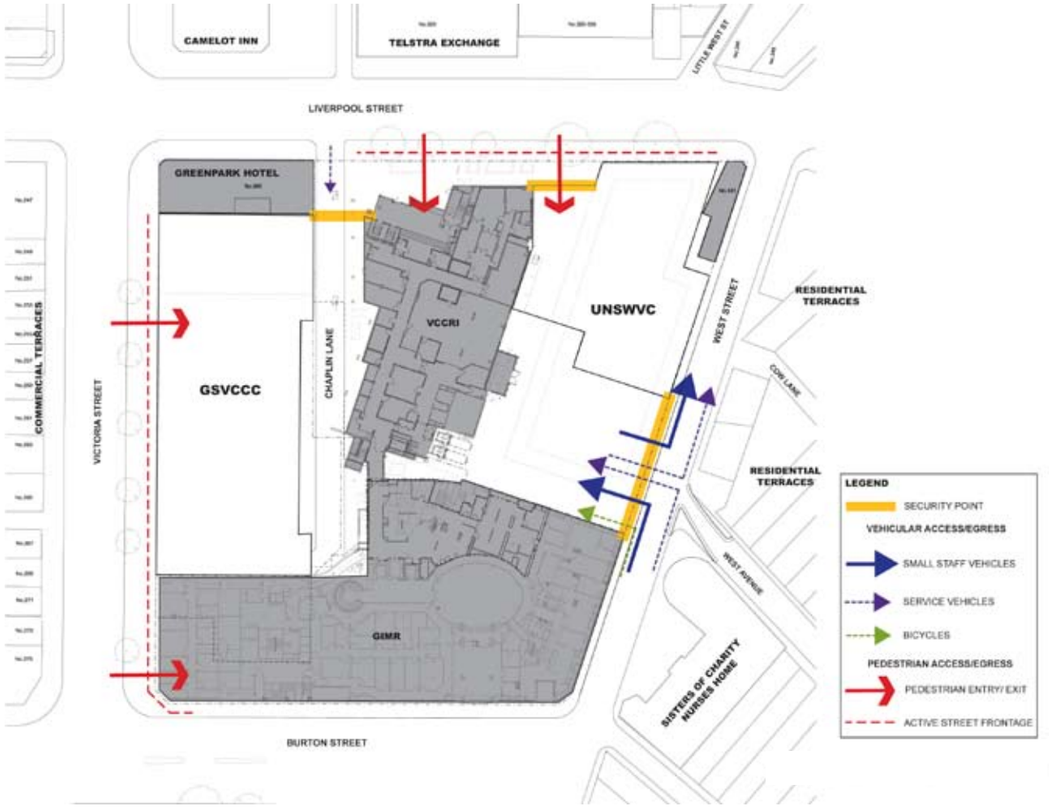


Figure 27 – Pedestrian and Vehicular Access (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.7 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 VCCRI 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 will 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 (e.g. cryogenic facilities).

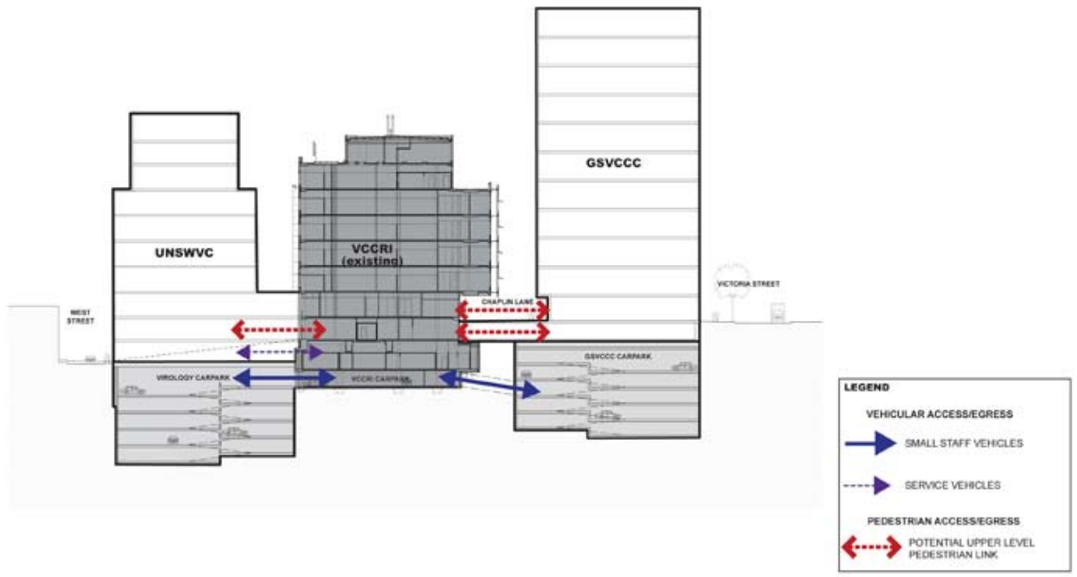


Figure 28 – Internal Connectivity (Source: Daryl Jackson Robyn Dyke Architecture)

