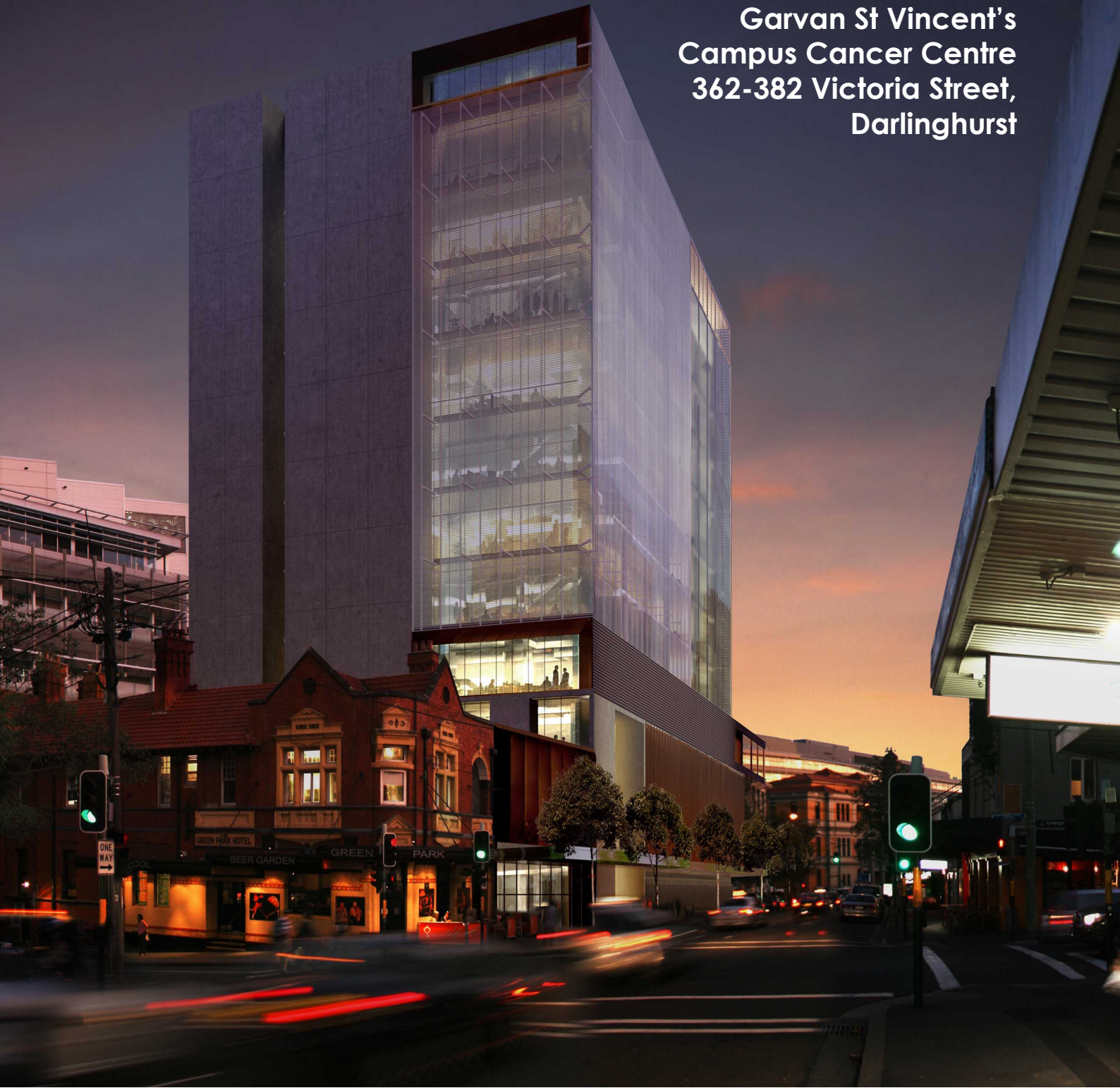


Project Application MP 09_0011

**Garvan St Vincent's
Campus Cancer Centre
362-382 Victoria Street,
Darlinghurst**



Environmental Assessment Report

June 2009



**St Vincents
& Mater Health
Sydney**



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Statement of Validity

Submission of Environment Assessment:

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

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Certification:

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

Signature



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Date

10/06/2009

10/06/2009

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Executive Summary	6
1 Introduction	7
2 Background	8
2.1 Concept Plan for the St Vincent's Research Precinct	8
2.2 The Proponent	9
2.3 The Consultant Team	9
2.4 Community Consultation	9
2.4.1 <i>Matters Raised During Consultation</i>	10
3 The Site and Context	11
3.1 The Site	11
3.2 Legal Description	13
3.3 Local Context	13
3.3.1 <i>Development to the North</i>	13
3.3.2 <i>Development to the West</i>	14
3.3.3 <i>Development to the East</i>	14
3.3.4 <i>Development to the South</i>	15
3.4 Site Analysis	16
3.5 Current Transport and Access Conditions	16
3.5.1 Road Network	16
3.5.2 Intersection Performance	16
3.5.3 Public Transport	17
3.5.4 Pedestrian and bicycle linkages to and within the site	17
3.6 Geotechnical Conditions	17
3.7 Contamination	17
4 The Project	18
4.1 The Vision	18
4.2 Overview of Project	18
4.3 Detailed Description of Project	18
4.3.1 <i>Early Works</i>	18
4.3.2 <i>Design and Construction of the Proposed Building</i>	18
4.3.3 <i>Land Use, Floor Space and Development Data</i>	21
4.3.4 <i>Landscaping and Public Domain Works</i>	22
4.4 Vehicular Access and Loading	23
4.5 Stormwater and Drainage	23
4.6 External Finishes	24
4.7 Signage	24
4.7.1 <i>Building Naming</i>	24
4.7.2 <i>Tenant Identification</i>	24
4.8 Integration with Precinct	25
4.9 Artwork to Southern Facade	25
4.10 Staging	26
4.11 Draft Statement of Commitments	26
5 Director General's Environmental Assessment Requirements	27

Garvan St Vincent's Campus Cancer Centre
362-382 Victoria Street, Darlinghurst

6	Environmental Assessment of Key Issues	29
6.1	Consistency with Strategic Planning Policy	29
6.2	Consistency with Statutory Planning Policy	29
6.2.1	<i>SEPP (Major Projects) 2005</i>	29
6.2.2	<i>SEPP (Infrastructure) 2007</i>	29
6.2.3	<i>SEPP 55 – Remediation of Land</i>	29
6.2.4	<i>South Sydney Local Environmental Plan 1998</i>	29
6.3	Strategic Justification for the Project	30
6.3.1	<i>Sydney Metropolitan Strategy</i>	30
6.3.2	<i>Sustainable Sydney 2030 Strategic Plan</i>	30
6.3.3	<i>Draft Inner Sydney Subregional Strategy</i>	30
6.4	Consistency with Concept Plan MP 09/0010	30
6.5	Building Design	31
6.6	Heritage	33
6.7	Amenity Impacts	33
6.7.1	<i>Visual Impact (View Loss)</i>	33
6.7.2	<i>Overshadowing</i>	33
6.7.3	<i>Privacy</i>	35
6.7.4	<i>Noise</i>	35
6.7.5	<i>Wind</i>	35
6.7.6	<i>Reflectivity</i>	36
6.8	Car Parking	36
6.9	Construction Impacts	36
6.9.1	<i>Noise and Vibration</i>	37
6.9.2	<i>Soil and Erosion Control</i>	37
6.9.3	<i>Air Quality and Air Pollution</i>	37
6.9.4	<i>Stormwater Management</i>	37
6.9.5	<i>Waste Management</i>	37
6.9.6	<i>Cut/Fill and Retaining Structures</i>	37
6.9.7	<i>Traffic Impacts and Management</i>	38
6.9.8	<i>Car Parking for Construction Workers</i>	38
6.10	Operational Impacts	38
6.10.1	<i>Noise Generation from Plant and Equipment</i>	38
6.10.2	<i>Waste Management (including storage of potentially hazardous materials)</i>	38
6.10.3	<i>Safety and Security</i>	39
6.10.4	<i>Emergency and Evacuation Procedures</i>	39
6.10.5	<i>Fire Safety</i>	39
6.10.6	<i>Lighting</i>	39
6.10.7	<i>Signage</i>	39
6.11	Building Code of Australia	39
6.12	ESD (Sustainability)	40
7	Conclusion	41

Figures

Figure 1 - Location of GSVCCC and UNSW Virology development Sites

Figure 2 – Context of Site

Figure 3 – Extent of Site

Figure 4 – Site Analysis Plan prepared by BVN

Figure 5 – Photomontages

Figure 6 – Landscape Plan, prepared by EDAW

Figure 7 – Chaplin Lane Landscape Section, prepared by EDAW

Figure 8 – External Finishes, prepared by BVN

Figure 9 – Shadow Diagrams – Winter Solstice – 21 June

Pictures

Picture 1 – 362 Victoria Street (vacant land used as beer garden to Green Park Hotel)

Picture 2 – 366-368, 370 and 372 Victoria Street

Picture 3 – 372 & 374 Victoria Street

Picture 4 – 376-382 Victoria Street

Picture 5 - Green Park Hotel – 360 Liverpool Street

Picture 6 -The eastern end of the street block to the north.

Picture 7 - Development to the immediate north, across Liverpool Street – viewed Victoria Street

Picture 8 - Development to the immediate west, across Victoria Street – viewed from Liverpool Street

Picture 9 - Development to the immediate west, across Victoria Street – viewed from Burton Street

Picture 10 – VCCRI and St Vincent's Centre for Applied Medical Research

Picture 11 – Chaplin Lane (VCCRI to Left, GSVCCC site to right)

Picture 12 – The GIMR building

Picture 13 – Burton Street and St Vincent's Hospital O'Brien Building (currently under construction)

Picture 14 – The original (de Lacy) St Vincent's Hospital building, with Cahill Building in background

Picture 15 – Looking south-east from the corner of Liverpool and Victoria Streets

Picture 16 – Looking north-east from the corner of Burton and Victoria Streets

Picture 17 – Looking east from Sydney CBD towards Bondi Junction

Picture 18 – Looking north-west from Oxford Street towards Sydney CBD

Appendices

Appendix A	Director General's Environmental Assessment Requirements
Appendix B	Community Consultation Program – KJA
Appendix C	Architectural Plans – Bligh Voller Nield
Appendix D	Photomontages – C3Di
Appendix E	Landscape Plan – EDAW
Appendix F	Draft Statement of Commitments – Urbis
Appendix G	Heritage Impact Statement – Urbis
Appendix H	Shadow Diagrams – Bligh Voller Nield
Appendix I	Acoustic Assessment – Wilkinson Murray
Appendix J	Traffic and Parking Report – TEF Consulting
Appendix K	Wind Impact Assessment – Heggies
Appendix L	Glare Impact Report – Heggies
Appendix M	Noise and Vibration Management Sub-Plan – AW Edwards
Appendix N	Soil and Water Management Sub-Plan – AW Edwards
Appendix O	Air Quality and Dust Management Sub-Plan – AW Edwards
Appendix P	Waste Management Sub-Plan (Construction) – AW Edwards
Appendix Q	Cut/Fill and Retaining Structures Sub-Plan – AW Edwards
Appendix R	Waste Management Plan (Operational) – Hyder
Appendix S	BCA Compliance Statement – Blackett Maguire & Goldsmith
Appendix T	Building Services Report – ARUP
Appendix U	ESD Report – ARUP

EXECUTIVE SUMMARY

St Vincent's & Mater Health Sydney (SVMHS) has been working with both the Garvan Institute of Medical Research (GIMR) and the University of New South Wales (UNSW) to further develop its world class medical research precinct in Darlinghurst. The Precinct is 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 proposed development is for the detailed design and construction of a new centre for cancer research and care on land known as 362-382 Victoria Street, Darlinghurst, within the St Vincent's Research Precinct, which occupies most of the street block to the north of the existing St Vincent's Hospital, across Burton Street.

This Environmental Assessment accompanies a Project Application, prepared pursuant to Part 3A of the Environmental Planning and Assessment Act 1979. The Project was declared a Major Project by the Minister for Planning on 20 January 2009 and is identified as Major Project Application No.09_0011. Major Project Application 09_0010 is for the recently submitted Concept Plan, which proposed building envelopes, floor space areas, land uses, car parking, vehicular access arrangements and the like for the whole precinct. The current application is consistent with, and has been prepared in conjunction with, and relies upon that Concept Plan.

The current proposal relates specifically to the Garvan St Vincent's Campus Cancer Centre (GSVCCC) which is a joint venture that will align GIMR's internationally acclaimed cancer research with the best practice cancer services at St Vincent's & Mater Health Sydney, with the aim of developing more effective approaches to the prevention, diagnosis and treatment of cancer.

The scope of the Project Application includes:

- Early works, including demolition, archaeological investigations and basement excavation.
- Detailed design and construction of a building to house the GSVCCC.
- Use and ongoing operation of the GSVCCC.
- Associated site improvements, landscaping and public domain works.

The GSVCCC facility will comprise the western part of the larger research precinct, principally occupying the properties fronting Victoria Street, between the existing GIMR building and the Green Park Hotel.

The proposed development will provide significant public benefits, principally due to the construction of a new centre for cancer research and care which will stimulate research activity and employment in the medical field within a world class medical research precinct. Further public benefits include the creation of an integrated research campus with high levels of staff, patient and visitor amenity.

This Environmental Assessment has been prepared in response to, and fully addresses the Environmental Assessment Requirements provided by the Director General and subject to the implementation of the Commitments made in this application, no significant adverse environmental effects will occur as a result of the project.

1 INTRODUCTION

The project involves the erection of a building specifically designed for GSVCCC. The proposed new Cancer Centre is a joint initiative of GIMR and SVMHS. It will combine the Garvan's internationally acclaimed cancer research with the best practice cancer services at SVMHS. Housing 365 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".

The proposed building will have 11 storeys above the Victoria Street frontage and 6 levels below, including a laboratory and plant level, and five levels of car parking, accessed via the basement car park of the existing Lowy Packer building located to the east of the proposed GSVCCC.

On 20 January 2009, the Minister declared the Project to be a 'Major Project', to which Part 3A of the Act applies. On 13 February 2009, a 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, and an accompanying Concept Plan application for the entire research precinct (MP09_0010).

On 11 March 2009, the Director General issued EARs which dictate the scope of this Environmental Assessment. A copy of the DG's EARs is included at Appendix A.

2 BACKGROUND

2.1 Concept Plan for the St Vincent's Research Precinct

A separate Concept Plan application has been submitted to the Minister for Planning (Major Project Application No. 09_0010), which proposes a planning framework for the larger 'St Vincent's Research Precinct', within which the GSVCCC will be located.

The Research Precinct generally comprises the street block bounded by Victoria, Liverpool, Burton and West Streets. The Precinct is already home to Garvan Institute of Medical Research (GIMR) and the 'Lowy Packer' building which houses St Vincent's Centre for Applied Medical Research and Victor Chang Cardiac Research Institute (VCCRI). For the purposes of this report, the 'Lowy Packer' building is hereafter referred to as VCCRI. To complete the Precinct two other facilities are proposed.

One is the currently proposed GSVCCC building. The other will house an initiative of UNSW, a National Institute of Virology, which will provide a new home for the National Centre in HIV Epidemiology and Clinical Research (NCHECR), a world leader in HIV treatment and prevention. The UNSW project will be the subject of a separate future application.



Figure 1 – Location of GSVCCC and UNSW Virology Development Sites

The scope of the Concept Plan application includes:

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

However, it does not provide any details of actual building design, which is the subject of the current application.

2.2 The Proponent

This project is a joint initiative of GIMR and SVMHS who are the joint proponents of this application.

GIMR is one of Australia's largest autonomous medical research institutions with over four hundred 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 the GIMR ensures that the quality of the research is amongst the best in the world.

SVMHS is part of the national Sisters of Charity Health Service, which is Australia's largest non-government, not-for-profit health care provider. The key facilities comprising SVMHS include St Vincent's Hospital and Community Health Services, Sacred Heart Hospice and St Vincent's Private Hospital. SVMHS also comprises the Mater Hospital in North Sydney and St Joseph's Hospital and Village in Auburn. Collectively, the SVMHS Group provides a comprehensive range of acute and sub acute health and aged care services from primary prevention through to tertiary level care across community, outpatient and inpatient settings.

SVMHS's work in health and aged care is supported by a significant investment in teaching and research in partnership with Universities and affiliated research institutes including UNSW, GIMR and VCCRI. SVMHS also has significant relationships with the University of Sydney, the Australian Catholic University, the University of Notre Dame Australia, the University of Tasmania and the University of Technology Sydney.

2.3 The Consultant Team

The consultant team assisting the Proponent with the Project Application comprises:

- Urbis – Environmental Assessment, Statutory Planning and Heritage.
- Bligh Voller Nield (BVN) – Architecture.
- KJA – Community Consultation.
- EDAW – Landscape.
- TEF Consulting – Traffic and Transport.
- ARUP – Services, Infrastructure and Sustainability.
- Wilkinson Murray – Acoustics.
- AW Edwards – Construction Impacts.
- Heggies – Reflectivity and Wind.
- Hyder – Waste Management.
- Blackett Maguire and Goldsmith – PCA (BCA Assessment)

2.4 Community Consultation

As detailed at Section 2.3 of the Concept Plan, KJA Pty Ltd were engaged by SVMHS to manage a process of community consultation in relation to the development of the precinct. The following activities were undertaken to engage the local community and other stakeholders during the concept design phase. The Community Consultation Program included at Appendix B outlines the ongoing program for consultation following lodgement of this application.

Letterbox Drops

Each of the following community events were advertised via letterbox drop to between 2,000 and 2,800 households.

Community Cocktail Evening

A letter inviting local residents to a community cocktail evening was distributed in early March 2009. The CEO of SVMHS, Steven Rubic invited local residents to an informal cocktail evening. The event was held between 6-7pm on Monday 16 March 2009 in the Function Room on the ground floor of St Vincent's Clinic.

Large information panels outlining SVMHS's plans to expand the research precinct through the proposed Concept Plan were on display during the evening. Approximately thirty local residents attended the cocktail evening.

Twilight Fair

A letter inviting local residents to the community Twilight Fair was distributed in March 2009. The CEO of SVMHS, Steven Rubic wrote to local residents alerting them to the Centenary of St Vincent's Private Hospital. One of the functions being held to celebrate the milestone was the Centenary Local Community Twilight Fair.

The Fair was held behind the Hospital at Barcom Avenue Park from 4-7pm on Friday 27 March 2009. The SVMHS hosted a stall displaying large information panels outlining plans to expand the research precinct through the proposed Concept Plan. Approximately 20 to 25 people visited the stall, viewed the panels and discussed the proposed development with the project's representatives.

Garvan St Vincent's Campus Cancer Centre

362-382 Victoria Street, Darlinghurst

Community Information Session

A letter inviting local residents to a community information session was distributed at the beginning of April 2009. A dedicated community information session was offered to St Vincent's neighbours on Tuesday 7 April 2009 between 5pm and 7pm in the St Vincent's Clinic Function Room. Local residents were advised they could drop by anytime between those hours to view a series of information panels which were on display.

A number of the Precinct partner's senior representatives were available during the evening to speak to local residents about the proposed plans and answer any questions. Approximately five people took the opportunity to attend the information session.

Community Group Briefings

There are two organisations that refer to themselves as 'Darlinghurst Residents Action Group' or DRAG. A briefing was provided to one of those groups on 17 April 2009. Two representatives of this group attended the briefing with SVMHS's CEO Steven Rubic; St Vincent's Public Health Services Executive Director Jonathon Anderson; SVMHS's Public Affairs and Communications Manager David Faktor; and Urbis Director David Hoy. A meeting was held with the second group on 1 May 2009, which was attended by David Faktor; SVMHS A/Capital Works Manager Owen Judge; and David Hoy.

Agency and Authority Consultation

Project representatives liaised with a number of agencies and authorities including the City of Sydney Council, NSW Ministry of Transport, NSW Roads and Traffic Authority and relevant utility providers. While each of these authorities was offered a briefing on the project, all advised that they would prefer to respond formally to the Preliminary Environmental Assessment (PEA) and EA formally referred to them by the Department of Planning. Issues raised in response to referral of the PEA were embodied in the DG's EARs and responses are included throughout this report.