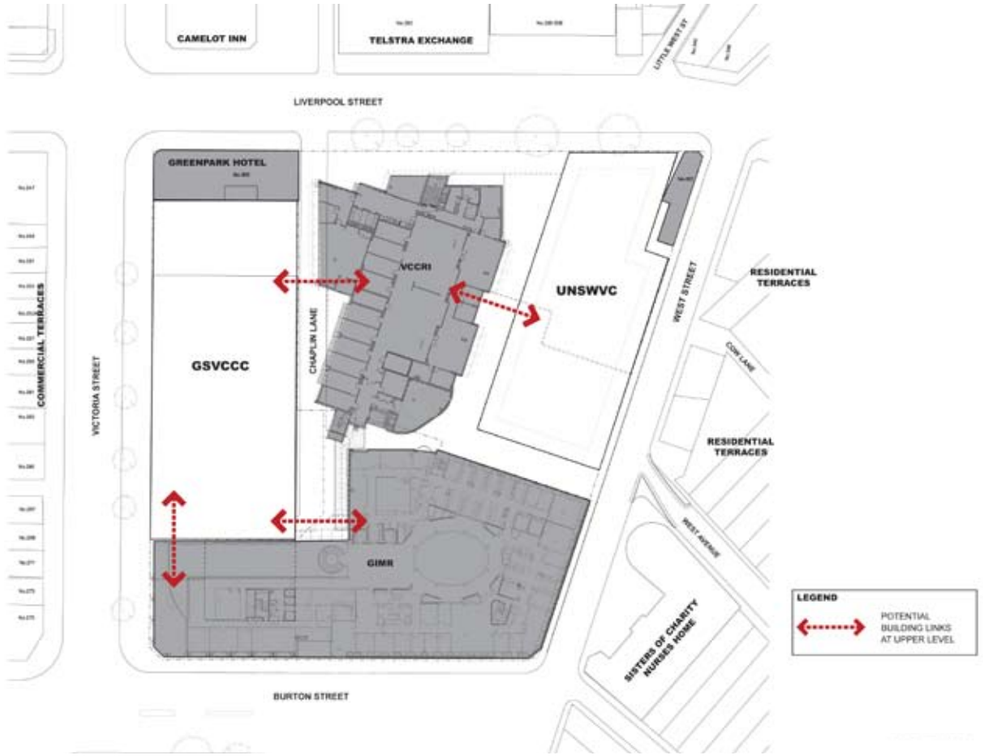


Figure 29 – Potential Upper Level Connections (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.8 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 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 VCCRI building. Both areas will be formally landscaped to provide courtyard spaces linking the VCCRI to the proposed UNSWVC and GSVCCC 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 VCCRI 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 VCCRI 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 buildings will be provided at Project Application stage

Figure 30 – Landscape Concept Plan (Source: Daryl Jackson Robyn Dyke Architecture)

6.3.9 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 lodgement 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 31.

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 E.