2.4.1 Matters Raised During Consultation

Key issues raised during the pre-lodgement consultation process included:

Scale of Proposed New Buildings

Several comments related to the height and scale of the proposed development. One person was concerned that the proposed buildings were significantly larger than described in an earlier Master Plan prepared for the Precinct.

Shadowing and Wind

The additional shadows and potential wind impacts that would be created by the proposed development were raised as potential issues.

Car Parking

The amount of car parking to be provided within the expanded Precinct was raised.

Traffic

Traffic generation is a topic regularly raised by the local community. Issues in particular included.

- A preference for the Precinct to use Liverpool Street instead of West Street as the car park entry/exit. It was felt this should have been the solution when the VCCRI building was being planned.
- Delivery vehicles using West Avenue to access the loading dock and existing car park. There were also concerns about heavy vehicles reversing into the loading dock from West Street to make deliveries.

Landscaping of West Street

It was suggested improved landscaping along West Street should form part of the Precinct planning. It was thought the landscaping would soften the interface between the Precinct and adjoining residential neighbourhood.

Lighting

It was suggested future development should avoid additional lighting impacts.

Location of the Precinct

The location of the Precinct in the heart of Darlinghurst was queried. A number of people wanted to know why the Precinct needed to be located in the proposed location as opposed to another area of Sydney.

Planning Process and Consultation

The Part 3A planning process was noted by several people with at least two people questioning what likely impact their views would have on the final decision.

Work of the Precinct

Several members of the community welcomed the proposal to expand the work of the Research Precinct noting the benefits that will potentially flow to patients around Australia and internationally.

3 THE SITE AND CONTEXT

3.1 The Site

The site comprises the western portion of the St Vincent's Research Precinct (see Figure 3), for which a separate Concept Plan application has been lodged (see Section 2.1).

The site has an area of approximately 2,151m² and comprises the properties along the eastern side of Victoria Street, Darlinghurst, between the Green Park Hotel (on the corner of Liverpool Street) and the existing GIMR. The site also includes Chaplin Lane, a rear service lane serving these properties.

The site principally comprises:

- 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).

The Project Application also includes works to connect the proposed building into and through the existing GIMR and VCCRI buildings. Accordingly, the works extend into the following properties (as indicatively shown at Figure 3):

- 384-390 Victoria Street (GIMR).
- 405-427 Liverpool Street (VCCRI).



Figure 2 – Context of Site

Garvan St Vincent's Campus Cancer Centre 362-382 Victoria Street, Darlinghurst

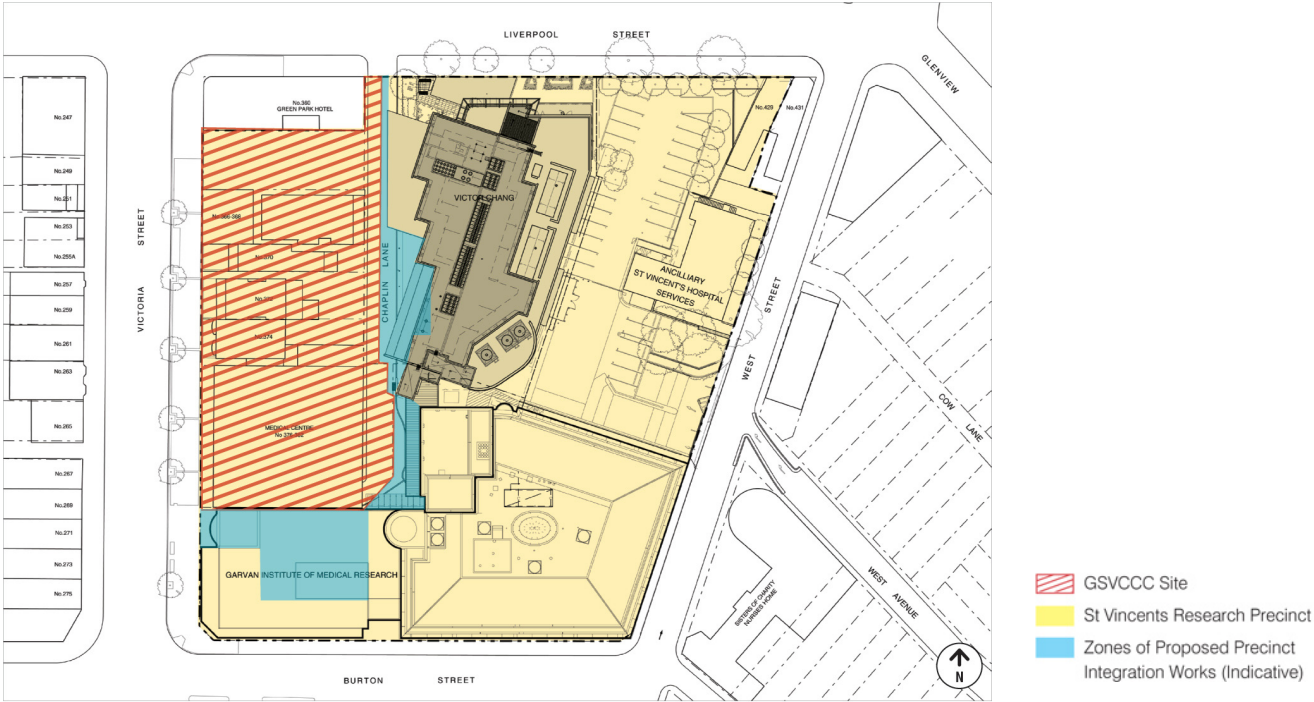


Figure 3 – Extent of Site

Existing development on the site is shown in the photographs below.



Picture 1 – 362 Victoria Street (vacant land used as beer garden to Green Park Hotel)



Picture 2 – 366-368, 370 and 372 Victoria Street



Picture 3 – 372 & 374 Victoria Street



Picture 4 – 376-382 Victoria Street

3.2 Legal Description

The site 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
- Part Lot 29 DP 881417 – 405-427 Liverpool Street
- Part Lot 10 DP 846558 - 384-390 Victoria Street

The entire St Vincent's Research Precinct, within which the site is located, is owned by the Trustees of St Vincent's. Landowner's consent to the lodgement of the Project Application is submitted under separate cover.

3.3 Local Context

The site is located on Victoria Street, which links 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.

3.3.1 Development to the North

Development immediately to the north of the site comprises the Green Park Hotel (360 Liverpool Street, on the corner of Liverpool and Victoria Streets).

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



Picture 5 - Green Park Hotel – 360 Liverpool Street



Picture 6 - The eastern end of the Liverpool Street block to the north



Picture 7 - Development to the immediate north, across Liverpool Street – viewed Victoria Street

Garvan St Vincent's Campus Cancer Centre 362-382 Victoria Street, Darlinghurst

3.3.2 Development to the West

Development on the western (opposite) side of Victoria Street comprises predominantly two storey terraces with restaurant/café uses on the ground floor and residential uses above.



Picture 8 - Development to the immediate west, across Victoria Street – viewed from Liverpool Street



Picture 9 - Development to the immediate west, across Victoria Street – viewed from Burton Street

3.3.3 Development to the East

To the rear of the site is the VCCRI 'Lowy Packer' building, which comprises part of the larger St Vincent's Research Precinct. The VCCRI is intended to be physically connected at various levels into the proposed GSVCCC building.



Picture 10 – VCCRI



Picture 11 – Chaplin Lane (VCCRI to left, GSVCCC site to right)

3.3.4 Development to the South

Immediately to the south of the site is the existing GIMR, to which it is proposed to physically connect the proposed GSVCCC at various levels. Development on the southern side of Burton Street comprises the St Vincent's Hospital, 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) located between the Cahill Building and Burton Street is currently under construction.



Picture 12 – The GIMR building



Picture 13 – Burton Street and St Vincent's Hospital O'Brien Building (currently under construction)



Picture 14 – The original (deLacy) St Vincent's Hospital building, with Cahill Building in background'

Garvan St Vincent's Campus Cancer Centre 362-382 Victoria Street, Darlinghurst

3.4 Site Analysis

Key features of the site and its immediate surrounds are illustrated in Figure 4.



Figure 4 – Site Analysis Plan prepared by BVN

3.5 Current Transport and Access Conditions

A Traffic and Parking Report has been prepared by TEF Consulting for the project (see Appendix J).

3.5.1 Road Network

The TEF Concept Plan report advises that two major arterial routes are located within close distances to the site – Oxford Street (State Road 172) and William St / 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 St / West St intersection.

3.5.2 Intersection Performance

TEF conducted traffic counts at all key intersections in the vicinity of the site. 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, SCATES (for Oxford Street intersections) and Aimsun microsimulation model.

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.

3.5.3 Public Transport

The site is very well serviced by public transport. Kings Cross railway station is located some 500 m from the Site (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 site. 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. More bus routes run along Oxford Street. These provide high frequency services.

3.5.4 Pedestrian and bicycle linkages to and within the site

Pedestrians are well provided for, with all streets in the vicinity of the site featuring footpaths. The walking path from Kings Cross railway station to the Precinct is under shop awnings for most of its length. Direct pedestrian access is currently provided to the site from Victoria Street. Numerous surrounding streets incorporate bicycle lanes.

3.6 Geotechnical Conditions

As detailed at Section 8.9 of the Concept Plan, a preliminary Geotechnical Assessment of the site has been prepared by Golder Associates.

The report advises that the precinct is located along the eastern side of a broad 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 concludes that no significant geotechnical constraints affect the proposed development on the site.

3.7 Contamination

As detailed at Section 8.10 of the Concept Plan, previous retail, commercial and residential uses of the site raise limited potential for localised contamination. Given that the entire area of the development site 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 to the Concept Plan 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 works on the site.

4 THE PROJECT

4.1 The Vision

The vision for the Project is:

"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".

4.2 Overview of Project

This Project Application seeks approval for:

- Early works, including demolition, archaeological investigations and basement excavation.
- Detailed design and construction of a building to house the GSVCCC.
- Use and ongoing operation of the GSVCCC.
- Associated site improvements, landscaping and public domain works.

Architectural Plans detailing the project for which approval is sought have been prepared by BVN and are included at Appendix C.

This application has been prepared in conjunction with the Concept Plan application No. MP 09_0010 for the larger precinct. Approval for the following parameters of the proposed research precinct is sought via the Concept Plan application:

- Demolition (conceptual approval only - not physical works)
- Building envelopes
- Land uses
- Floor space
- Car parking numbers
- Vehicle access arrangement
- Street frontage activities
- Subdivision/consolidation of titles

The current Project Application **does not** seek approval for these aspects of the project.

4.3 Detailed Description of Project

4.3.1 Early Works

In order to commence archaeological investigations and site preparation works as soon as possible, the Proponent seeks a separate Project Approval for 'early works' associated with the redevelopment of the site including:

- Demolition works of buildings and structures
- Contamination investigations and any required remediation works
- Archaeological investigations.
- Site preparation.
- Excavation to facilitate the installation of services and construction of basement parking.

4.3.2 Design and Construction of the Proposed Building

The proposal seeks approval for the detailed design and construction of an 11 storey building with 1 level of basement laboratory and plant and 5 levels of basement car parking as detailed on the Architectural Plans prepared by BVN (see Appendix C).

Photomontages of the proposed development are included below and reproduced at a larger scale at Appendix D.

Figure 5 – Photomontages, prepared by C3Di



Picture 15 – Looking south-east from the corner of Liverpool and Victoria Streets



Picture 16 – Looking north-east from the corner of Burton and Victoria Streets (artwork is indicative only - see Section 4.9)

Garvan St Vincent's Campus Cancer Centre
362-382 Victoria Street, Darlinghurst



Picture 17 – Looking east from Sydney CBD towards Bondi Junction



Picture 18 – Looking north-west from Oxford Street towards Sydney CBD

4.3.3 Land Use, Floor Space and Development Data

As detailed in Table 1, the proposed building will have 11 storeys above the Victoria Street frontage and six below, including five levels of car parking, accessed via the basement car park of the existing VCCRI building. The building will have one level of basement laboratories and plant (Level 3). Ground level (Level 4) will comprise a foyer entry, a commercial tenancy and a Haematology and Oncology Ambulatory Care (HOAC) facility. This facility will provide day treatment for cancer patients receiving ongoing chemotherapy and other cancer treatments. The first floor (Level 5) will accommodate the upper level of the HOAC and a 'wellness' centre and clinical consulting area. The level above (Level 6) will accommodate clinical data management and administration, in addition to meeting rooms and a landscaped rooftop garden over the lower part of the building adjoining the Green Park Hotel. With the exception of Level 11, which is the plant level, all other levels of the building will be used as research laboratories.

Car parking that exceeds the 1 space per 125m² requirements of DCP 11, technically constitutes 'gross floor area' pursuant to South Sydney LEP 1998. However, to avoid confusion, the GFA of habitable research and other space has been expressed separately to that associated with car parking proposed in excess of DCP 11 standards.

Table 1 – Summary of Proposed Development Data

Level	Use/s	Gross Floor Area ¹ (m ²) Research and Mixed Uses	Gross Floor Area (m ²) Car Parking	Car Parking Spaces
Level B3 (Basement)	Car parking	-	1,878	49
Level B2 (Basement)	Car parking	-	1,878	45
Level B1 (Basement)	Car parking	-	341	45
Level 1 (Basement)	Car parking	-	-	44
Level 2 (Basement)	Car parking	Nil	-	34
Level 3 (Basement)	Research laboratories and plant	1,410	-	Nil
Level 4 (Victoria Street Ground level)	Commercial tenancy, HOAC and rear courtyard	1,324	-	Nil
Level 5	HOAC, wellness centre and clinical area	1,555	-	Nil
Level 6	Clinical data management, administration, rooftop garden and meeting rooms	1,273	-	Nil
Level 7	Research laboratories	1,145	-	Nil
Level 8	Research laboratories	1,165	-	Nil
Level 9	Research laboratories (and plant on roof of GIMR)	1,139	-	Nil
Level 10	Research laboratories	1,143	-	Nil
Level 11	Plant	362	-	Nil
Level 12	Research laboratories	1,141	-	Nil
Level 13	Research laboratories	1,143	-	Nil
Level 14	Research laboratories	1,142	-	Nil
Total	-	13,942	4,097	217

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"

Garvan St Vincent's Campus Cancer Centre
362-382 Victoria Street, Darlinghurst

4.3.4 Landscaping and Public Domain Works

Landscape Plans and a Design Statement for the project have been prepared by EDAW and are included at Appendix E. Key elements of the proposed landscape concept are summarised below.

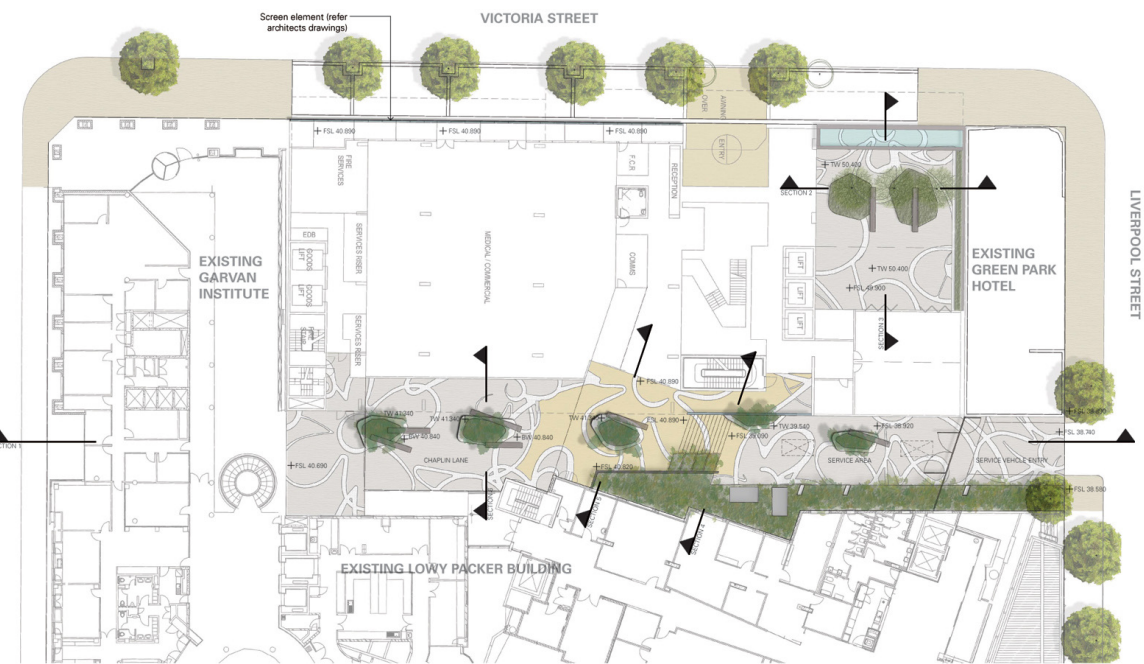


Figure 6 – Landscape Plan, prepared by EDAW

Chaplin Lane Courtyard

As stated in EDAW's Design Statement (see Appendix E).

"The Chaplin Street courtyard provides an indoor / outdoor link to the arrival foyer space providing an outdoor urban amenity to users of the precinct. When passing through the courtyard the user will be drawn over a subtle patterned paving through groves of bamboo that will pull the eye through the courtyard and provide both informal places to pause and wait and intimate pockets for contemplation".



Section 6

Figure 7 – Chaplin Lane Landscape Section, prepared by EDAW

Notes

- (1) Raised planters with Bamboo
- (5) Security fence and gate

Victoria Street

The ground level to Victoria Street presents an atrium entry to the new building slightly north of centre of the frontage. To the north of the proposed atrium is a commercial tenancy with direct access to Victoria Street. To the south is the HOAC facility, which will have a glass line setback from the street behind metal louvres at the street edge. In between the glazing and the louvres will be a garden zone that, in conjunction with the louvres, will provide privacy to cancer patients, while maintaining outlook to, and passive surveillance of the street.

A metal awning is proposed across the length of the Victoria Street frontage, except over the proposed entry atrium, where the entry to the building will be identified by a slightly higher glass awning. The proposed building will thereby continue the active, weather protected pedestrian conditions that positively characterise the pedestrian experience of Victoria Street.

The footpath and street trees are proposed to be replaced as required in accordance with City of Sydney Street Tree Master Plan 2004 and Council's relevant footpath paving standards.

Rooftop Terrace Garden

A rooftop garden (Level 6) is proposed to the north western part of the building, adjoining the Green Park Hotel.

This area, comprising approximately 150m², will include a combination of paved and planted surfaces to create an attractive and usable outdoor area with level access. It will also benefit from full sunlight throughout the day due to its direct northern exposure and will provide outdoor urban amenity for the future occupants of the GSVCCC as well as the broader research precinct.

4.4 Vehicular Access and Loading

Vehicular access is provided by two separate vehicles lanes connecting proposed Basement Level B1 into the existing basement car park of the VCCRI, which has existing access onto West Street.

New pedestrian access from Level 3 of the proposed building into the VCCRI will allow access to the existing VCCRI loading dock. This dock will be relied upon for all servicing and loading access, with the exception of the commercial/retail tenancy proposed to Victoria Street, which will load directly from Victoria Street. Similarly, the proposed substation under Chaplin Lane will be serviced from the retained northern end of Chaplin Lane.

4.5 Stormwater and Drainage

It is proposed to connect the storm water system associated with the GSVCCC to the existing storm water drain in Chaplin Lane. Storm water drainage will predominantly comprise roof water and pavement water from the front and rear of the building. Roof water will be directed to rainwater tanks located in the roof top plant room with overflows directed to the Level 2 aerial storm water system.

Trench drains will be provided at building entries to eliminate water ingress to the building. A pit and pipe storm water system will be installed to the lowest basement car park level and will drain to a storm water pump station which will pump out to the gravity storm water drainage system.

The proposed drainage system will enable rainwater to be harvested from all areas of the roof. A rainwater tank of approximately 50,000 litres is proposed to catch and store the rainwater within the roof plant room. The system will be designed for yearly rainfall intensities to ensure the system is regularly flushed. A non-potable water pump set will be installed adjacent to the rainwater tank with a potable water automatic change over device to ensure continuous flow during periods of low rainfall. The non-potable rainwater supply will provide water supply for toilet flushing and landscape irrigation, if required.

On Site Detention (OSD) is not proposed given the proposed works will incorporate rainwater harvesting and the works will not result in any increase in the impervious area on site.