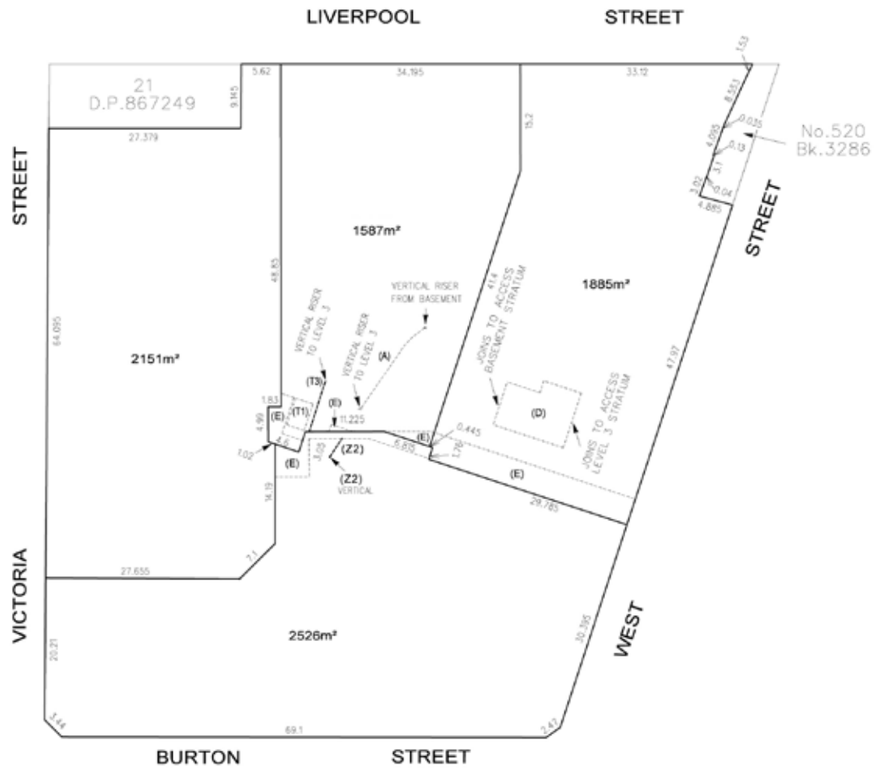


Figure 31 - Proposed Subdivision Extract (Source: Rygate Surveyors)

6.4 Draft Statement of Commitments

A draft Statement of Commitments is included at Appendix F. 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 draft 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.

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 Seperate 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 AA
	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
	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

DG's EA Requirements		Relevant Section of this Report
	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 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).

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 Projects) 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 Projects. Furthermore, as each component of the project have an approximate capital investment value in the order of $60 million (GSVCCC) and $75 million (UNSWVC), each project exceeds the $15 million threshold.

The Minister for Planning was therefore requested to confirm that both the GSVCCC and the UNSWVC 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 Gross Floor Area greater than 10,000m^2, would 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.

8.4 Urban Design and Built Form

The Concept Plan adopts an urban street edge form with no street setbacks other than at upper levels. 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 UNSWVC Building has been determined by that of the existing GIMR building to the immediate south. Three upper levels have been setback in a similar manner to the plant levels of the GIMR building.

Similarly, the street edge of the proposed GSVCCC building reflects the parapet height of the existing Telstra Building to the immediate north.

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, the proximity of evening entertainment uses in Taylor Square and Kings Cross and the various mental health and drug and alcohol treatment facilities within the hospital campus, safety and security is important.

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 VCCRI building and the two proposed buildings are proposed to be landscaped as accessible outdoor areas, these areas will be secured.

The existing GIMR and VCCRI 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 draft Statement of Commitments attached at Appendix F.

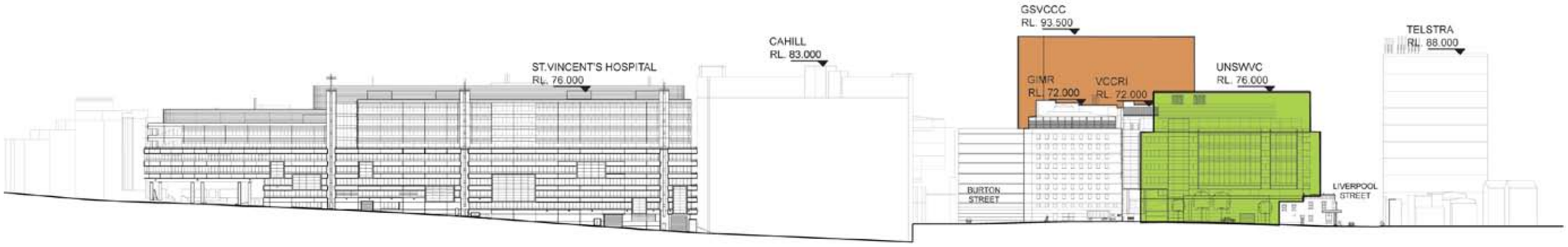


Figure 32 – Relationship of proposed and surrounding building heights (Source: Daryl Jackson Robyn Dyke Architecture)

8.5 Environmental and Residential Amenity

8.5.1 Visual Privacy

While the proposed UNSWVC building will overlook residential areas to the east, this area is already overlooked in a very similar manner by the existing GIMR and the St Vincent's Hospital buildings. Furthermore, the UNSW Virology building will be a purpose built medical research facility, and other than possible café use at ground floor, no balconies or operable windows 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. 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 is imperceptible from surrounding residences.

Vehicle Noise

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

Loading Dock Noise

While the amount of floor space served by the existing VCCRI loading dock will be significantly 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 be marginal relative to the scale of the proposed increase in floorspace.

Furthermore, partial enclosure of the loading dock within the proposed UNSWVC 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.