4.6 External Finishes

The external finishes of the project are illustrated at Figure 8.

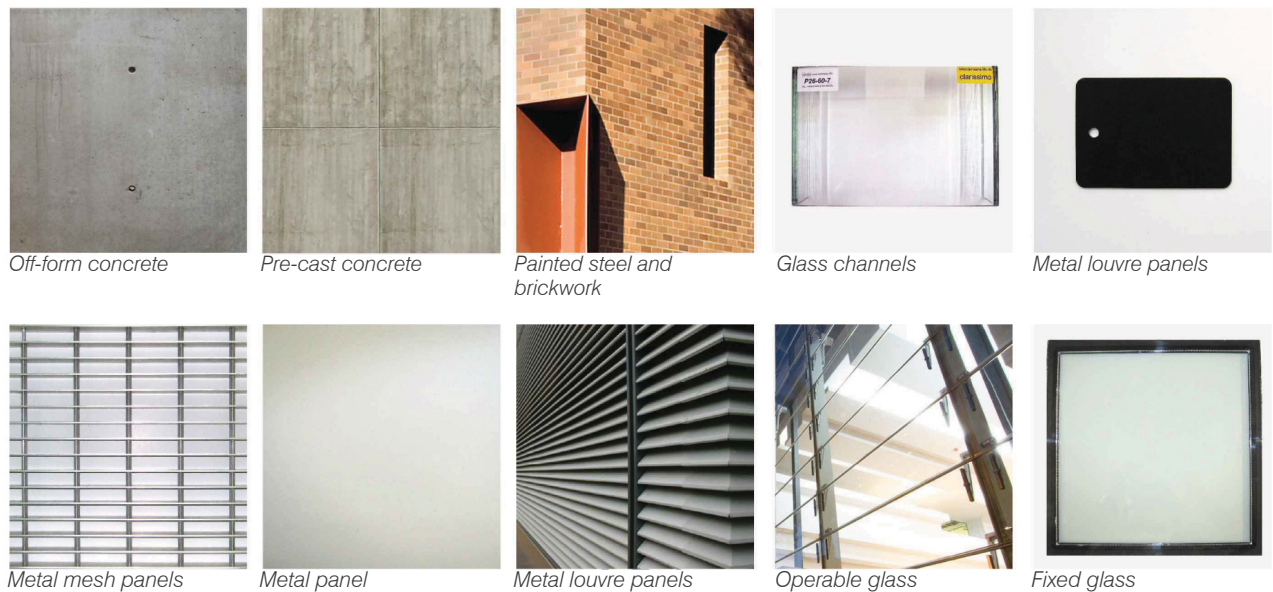


Figure 8 – External Finishes, prepared by BVN

4.7 Signage

The project includes a number of zones for the erection and display of external signage, as indicated on the Architectural Plans included at Appendix C. While the design and content of individual signs has yet to be determined, approval is sought for various signage zones, subject to separate applications for the specific design and wording of individual signs.

4.7.1 Building Naming

A 5x5 metre signage zone is proposed on the top left corner of the north, south and east facades of the tower building. On the western (Victoria Street) façade a similar signage zone is proposed above the main building entrance. Each zone will identify the name of the tenant and principal sponsor, in the same way the adjoining VCCRI building signage identifies both the VCCRI and the 'Lowy Packer Building'. The signs will take the form of backlit, individually mounted lettering and symbols, of a type similar to the VCCRI signage.

Similar 1.5x1.5 metre and 2x1 metre signs will be erected at street level on the front façade adjacent to the main building entry to identify the building to passing pedestrians.

4.7.2 Tenant Identification

The proposed ground floor tenancies will require external identification. A 500mm high zone for the naming of these tenancies is proposed along the top of the glass line to Victoria Street. One under awning sign per tenancy is also envisaged.

4.8 Integration with Precinct

The fostering of collaboration is a fundamental tenet underpinning the development of the precinct.

To this end, the proposed building has been designed as an integrated part of the St Vincent's Research Precinct, with links at various car parking, plant and habitable levels of the existing GIMR and VCCRI as detailed in Table 2. It also involves the creation of a new landscaped courtyard over the former Chaplin Lane (see Section 4.3.4) with pedestrian entries to both the GIMR and VCCRI, to act as a focus of pedestrian connection within the precinct.

Table 2 – Connections into GIMR and VCCRI

Level of Proposed Building	Links to VCCRI	Links to GIMR	See Drawing Nos.
Level B1	Two way divided vehicular access ramps into existing basement car park	Nil	D-B1, F-02
Level B2 – B3	Nil	Nil	D-B2, D-B3
Level 01	Nil	Access connection into basement substation	D-01
Level 02	Nil	Nil	D-02
Level 03	Two basement pedestrian links	Two basement pedestrian links	D-03
Level 04 (Ground Level at Victoria Street frontage)	Courtyard over Chaplin Lane with connection into VCCRI	Relocation of glass wall to Chaplin Lane approx 7 meters north, with access into new courtyard over Chaplin Lane	D-04
Level 05 - 06	Nil	Relocation of glass wall to Chaplin Lane approx 7 meters north	D-05, D-06
Level 07	Nil	Relocation of glass wall to Chaplin Lane approx 7 meters north	D-07
		Bridge connection into GIMR within new Chaplin Lane glass line	D-07, E-04
		Connection into 'de Novo' café and roof terrace	D-07, E-02, E-03
Level 08	Nil	Glass roof over Chaplin Lane extension	D-08
Level 09	Nil	New plant enclosure over roof	D-09, E-02
Level 10-14	Nil	Nil	D-10 – D-14

4.9 Artwork to Southern Facade

The photomontage at Figure 5 indicates a notional art treatment to the southern façade. However, this is not a proposed design, but an indicative representation of the extent of artwork that is intended to be installed on this façade.

In its abstraction, this artwork will publicly reflect the interaction between art and cancer research, and the activities that are undertaken within the GSVCCC building. The proponent commits to undertake an independent art selection process to determine the final form of this artwork.

The artwork will face towards St Vincent's Hospital and Green Park, but will also be exposed to the broader cityscape and public view.

4.10 Staging

Indicative staging is proposed as follows:

- Stage 1: Early Works - Demolition, Archaeological excavations, contamination investigations and remediation (if found to be required), car park excavation and services diversions.
- Stage 2: Building Works.

Separate project approvals are sought for each stage.

4.11 Draft Statement of Commitments

A draft Statement of Commitments is included at Appendix F. It forms part of the Project Application and is proposed to ensure that the proposed development will adequately mitigate any potential adverse environmental impacts both during 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)
- Artwork to Southern Facade
- External Signage
- Security Management Plan
- Construction Hours
- BCA Compliance
- Lighting Standards
- Car Parking and Loading Area Design Standards
- Augmentation of Utilities
- Remediation/Disposal of Contamination
- Noise Mitigation
- Drainage
- Access and Mobility
- Crime Prevention through Environmental Design (CPTED)
- Waste Management Plan
- Construction Management
 - General Construction Management
 - Parking for Construction Workers
 - Traffic Management
 - Environmental Management

5 DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Table 3 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 3 – Director General's Environmental Assessment Requirements Checklist

Director General's Environmental Assessment Requirements	Relevant Section of Report
General Requirements	
Description of the site including cadastral and title details	Sections 3.1 & 3.2
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 4.11 & Appendix F
Report from a quantity surveyor identifying the capital investment value	Separate Cover
Key Assessment Requirements	
Built Form, Design and Amenity	
Detailed architectural plans, elevations and sections to 1:100 or 1:200 scale	Appendix C
Urban design, height, density, bulk and scale of the development and relation to the surrounding development, landscape and topography	Section 6.5
Site analysis and assessment of the potential of overshadowing, privacy and view loss impacts on surrounding properties	Sections 3.4 & 6.7
3D modelling and a physical model of the proposed building	Separate Cover
External materials and finishes, including a sample board	Section 4.6
Photomontages and view analysis	Appendix D & Section 6.7.1
Details of proposed areas of landscaping and open space.	Section 4.3.4 & Appendix E
Construction Impacts	
Noise and vibration	Section 6.9.1
Soil and erosion control	Section 6.9.2
Air quality and air pollution	Section 6.9.3
Stormwater management	Section 6.9.4
Waste management	Section 6.9.5
Cut/fill and retaining structures	Section 6.9.6
Traffic impacts and management, include pedestrian/cyclist circulation	Section 6.9.7
Car parking for construction workers	Section 6.9.8
Operational Impacts	
Noise generation from plant and equipment	Section 6.10.1
Waste management including biomedical, infectious or toxic wastes, storage of any chemicals / hazardous materials	Section 6.10.2
Site security, including 'safer by design' principles in relation to new car parks and public area such as lighting and active / passive surveillance	Section 6.10.3
Emergency and evacuation procedures	Section 6.10.4
Fire safety	Section 6.10.5
Lighting	Section 6.10.6
Signage	Section 6.10.7
ESD Measures	
Address proposed ESD measures including water reuse and demand management, energy efficiency, recycling and waste disposal.	Section 6.12 & Appendix U

Garvan St Vincent's Campus Cancer Centre
362-382 Victoria Street, Darlinghurst

Director General's Environmental Assessment Requirements	Relevant Section of Report
<u>Consultation Requirements</u> Written evidence shall be submitted to demonstrate that an appropriate level of consultation with the relevant Local or State government authorities, service providers, community groups and other stakeholders has been undertaken. In particular, you should consult with: 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. This consultation process and the issues raised should be described in the Environmental Assessment.	Section 2.4 and Appendix B
<u>Landowner's Consent</u>	Separate Cover

6 ENVIRONMENTAL ASSESSMENT OF KEY ISSUES

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

The Project 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. As stated earlier in this report, the Minister has formally declared the project a 'Major Project'.

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.

This section provides an environmental assessment of the key issues identified in the DG's EARs (See Section 5).

6.1 Consistency with Strategic Planning Policy

As detailed in the Concept Plan, the project is not only 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.

6.2 Consistency with Statutory Planning Policy

6.2.1 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, with a capital investment value in the order of \$60 million, the project exceeds the \$15 million threshold.

The Minister for Planning was therefore requested to confirm the GSVCCC component of the St Vincent's Research Precinct as a 'Major Project' pursuant to the SEPP. On 11 March 2009, the Minister so declared the project, and is therefore the consent authority.

6.2.2 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. As such, the project would attract a referral to the RTA under this Policy.

6.2.3 SEPP 55 – Remediation of Land

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

In summary, only limited localised potential for contamination exists and a Draft Statement of Commitment is proposed to ensure that a Remediation Action Plan is implemented if found to be required.

6.2.4 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' with consent, including associated research facilities.

It is noted that the LEP does not contain any development standards which restrict building height, FSR or the like for development within the 5 Special Use Zone.

6.3 Strategic Justification for the Project

As discussed at Section 3 of the Concept Plan, 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.

6.3.1 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).

6.3.2 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. The project is clearly consistent with these strategic directions.

6.3.3 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 National Centre for HIV Epidemiology and Clinical Research 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.

6.4 Consistency with Concept Plan MP 09/0010

This application has been prepared in conjunction with a Concept Plan application for the St Vincent's Research Precinct. The scope of the Concept Plan application includes:

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

As illustrated on the Architectural Plans included at Appendix C, the massing of the building is generally consistent with the building envelopes proposed as part of the Concept Plan application. While a minor portion of the proposed building (Levels 7 to 14) projects slightly into the air space above Chaplin Lane, the ground level remains within the envelope proposed as part of the Concept Plan. This is considered to be generally consistent with the Concept Plan and is internal to the site and therefore will not result in any impacts on surrounding development.

Similarly, at Level 7 a horizontal metal screen element that vertically defines the base and tower elements of the building extends across the top of the façade of the existing GIMR building. While this element is not envisaged in the Concept Plan, it is a purely visual device that contains no floor space area, but visually integrates the GIMR building and the proposed GSVCCC.

The street awning over the Victoria Street footpath also extends outside the Concept Plan envelope, but for the purely public purpose of providing pedestrian weather protection and maintaining the positive streetscape character of Victoria Street.

The 13,942m² of gross floor area (in addition to 4,097m² of car parking in excess of DCP 11 rates) and 217 car spaces is consistent with the 14,000m² of gross floor area (in addition to 4,097m² of car parking in excess of DCP 11 rates) and 218 car parking spaces provided for in Concept Plan MP 09/0010.

6.5 Building Design

The following design statement has been prepared by James Grose of BVN Architects, the Director responsible for the design of the proposed building:

Introduction

A St Vincent's Research Precinct concept plan was recently submitted to the Department of Planning for approval by the minister. This plan establishes building envelopes and other key development parameters for the precinct.

Located on the south-eastern edge of the CBD, the Garvan and St. Vincent's Campus Cancer Centre (GSVCCC) building has been designed to present a distinctive and measured response to its context of Darlinghurst. The proposed building combines both cancer research and clinical services. The design aspiration of the GSVCCC is to encourage physical and intellectual interaction between research and clinical staff to provide the opportunity for new ideas and thoughts to be exchanged and formulated.

The building form is articulated by its four discrete sides relating to the urban and environmental contexts – to the north, the building is set back, giving distance (about 13 metres) between its main mass and the Green Park Hotel and aligning with the parapet. In elevation, adjacent to the Green Park Hotel, the building breaks down its scale into elements that are appropriate to its smaller neighbour. This human scale addressing the Green Park Hotel is further emphasised by the planted roof garden and meeting room. The colour of the new building complements the colour of the Green Park Hotel.

As the mass of the building moves away from the Green Park Hotel its sculptural composition escalates in scale above street level presenting a façade that is ambiguous, ranging from diaphanous to solid, depending on whether one is viewing the structure by day or night, and the angle at which the sun is hitting the building. Although appearing fixed and static, the series of facades facing Victoria Street reflect the activity within, both physically and metaphorically. This element of the building is formed of 11 storeys, including a centrally located plant level.

The strong horizontal articulation of the physical connection with the Garvan Institute modifies the scale of the building as it approaches street level, where the functional programme changes to retail and medical space. At this level, the façade and its occupants are sheltered by means of an awning, continuing the language of awnings found along Victoria Street and throughout Darlinghurst. At this level, the façade module of the building is far more intimate, as shopfront. Functionally and physically, the façade breaks down from the north to the south demonstrating new retail and commercial function, the new entrance to the GSVCCC and adjacent to this, another new medical frontage.

Addressing the concept plan

The concept plan requires the envelope of the GSVCCC building be no higher than RL 93.5 with the topmost ceiling being RL87.83. These heights are achieved within the proposed building envelope. Vehicular access to the proposed car parking is achieved through the existing Lowy Packer driveway and car park on West Street.

The concept of the elemental building

In section, elevation and plan, the building has been conceived as a set of functional and spatial elements that articulate quite clearly their function. From South to North, the functional programme of service core to laboratory space to write-up space to meeting rooms and atria are clear.

This elemental relationship is reflected in the services strategy in the building which presents a highly serviced zone at laboratory area, graduating to less heavily serviced areas for write up and finally to naturally ventilated zones where the atrium is encountered and also reflected in the elevations, as described below.

Façade

Each of the facades of the GSVCCC addresses different functional and cityscape requirements of the building.

On the northern façade, vertical elements express the lift and service cores. Behind a sunscreen, a secondary glazed wall expresses other functions and complexities within the atrium beyond. The northern sunscreen serves to protect the internal spaces from thermal overloading at the same time as exposing the building's interior form and complexity through its diaphanous nature when daylight falls away. At high level on the northern façade, a clerestory window directs sunlight into the depths of the atrium below in the winter and allows an influx of shaded, diffused light into this space in the summer. At low level, a similar window brings sunlight into the atrium space, filling the clinical waiting areas with light and optimism.

The western façade of the GSVCCC is composed of several elements:

- 1 The sunscreen*
- 2 The breezeway*
- 3 The vertical blades*
- 4 The street-scale façade*

The sunscreen is the same as the northern façade sunscreen: composed of a hung aluminium louvre sunscreen over a glass façade that forms a cladding over the atrium and meeting room "functions". The screen is placed again to protect the inner functions of the building from thermal overloading and act as a diaphanous filter of the complexities of the building behind.

The breezeway at low level is made of horizontal charcoal coloured louvres over operable glass louvres, forming a corridor with a panelised curtain wall behind. This interstitial zone acts as the connecting passage way between the new GSVCCC building and the existing Garvan Institute. The seven storey void over the breezeway serves effectively as a form of thermal buffer, conducting fresh air into its volume at low level and expelling warm air at high level. Materially and visually, the Breezeway at high level is composed of "u" channel glass elements which are not quite fully transparent. Combined with a low reflectivity, this material renders views beyond (both internal and external) slightly ambiguous.

The vertical blades run as elements across two storeys of the building, as sunscreens to the office space and clinical programme allocated to the building.

The street-scale façade is composed of the western façade adjacent to The Green Park Hotel, the entrance to the building and the medical area. The northern zone of the west facade is three storeys in height, united to both the main building and the Garvan Institute building at the far extremities of the site by virtue of a vertical rhythm reflecting that of the Garvan and reflecting common elements of material connection: red oxide painted steel blades, the awning, and the streetedge. Adjacent to the main entrance foyer of the GSVCCC and the southern end adjacent to the Garvan Institute, the shopfront and awning is punctuated by concrete elements. The concrete element adjacent to the main GSVCCC entrance will allow building naming; whilst the southernmost element of concrete describes the functionality of the service cores as elements of the composition. The vertical blades above the awning are referenced in the screen running in front of the medical space.

The eastern façade is punctuated by the expression of concrete cores at its extremities. Between these punctuations lies a simple panelised curtain wall being afforded independent solar protection only at high level, between levels 12 and 14. The façade is articulated by the functional requirements of the laboratories within, resulting in a clear reading of this function. The plant room at Level 11 is expressed as a recessed panel of louvres. At low level on the eastern façade, glazing in the under-croft contributes to the active edge of the landscaped space between the GSVCCC and Lowy Packer Building. At the northern extremity, the building again compositionally links to the Green Park Hotel by uniting its materials of red oxide painted steel and concrete.

Forming the rear wall of the service core and abutting to the Garvan Institute, the southern façade has no fenestration. It does, however form an important aspect for the building. Primarily, it faces towards St. Vincent's Hospital and Green Park and as such opens the building to the broader cityscape and public scrutiny. It is the prominent façade for building naming, having such exposure and therefore has been treated to express the internal workings of the GSVCCC. It is proposed that the southern façade will carry an art commission which, in its abstraction shall reflect the interaction between art and science and carry to the public realm, as a symbol, the activities that are undertaken in the building.

6.6 Heritage

A Heritage Impact Statement has been prepared by Urbis and is included at Appendix G.

The site adjoins the locally heritage listed Green Park Hotel and forms part of the Victoria Street heritage streetscape. It is also located in the vicinity of the Barcom Avenue Conservation Area and the deLacy building, the original St Vincent's hospital building on the south-east corner of Burton and Victoria Streets.

While clearly of a different scale to surrounding heritage buildings, the proposed design meaningfully responds to these building in various ways.

Rather than mock or compete with the ornate features of surrounding heritage buildings, the proposed architecture adopts an elegant and unpretentious simplicity that provides a neutral background to the ornate detailing of the heritage items.

The design does however reflect the predominant street edge scale of Victoria Street through a strongly expressed horizontal base element that steps down from a height of four storeys towards the deLacy building, to two storeys adjoining the lower Green Park Hotel. Within this base element, the building expresses a strong rhythm of vertical elements that echo the proportions and scale of Victorian terrace streetscapes, adopts a modern interpretation of the traditional metal footpath awning and provides a high degree of activity at ground level. The two storey element connecting the main building mass to the Green Park Hotel continues the parapet line of the hotel building, and adopts a darker, more solid vertical expression, which connects, but is visually recessive to the adjoining hotel and other building forms.

Above the base element, the façade expression has a contrasting restrained simplicity that allows it to read as a distinct element to the more dominant building base. Overall, the design reflects the prevailing character of the locality, with a solid, detailed form of two to three storeys providing the foreground to multi-level modern towers above/behind.

With regard to the Barcom Avenue Conservation Area, the site is physically separated from this environment by the existing VCCRI building.

6.7 Amenity Impacts

6.7.1 Visual Impact (View Loss)

There are no significant view lines across the site, and any potential views would have been largely obscured by the VCCRI building. As can be seen in the photomontages included at Section 4.3.2 and Appendix D, the proposed building will be prominent in its immediate context, but will sit amongst a suite of similar hospital related buildings along the Kings Cross Ridge.