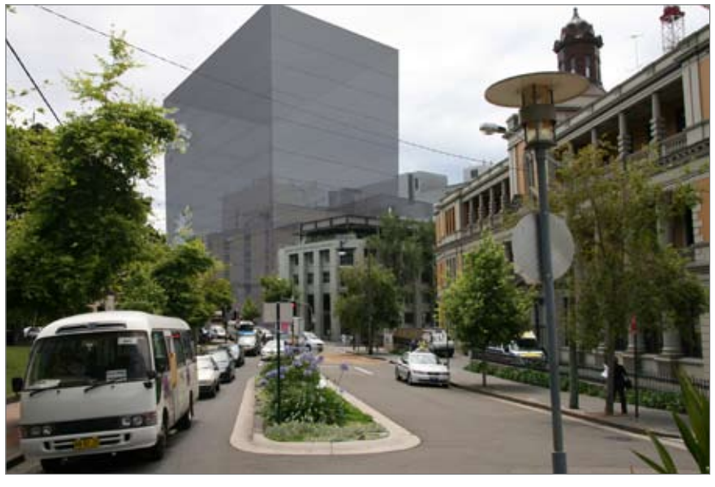
8.5.3 View Analysis

The proposed buildings will be large and visually apparent, particularly relative to the lower scale of Victorian terrace houses to the east, in Paddington. However, this impact 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 merely 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 building 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 34).

Cnr West and Liverpool Street

Cnr Victoria and Liverpool Street



Garvan Cnr View North along Victoria Street

Figure 33 – Street Level Visual Impact (Source: Daryl Jackson Robyn Dyke Architecture - A4 copies included at Appendix G)

Figure 34 – 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) are included at Figure 35 and reproduced at a larger scale at Appendix H. 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 shadow diagrams in mid winter, early morning shadows cast by the proposed GSVCCC building will affect Green Park and commercial premises on Victoria Street. However, these shadows will move off Green Park shortly after 10.00am. All other morning shadowing will largely fall within the Precinct itself and the Hospital buildings.

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 35, 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 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, only the Sisters of Charity convent and very small pockets of other properties will be overshadowed.

While numerous West Avenue properties will lose existing sunlight at 2.00pm in mid winter, that sunlight is already lost by existing buildings by 3.00pm in any event. Furthermore, these dwellings maintain well in excess of the two hour minimum sunlight requirement on the winter solstice.

Summary
In summary, Green Park will maintain full sun access shortly after 10.00am and West Avenue residences will lose an hour of sunlight between 2.00pm and 3.00pm on the shortest day of the year. In the context of a densely developed urban area, this is not an unreasonable impact. West Avenue residences will exceed the sunlight access requirements of the RFDC and impacts throughout most of the year will be considerably less.

Figure 35 – Existing and Proposed Shadow Diagrams – Winter Solstice (21 June). (Source: Daryl Jackson Robyn Dyke Architecture)

9.00am Shadow Diagram

10.00am Shadow Diagram

11.00am Shadow Diagram

Noon Shadow Diagram

1.00pm Shadow Diagram

2.00pm Shadow Diagram

3.00pm Shadow Diagram

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 VCCRI 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, thess 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 Traffic and Parking report has been prepared by TEF Consulting and is included at Appendix C.

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 requirement for bicycle parking provision at a rate of 1 space per 20 staff as a minimum.

Table 3 - Precinct Car Parking Requirements (based on DCP 11 provisions)

	Gross Floor Area	DCP 11 Car Parking Requirement
VCCRI	9,354m^2 (actual)	65
GIMR	17,157m^2 (estimated)	80 (by previous approval)
GSVCCC	14,000m^2 (proposed)	112
UNSWVC	8,500m^2 (proposed)	60
Total Precinct	49,011m^2	317

While the 400 spaces proposed within the Precinct exceed the 317 spaces calculated in accordance with the DCP control, the current parking demand generated by the St Vincent's Campus as a whole, including St Vincent's Public and Private Hospitals and the Medical Centre, is greater than the existing parking supply by some 300 cars. The overall St Vincent's Campus has a substantially higher ratio of employees to car parking spaces than comparable hospitals (see Table 4), even accounting for the 400 proposed additional spaces.

Table 4 - Comparison of Car Parking Provision Ratios

	Staff Numbers	Existing Parking	Staff to parking ratio
Prince of Wales	4,500	2,240	2.01:1
Royal North Shore	4,000	2,600	1.54:1
St Vincents	4,100	1,000	4.1:1
St Vincents (+400 proposed)	4,100	1,400	2.9:1

Insufficient parking provision at St Vincent's leads to parking overspill onto surrounding streets. Notwithstanding the low rate of parking supply on site, St Vincent's staff continue to drive their cars to work, parking in surrounding areas. Whilst a Transport Management and Accessibility Plan (TMAP – see draft Statement of Commitments at Appendix F) will be implemented to minimise single occupancy car travel to and from the Precinct, parking demand overspill is not expected to be mitigated just by these measures. It is therefore proposed that 83 spaces be provided in addition to the 317 spaces generated by development proposed within the Precinct.

8.6.2 Vehicular Access

The following options for vehicular access to the Precinct have been considered.

Victoria Street

Victoria Street is an important pedestrian street, with very high pedestrian volumes. It is also listed as a heritage streetscape. A vehicular driveway capable of providing separate ingress and egress for both cars and delivery/waste collection vehicles would compromise the continuity of the heritage streetscape and create a significant conflict with pedestrians.

Furthermore, Victoria Street carries significant traffic volumes and is the busiest frontage of the precinct.

Burton Street

The existing GIMR building practically precludes vehicular access from Burton Street.

Liverpool Street

Vehicular access to Liverpool Street could only be provided via Chaplin Lane or the UNSWVC site frontage to Liverpool Street. In these regards:

- The capacity of Chaplin Lane is limited by interaction with the traffic flows and queuing at the Victoria Street / Liverpool Street intersection. A left in / left out access would result in lesser impacts on this intersection operation. However it would require a physical barrier (a median island) along Liverpool Street to prevent right hand turns, which would require the loss of existing on-street parking spaces in Liverpool Street. Furthermore, the majority of vehicles arriving from the north, west and south would need to travel to the site via West Street in order to enter Chaplin Lane via a left turn in.
- Liverpool Street is the logical street address and pedestrian entry for the UNSWVC building. Given the relatively narrow width of this frontage, the co-location of a vehicular driveway would visually and functionally conflict with this role.

West Street

The existing access from West Street operates at a good level of service and has substantial spare capacity, with little traffic other than that generated by existing development within the Precinct. It has the lowest traffic flows of streets adjoining the Precinct and the section of West Street adjoining the Precinct only directly serves a small number of other properties.

West Street carries significantly lower traffic volumes than any of the other three streets fronting the Precinct. Provision of vehicular access via the least congested frontage is consistent with RTA policy and good traffic planning practice.

Furthermore, as discussed at Section 8.6.3, West Street has ample 'environmental capacity' to accommodate the traffic predicted to result from development proposed within the Precinct.

A specific concern expressed by some residents in West Avenue is the use of West Avenue to access the existing loading dock and car park, which are entered from the West Street driveway directly opposite West Avenue. In this regard:

- The existing "All Traffic Turn Right" sign and the kerb extension at the western end of West Avenue already discourage this movement.
- Performing this movement currently constitutes a traffic offence, for which legal penalties apply.
- Traffic counts (see Appendix C) indicate that very few vehicles actually perform this movement.
- Anecdotal evidence suggests that some courier vehicles are directed to access the loading dock via West Avenue by their GPS machines. The proponent will approach the main GPS mapping providers with a request to rectify this situation.

Summary

Notwithstanding perceptions by some residents that West Avenue is unsuitable to accommodate additional vehicle movements, it is the most logical point of vehicular access to the Precinct, and objective traffic analysis indicates that West Avenue 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 C) indicates the preferred modes of travel to work are public transport and modes other than private car (i.e. walking, cycling).

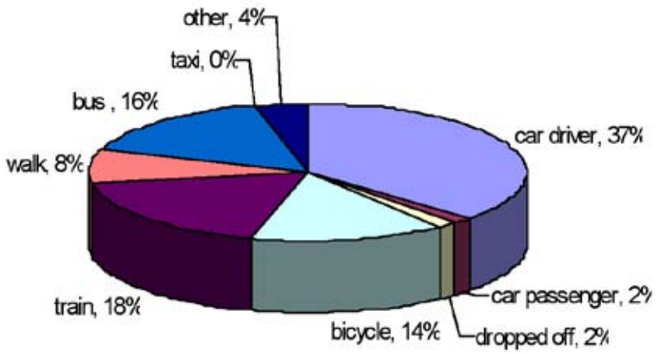


Figure 36 – Modal Transport Split (Source: TEF Consulting Traffic and Parking Report)

While 400 car parking spaces are proposed, only 184 of these spaces will generate new traffic. The rest will accommodate cars which already park either on site or in the surrounding area, and will not add to the existing traffic flows on the road network.

Midblock 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 3% and 8 %.