The simple and light weight contemporary expression of the facades will sit comfortably with the contemporary style of the VCCRI building, and will enhance the design quality and visual appeal of some of the less attractive taller buildings in the immediate vicinity of the site (e.g. the Telstra and Cahill buildings).

The strongly defined base element of the building has been designed to mediate between the height of the adjoining Green Park Hotel and the GIMR building facade to Victoria Street. The strong definition of this base element, and the rhythm of vertical elements within it, allows the building to express a character that is not inconsistent with the Victoria Street streetscape, notwithstanding that it is a very contemporary expression.

While the tower element above will be clearly visible, it is very common for lower scale street edge buildings in this part of Darlinghurst to be read in the context of considerably taller modern buildings behind. Indeed the existing lower scale buildings on the site are already read in the context of the multi-level VCCRI, GIMR and Telstra buildings beyond.

When viewed from surrounding suburbs, as illustrated in Pictures 15 and 16 (see Section 4.3.2), the proposed buildings will read as a relatively small object.

The artwork proposed on the southern façade is intended to create a positive landmark statement, and contribute to the vibrant arts culture of Darlinghurst.

6.7.2 Overshadowing

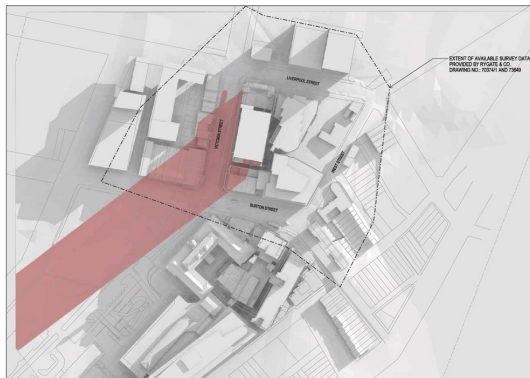
The Residential Flat Design Code (RFDC) adopts the standard sunlight access requirement that living rooms and private open spaces should generally receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid winter, but that in dense urban areas a minimum of two hours may be acceptable.

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 9, and reproduced at a larger scale at Appendix H, along with similar drawings for 14 August (indicative of equinox conditions).

Garvan St Vincent's Campus Cancer Centre 362-382 Victoria Street, Darlinghurst

Figure 9 – Shadow Diagrams – Winter Solstice – 21 June



Picture 17 – 9.00am



Picture 18 – 10.00am



Picture 19 – 11.00am



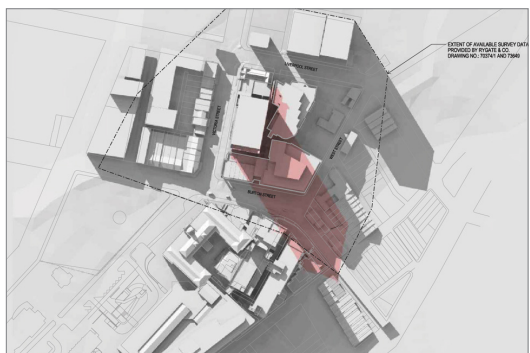
Picture 20 – Noon



Picture 21 – 1.00pm



Picture 22 – 2.00pm



Picture 23 – 3.00pm

Green Park

As can be seen in the shadow diagrams, 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 shadows will fall largely within the Precinct itself and on the Hospital.

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, no existing or proposed building within the Precinct will overshadow the residential area to the east before 2.00pm, providing well in excess of the required 3 hours of winter sunlight between 9.00am and 3.00pm. Furthermore, the small area of shadowing that is indicating as effecting residents to the east between 2.00pm and 3.00pm will in large part fall within existing shadows cast by the GIMR building.

Summary

In summary, Green Park will maintain full sun access shortly after 10.00am and a small number of dwellings to the west will lose a short period of sunlight between 2.00pm and 3.00pm on the shortest day of the year, but will retain well in excess of the 3 hours of sunlight typically deemed to be an acceptable minimum of the winter solstice. In the context of a densely developed urban area, this is not an unreasonable impact.

6.7.3 Privacy

While tall, the proposed building is set well back from any surrounding residences, and other land uses that may be sensitive to privacy intrusion from a commercial building.

While quite close to the VCCRI building, sightlines between the buildings will foster a sense of an integrated precinct, rather than an intrusion of privacy.

6.7.4 Noise

The Acoustic Assessment prepared by Wilkinson Murray (see Appendix I) includes consideration of traffic and loading dock noise in West Street.

Traffic Noise in West Street

A traffic assessment has been undertaken by TEF Consulting (see Appendix J), which predicts an increase in maximum hourly traffic volumes from 35 vehicles per hour (vph) to 105vph. Given the physical conditions of West Street, a maximum vehicle speed of 30km/h has been assumed by Wilkinson Murray, who predict an LAeq 1 hour of 52dBA, which is comfortably within the 55dBA NSW Environmentally Criteria for Road Traffic Noise (ECRTN) criteria.

Loading Dock Noise

The proposed GSVCCC will use the existing shared loading dock with the VCCRI building. While this will significantly increase the amount of floor space served by the loading dock, the number of product deliveries or waste collections is not anticipated to increase significantly.

Given the very similar nature of the VCCRI, GIMR and GSVCCC uses, the majority of products delivered to the GSVCCC will be from current suppliers of the precinct. The number of packages per delivery will increase but not necessarily the number of vehicles accessing the site. Waste generated by the GSVCCC will fit into existing streams with the main waste stream (contaminated) already being collected daily. The next two significant waste streams are collected in compactors on site which may result in an additional vehicle movement up to once a week.

Wilkinson Murray therefore conclude that the noise levels emitted from the dock during any 15 minute assessment period will remain the same as present, and note that physical constraints limit the dock capacity. No adverse noise impacts on West Street/Avenue residences are therefore envisaged.

Specific assessment of construction noise impacts and operational plant and equipment noise are provided at Sections 6.9.1 and 6.10.1 respectively.

6.7.5 Wind

A Wind Impact Assessment has been prepared by Heggies (see Appendix K).

Existing Winds

Heggies predict that existing street level wind conditions in the vicinity of the site are likely to be either close to or under the 16 m/sec "walking comfort" criterion for many prevailing wind directions given the varying degree of shielding afforded to the site by surrounding buildings.

Garvan St Vincent's Campus Cancer Centre

362-382 Victoria Street, Darlinghurst

Future Wind Environment

In terms of the future wind environment with the proposed development, the following features of the development are noted by Heggies as being of most significance:

- The site is shielded by numerous mid-rise buildings from the north clockwise through to the south.
- Awnings are proposed above all the entrances on Victoria Street and above the pedestrian footpath which will minimise the potential for "downwash" winds to occur, ie winds which impact on the west-facing façade of the development and are then deflected back towards the ground.
- Pedestrian areas located on the west and east side of the development are protected from adverse winds by existing and planned landscaping.
- The outdoor meeting area on the east side of the development is shielded by adjacent buildings and the proposed development.

Accordingly, Heggies predict that ground level wind speeds along all surrounding public footpaths and public access areas within the development itself will either remain at their present levels or decrease slightly with the addition of the proposed development and wind mitigation treatments.

6.7.6 Reflectivity

A Reflectivity Analysis has been prepared by Heggies (see Appendix L).

Heggies analysis of the development shows that there will be no elements within the proposed facades that are capable of causing adverse glare events at surrounding locations for motorists (disability glare) or pedestrians (discomfort glare) under any reflection condition.

This is due to the following:

- The development's facades will have a reflectivity coefficient of less than 15%.
- The proposed buildings dimensions and limited number of streets affected.
- The facade design of the development involves a mix of materials which limit the potential to generate significant glare, including:
- Other facade materials which cannot create glare, eg precast concrete, metal mesh panels and metal artwork panels.
- Metal louvers covering several sections of the facades.

In summary, through a combination of choice of glazing, facade design, facade orientation and surrounding thoroughfare orientation, no facades of the development will produce reflections causing either disability glare for passing motorists or unacceptable discomfort glare for passing pedestrians.

6.8 Car Parking

The 217 car parking spaces within the GSVCCC building are proposed and justified within the separate Concept Plan (see Concept Plan MP 09_0010) for the larger precinct. The rational for this quantum of parking is also explained in the Traffic and Parking Report prepared by TEF Consulting (see Appendix J).

With specific regard to the design of the proposed parking and vehicular manoeuvring facilities, the TEF report provides an assessment against the requirements of AS/NZS2890.1-2004 (car parking). The design drawings were checked against the requirements of the above Standard in terms of dimensions and gradients of parking spaces, parking aisles and ramps. Checks of vehicle manoeuvring were carried out using AutoTrack 8 swept path prediction software, and the proposed design is considered to be adequate.

South Sydney DCP 11 requires that bicycle parking be provided at a rate of one space per 20 staff minimum. The proposed jobs at GSVCCC amount to 365 Full-Time Equivalent (FTE) staff. However, only 328 staff are expected to be on site on a typical busy day. This would require provision of 16 bicycle parking spaces. A facility is proposed within the Level 2 basement car park that can provide well in excess of these requirements.

6.9 Construction Impacts

Prior to any works commencing, a Construction Environmental Management Plan (CEMP) will be prepared and implemented to manage all environmental aspects associated with the construction of the development. The CEMP will identify construction measures and practices to be established for the purposes of minimising potential construction impacts such as dust emission, erosion and sediment transfer, stormwater drainage, waste disposal, construction traffic and parking, noise, vibration and worker safety.

As such, a draft Statement of Commitment is proposed to ensure a CEMP is implemented if found to be required (see Appendix F).

Potential construction impacts identified in the DG's EARs are addressed below.