RTA guidelines

For local residential streets the RTA (2002) provides an 'environmental goal' of 200 veh/hr and a 'maximum environmental capacity' of 300 veh/hr. On residential 'collector streets the environmental goal increases to 300 veh/hr and the maximum environmental capacity increases to 500 veh/hr. However, on roads with no direct property access, midblock street capacity is typically in the order of 900 veh/hr per lane, with two lanes in the same direction having a capacityof1800 veh/hr, but two opposing lanes (i.e. two-way traffic) have a reduced capacity of 1,500 veh/hr, depending on lane widths, kerbside parking etc.

Victoria Street

Traffic volumes on Victoria Street between Liverpool and Burton Streets will increase by 11% in the morning (from 746 to 826 veh/hr) and in the afternoon (from 921 to 1,018 veh/hr). This is well within the one-way, two-lane carriageway capacity of 1,800 veh/hr.

Burton Street

Traffic volumes on Burton Street between Victoria and West Streets will increase by 19% in the morning (from 601 to 718 veh/hr) and by 12% in the afternoon (from 500 to 560 veh/hr).

This is well within the two-lane, two-way carriageway capacity of 1,500 to 1,800 veh/hr.

Traffic volumes between Victoria Street and Darlinghurst Road will increase by 7% in the morning (from 678 to 728 veh/hr) and by 2% in the afternoon (from 608 to 618 veh/hr). This is also well within the two-lane, two-way carriageway capacity of 1,500 to 1,800 veh/hr .

Traffic volumes west of Darlinghurst Road are currently slightly below the maximum environmental capacity at 427 veh/hr and 478 veh/hr in the morning and afternoon peaks. These volumes would increase by only 2% in the morning (from 427 to 437 veh/hr) and by less than 1% in the afternoon (from 478 to 481 veh/hr). While bringing traffic volumes closer to the maximum environmental capacity of the street, such increases are insignificant and will not perceptibly affect existing conditions.

Liverpool Street

Traffic volumes on Liverpool Street to the east of West Street would increase by 2% in the morning (from 530 to 541 veh/hr) and by 4% in the afternoon (from 485 to 504 veh/hr). While existing traffic volumes in Liverpool Street are already at and above the maximum environmental capacity of residential collector streets, residential properties are only located on one side of the street, resulting in the maximum environmental capacity being higher than collector streets with residential development on both sides. Furthermore, the proposed increases are very small and Liverpool Street is recognised in the City of Sydney's "City East Traffic Study" as "the principal road" with an important collector function. Traffic volumes in the order of 600 veh/hr recorded in the "City East Traffic Study" for similar conditions in Liverpool Street east of Forbes Street were not regarded as unacceptable.

Traffic volumes between Victoria and West Streets will increase by 3% in the morning (from 508 to 522 veh/hr) and by 6% in the afternoon (from 513 to 542 veh/hr), which is well within the two-lane, two-way carriageway capacity of 1,500 to 1,800 veh/hr.

Traffic volumes between Victoria Street and Darlinghurst Road will increase by 2% in the morning (from 573 to 587 veh/hr) and by 6% in the afternoon (from 479 to 508 veh/hr), which is well within the two-lane, two way carriageway capacity of 1,500 to 1,800 veh/hr.

Traffic volumes west of Darlinghurst Road will increase by 2% in the morning (from 694 to 705 veh/hr) and by less then 1% in the afternoon (from 583 to 584 veh/hr). These increases are insignificant and will not perceptibly affect existing conditions.

West St

Only a few residential properties have access to West St between Burton and Liverpool Streets, with the western side having no residential properties. The maximum environmental capacity of West St is therefore greater than 300 veh/hr. However, proposed traffic volumes will only be in the

order of 180 to 190 veh/hr in the morning and afternoon commuter peak hours respectively. This is below the environmental goal, and well within the environmental capacity of the street.

Intersection Capacities

Notwithstanding the above considerations of midblock street capacity, the efficiency of urban road networks is defined more by the efficiency of intersections than midblock capacities. RTA (2004) and Austroads (2005) set out the following assessment criteria intersection operations.

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)

The main criterion is the average delay, expressed in seconds per vehicle, with various thresholds expressed as 'Levels of Service' (LoS). However, Levels of Service should not be regarded as strict cut off points. For example the actual traffic conditions when the average delay is 42 seconds (LoS "C") do not differ much from traffic conditions when the delay is 43 second delay (LoS "D").

Three different computer simulation programs (SIDRA, SCATES and Aimsun) were used by TEF consulting to model the effects of the project upon the performance of surrounding intersections. This analysis found that the key intersections in the area will continue to operate at the same or similar level of service as at present, with only minor increase in average delays. This result accorded with expectations, considering that additional traffic will constitute a very minor proportion of the existing traffic flows. While the three different computer models show slightly different results, due to different calculation methods, the outcomes are very similar, with the exception of the intersection of Oxford and Victoria Streets

The four intersections at the corners of the Precinct currently operate at good Levels of Service with acceptable delays and spare capacity (LoS "A" and "B"), and will continue to operate at the same LoS after the Precinct is developed. Average delays at these intersections will experience only minor changes, generally between 0.1 and 3.9 seconds per vehicle, which is insignificant in traffic engineering terms and is not noticeable in practice for an observer.

With regard to the intersections of Oxford Street with Victoria Street and Darlinghurst Road, all three computer models showed that additional traffic from the proposed development of the Precinct will not have a significant effect on the operation of these intersections, which will remain between LoS "C" and LoS "D" before and after the development. Additional average delays will be minor, as could be expected considering that additional traffic volumes from the Project will constitute only 1% to 2% of the existing total volumes at the two intersections.

Although Aimsun results indicate a change from LoS "C" to LoS "D", with an increase in average delay by 8.9 seconds, this delay is not supported by the other two models, which show no change in the LoS, and increases in average delay of only 0.3 and 0 seconds respectively during the same period.

TEF Consulting therefore concluded that the existing road and intersection network in the vicinity of the site can therefore 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 fitout works currently being undertaken for the VCCRI building, 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 (fridges, office furniture and similar), currently approximately one delivery per day. The latter deliveries are expected to cease once the fitout works are completed (in approximately six months), after which there will be only occasional deliveries by HRVs plus daily contaminated waste collection.

There is currently no opportunity for HRVs to turn around within the loading dock, requiring reverse movements into West Street to leave the site. This situation can be tolerated with the existing very low traffic volumes in West Street. However, with the increased volumes after the proposed development it will be necessary to enable HRVs to enter and exit in a forward direction. This can be achieved by either providing a turning area within the loading dock or 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 proposed basement car park entry is the preferred option. 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 required to cater for the proposed development.

8.7 Heritage

A Heritage Impact Statement for the Concept Plan has been prepared by Urbis and is included at Appendix I. The key findings of the statement 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 VCCRI building). The lane had been terminated in the centre of the Precinct and a new access way created into West Street.

In 2008 the VCCRI building on the site of the northern car park was officially opened.

As indicated in Figure 37:

- The only heritage item on the site is 372 Victoria Street
- The GSVCCC 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.

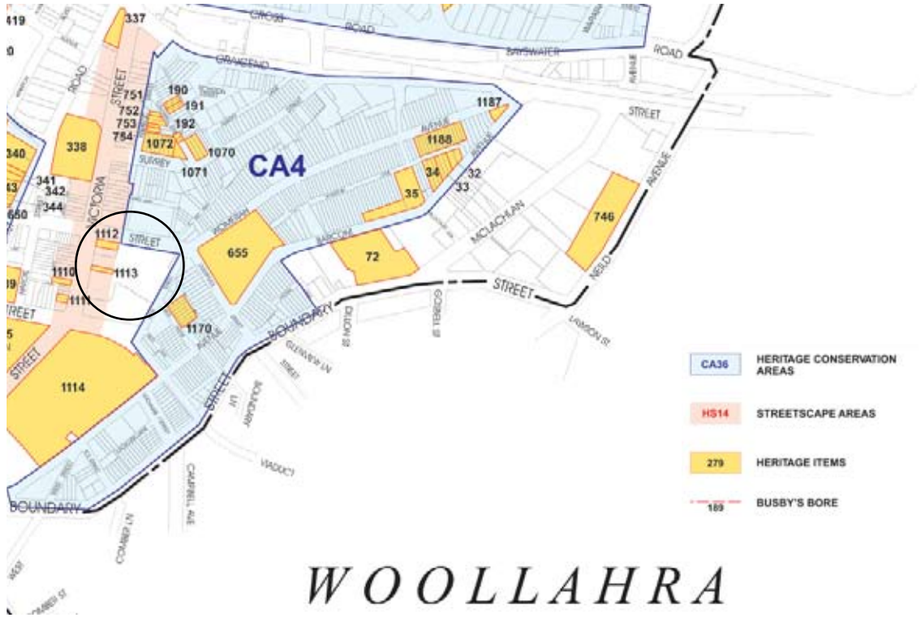


Figure 37 – Heritage Listings (Source: South Sydney LEP 1998)

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"

No. 372 Victoria Street 'Pomona' is a locally listed heritage item under the South Sydney LEP, and is the only listed heritage item in the Precinct. Urbis have undertaken a site inspection and an assessment of heritage significance in accordance with the 'Assessing Heritage Significance' (2001) guideline from the NSW Heritage Manual

This assessment concluded that the building is a representative late Victorian terraced dwelling in relatively original condition both internally and externally. It is considered a representative example of a three storey terraced house that makes a contribution to the terraced house type in Darlinghurst. However, the dwelling is not rare and is no longer one of a matching pair to its neighbour at 374 Victoria Street, which has been significantly altered.

It is considered that the dwelling does not reach the threshold for individual listing. Although it is listed under the South Sydney LEP 1998, no justification has been made for the listing. It appears it was included when many individual dwellings were included as heritage items prior to the survey work for area contributory grading.

The HIS concludes that the dwelling is a good example of its kind but is not considered to be significant enough to warrant its individual listing.

In view of this assessment, the Concept Plan team considered options for retention of the building, but concluded that as it is located centrally within the proposed GSVCCC site, it would not be practicable to retain the building or any meaningful context, and develop the GSVCCC. Given the broader medical and strategic planning significance of the GSVCCC and the SVRP, demolition of 372 Victoria Street is proposed.

429 and 431 Liverpool Street – terraces

The terraces at 431 and 429 Liverpool Street are a remnant pair which once formed part of a greater row along Liverpool Street between Chaplin Street and West Street. 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. The buildings contribute to the character of the area, but 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.

No. 429 is proposed to be demolished and redeveloped as part of UNSWVC. No. 431 is not owned by the Trustees of St Vincent's and is not proposed to be altered.

8.7.2 Victoria Street Heritage Streetscape

The buildings within the Precinct that front Victoria Street and form part of the heritage streetscape exhibit a wide variety of forms and styles from the isolated contributory terrace house at No. 372, to highly altered terraces, a vacant site and the large detracting medical centre building. As discussed above, retention of No. 372 is not practicable, and in the absence of this building, there is little existing fabric that positively contributes to the heritage streetscape. This section of the streetscape also forms an interface between the more characteristic lower scale forms opposite and to the north, and the high rise institutional character of the southern end of the street.

The proposed GSVCCC building on Victoria Street is proposed to be a prominent addition to the streetscape and will be larger than the surrounding buildings. It cannot be considered comparable to the buildings opposite and makes no attempt to be an infill building. It is designed to be a new element in the townscape and has a better relationship to the higher buildings associated with the hospital buildings on the ridge than attempting to mediate between the two storey terraces and the eight storey VCCRI building. The building mediates between the adjacent heritage listed Green Park Hotel by providing a lower height limit on the hotel's southern side. This will provide a focus for the hotel and allow it a visual curtilage on its prominent corner location.

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 remodelled 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 multistorey GSVCCC 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 a s a low scale element set before the existing high rise forms of the VCCRI 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 Arcaeological Assessment was conducted by Cultural Resources Management in 2005 in association with the proposal to develop the VCCRI building (see Appendix I). 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 draft Statement of Commitments (see Appendix F) 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 F) 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 Geotechncial Assessment of the proposed development sites has been prepared by Golder Associates (see Appendix J).

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 VCCRI building to potentially link the GSVCCC and UNSWVC 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 draft Statement of Commitments (see Appendix F) 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).

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 GSVCCC, and the West Street has a 150mm UPVC water main that should provide sufficient hydraulic and fire flows to the proposed UNSWVC.

The existing GIMR is served by a 150mm DICL water main in Burton Street and the existing VCCRI 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 GSVCCC and ARUP assume a similar flow rate will be required for the proposed Institute for Virology.

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 VCCRI 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 UNSWVC 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 GSVCCC 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 VCCRI are not adequate to service the new UNSWVC and GSVCCC 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 GSVCCC 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 UNSWVC building.

8.11.5 Telecommunications

The ARUP report advises that existing telecommunications services are adequate for the future requirements of the GSVCCC and the UNSWVC buildings. Upgrades to the existing GIMR telecommunications lead-in cables and telephone tie-cable links to the GSVCCC and UNSWVC may be provided, or new GSVCCC and UNSWVC 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 GSVCCC and UNSWVC 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). 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 VCCRI building and this drain currently collects drainage from the VCCRI building and Chaplin Lane. This 450mm drain will be required to drain the proposed GSVCCC building and the majority of the proposed UNSWVC 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. SVMHS, GIMR, VCCRI, GSVCCC, UNSWVC 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 virology 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 and virology research and care centres are clearly 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. In other words, to fragment these facilities would be anathema to the premise upon which the whole Concept Plan is based.

We therefore conclude that the relatively minor and localised adverse 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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