6.9.1 Noise and Vibration

As outlined in the Acoustic Assessment prepared by Wilkinson Murray (refer Appendix I), the following construction noise mitigation is recommended and forms part of the Draft Statement of Commitments at Appendix F:

- A detailed construction noise management plan will be developed prior to commencement of construction.
- A 2.4 metre hoarding will be constructed around the site, where appropriate.
- The contractor will liaise with potentially affected neighbours, including residents and occupiers of the adjacent hotel. Advice will be provided including:
 - a construction program noting likely periods of noise and vibration generation.
 - a complaint hotline.
 - Complaint handling procedures will be developed to ensure that all valid complaints are investigated and reported upon.
- Separate ongoing liaison will be instituted with GIMR and VCCRI to allow scheduling of construction activities to minimise the effect of noise and vibration within the buildings.
- Noise and vibration will be carried out at nominated residences (sensitive receiver locations) on one day a month from the commencement of construction activities. Construction noise monitoring carried out at noise-sensitive locations will generally be carried out at the facade of affected buildings subject to local access constraints. Supplementary noise monitoring may be carried out in response to complaints, exceedances or for the purpose of refining construction methods or techniques to minimise noise. Monitoring allows immediate feedback to operators so that corrective action (if required) can be implemented promptly.

Accordingly, a Noise and Vibration Management Sub-Plan has been prepared by AW Edwards and is included at Appendix M. This plan has been prepared to ensure that construction works do not significantly impact background noise levels or result in damage to surrounding buildings due to vibration impacts.

6.9.2 Soil and Erosion Control

A Soil and Water Management Sub-Plan has been prepared by AW Edwards and is included at Appendix N. This plan has been prepared to ensure that construction works do not result in soil erosion on the site and to ensure water quality is maintained. Specific controls to manage soil erosion will be included in any CEMP prepared for the site. A draft Statement of Commitment is proposed to ensure that this plan is implemented prior to commencement of construction (see Appendix F).

6.9.3 Air Quality and Air Pollution

An Air Quality and Dust Management Sub-Plan has been prepared by AW Edwards (Appendix O) for the project to ensure that the air quality surrounding the site during the course of works is appropriately managed to minimise the environmental and health risks associated with dust and exhaust emissions. A draft Statement of Commitment is proposed to ensure that this plan is implemented prior to commencement of construction (see Appendix F).

6.9.4 Stormwater Management

Appropriate stormwater management measures will be identified to ensure that adequate drainage will be provided on the site during construction. Details will be included in the CEMP. A Draft Statement of Commitment is proposed to ensure that this plan is implemented (see Appendix F).

6.9.5 Waste Management

A Waste Management Sub-Plan has been prepared by AW Edwards (see Appendix P) which outlines the proposed strategy for management of excavation and construction materials associated with the redevelopment of the site. Details of construction waste will be included in the CEMP. A draft Statement of Commitment is proposed to ensure that this plan is implemented (see Appendix F).

6.9.6 Cut/Fill and Retaining Structures

After removal of approximately 1.5m of overlaying soil, the site will be cut to a depth of 6 storeys into sandstone bedrock in order to allow for construction of the basement car park. Sydney Sandstone is a stable material for excavation and any excavated material may well be suitable for reuse in sandstone building works off site. It is noted that there will be no fill proposed on the site.

A Cut/Fill and Retaining Structures Sub-Plan has been prepared by AW Edwards (see Appendix Q) to ensure that construction works do not impact on the integrity of adjacent structures. A draft Statement of Commitment is proposed to ensure that this plan is implemented (see Appendix F).

6.9.7 Traffic Impacts and Management

As stated in the Traffic Report (see Appendix J), it is not possible to develop a detailed Traffic Management Plan for construction at the project development stage. However, general principles have been set out by TEF Consulting and will be used by the Building Contractor following their appointment.

The general principles for the Traffic Management Plan are outlined at Section 3.8 of the Traffic Report. Accordingly, a draft Statement of Commitment is proposed to ensure a Traffic Management Plan is implemented if found to be required (see Appendix F).

6.9.8 Car Parking for Construction Workers

On site parking for construction personnel will be resolved as part of the Traffic Management Plan/CEMP.

6.10 Operational Impacts

Potential operational impacts identified in the DG's EARs are addressed below.

6.10.1 Noise Generation from Plant and Equipment

Most mechanical plant will be located in the Level 11 plant room or on the roof of the GIMR building. The closest potentially effected residences are those above the cafes and restaurants in Victoria Street approximately 50m from the roof top plant.

Based upon preliminary plant selections, the Acoustic Assessment prepared by Wilkinson Murray (see Appendix I) indicates the noise control measures that will be provided to mitigate noise from each item, as summarised in Table 4.

Table 4 – Preliminary Plant Selections, Indicative Noise Levels and Noise Reduction Requirements

	Noise Level (dBA)	Noise Reduction (dBA)	Type of Noise Control
Level 11 Plant Room			
Car park exhaust	82dBA at 3m	15	Attenuators
Air Handling Units	75dBA at 1m	15	Attenuators
Roof			
Boilers	87dBA at 1m	8	Acoustic louvres
Up to 8 x Cooling Towers	53dBA at 16m		Shielding
30 x Exhaust fans	76dBA at 1m	15	Shielding/louvres*
Standby Generator 1000KVA	100dBA at 1m	20	Attenuators
Level 3			
Air Handling Units	75dBA at 1m	15	Attenuators
Level 2			
2 x Water cooled chillers	83dBA at 1m	15	Acoustic louvres

* Attenuators are not an option for laboratory exhaust fans due to corrosion as such alternative mitigation such as shielding and louvres will be utilised.

6.10.2 Waste Management (including storage of potentially hazardous materials)

A Waste Management Plan (WMP) has been prepared by Hyder Consulting for the operational phase of the development (see Appendix R).

It is noted that several different waste streams will be generated through the various activities within the GSVCCC. Generally these will be disposed of at or near the point of generation and collected by cleaners to be transferred to Level 3. Depending on the waste type, waste may also be transferred directly to Level 3 by the relevant members of staff.

The majority of waste management activities within the GSVCCC (i.e. waste storage and removal, delivery of new waste receptacles and bin washing) will take place on Level 3 in an area referred to as the Waste Storage and Transit Area (WSTA). GSVCCC waste management will be fully integrated with the waste management system of GIMR and VCCRI. Therefore parts of the existing WSTA (i.e. namely waste compactors, the autoclave, bulk/pallet storage, the loading dock and access routes) will be utilised for management of GSVCCC waste.

6.10.3 Safety and Security

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

While the courtyard area between the existing VCCRI building and the proposed building is proposed to be landscaped as an accessible outdoor area, this area 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 facility. A commitment in this regard is included in the draft Statement of Commitments.

In addition to the crime prevention measures outlined above, the proposal has been designed to ensure pedestrian safety within the site. The proposed building design incorporates physical separation of pedestrian and vehicle access points. Vehicular access is limited to West Street which allows safe pedestrian access via the main activity street of Victoria Street.

6.10.4 Emergency and Evacuation Procedures

The BCA Compliance Statement (see Appendix S) and Building Services Report (see Appendix T) address the relevant provisions of the BCA and Australian Standards in relation to procedures for Emergency and Evacuation. Further, a draft Statement of Commitment is proposed to ensure an Emergency and Evacuation Procedure Plan is implemented if found to be required.

6.10.5 Fire Safety

Details of proposed fire services is provided at Section 5 of the Building Services Report prepared by ARUP (see Appendix T).

In summary, the following services are proposed:

- Separate stand alone systems to serve the new building.
- Sprinklers will be provided where dictated by the fire engineered solution.
- New fire water supply from Victoria Street water main.
- Fire control panels, smoke detection and dry fire services.

6.10.6 Lighting

Details of proposed internal and external lighting are provided at Section 7.6 of the Building Services Report prepared by ARUP (see Appendix T). It is noted that a draft Statement of Commitment is proposed to ensure that a detailed lighting plan is prepared to minimise any potential impacts on surrounding properties.

6.10.7 Signage

While the actual wording and design of individual signs is yet to be determined, zones for building and tenant identification are indicated on the Architectural Plans included at Appendix C, and discussed further at Section 4.7.

The proposed signage scheme provides for one building / tenant identification sign on each façade of the tower, two pedestrian level entry identification signs and signage zones for tenants of the two proposed ground level tenancies to Victoria Street. This level of signage will appropriately identify the building, without unreasonable visual impact or clutter.

6.11 Building Code of Australia

Blackett Maguire & Goldsmith have undertaken an assessment of the proposed development against the relevant provisions of the Building Code of Australia. A BCA Compliance Statement is included at Appendix S.

The key findings of the Compliance Statement are as follows:

- The proposed development will generally satisfy the Deemed-to-Satisfy (DTS) provisions of Sections B, C, D, E, F and J of the BCA subject to a number of recommendations.
- The proposed building and interconnections to the adjoining VCCRI and GIMR will be the subject of various fire engineered alternative solutions to the DTS provisions of the BCA.
- It is considered that the proposed fire engineered alternative solutions can be appropriately addressed in the preparation of the Construction Certificate design documentation without giving rise to any inconsistencies with the development consent.

6.12 ESD (Sustainability)

ARUP have prepared a report which outlines the ESD measures proposed in relation to the project (refer to Appendix U). ARUP 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 to investigate 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 adopt 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. Specific strategies will be identified 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.

In the above regards:

- The proposed development has been designed having regard to ESD principles including investigation of national and international rating tool guidelines to measure sustainability with the intention of defining a sustainability plan, the reduction of energy consumption, water conservation, biodiversity and carbon reduction.
- Numerous passive and active systems will be employed to minimise the environmental impact of the development, and has been designed to achieve NABER's key goal of reducing operation energy consumption as a fundamental design target.
- Energy efficiency initiatives include proposals for efficient equipment selections, high performance façade materials, and the investigation of solar photovoltaics.
- Water Sensitive Urban Design measures include proposals for rainwater capture, storage and reuse; water-efficient tapware; green roofs to reduce stormwater runoff; and low or no water irrigation.
- The material selection process aims to include the reduction of Volatile Organic Compounds to improve indoor air quality and to reduce the release of known carcinogens into the biosphere.
- In addition to energy and water conservation measures, the proposal will implement appropriate waste minimisation and recycling strategies both during construction and ongoing operation.

7 CONCLUSION

The GSVCCC represents the next tangible project that will contribute to the evolution of a world class medical research precinct within Sydney. This project has been designed in a way that responds to the broad Concept Plan that has been developed to set the strategic intent for the development of this precinct into the future.

This Environmental Assessment Report has demonstrated that this proposal can be implemented in a way that is cognisant of its immediate context but most importantly, underscores the attention to design quality that is befitting of a world class facility.

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

We therefore conclude that the project can be approved in the form proposed and subject to the commitments made to ensure that there is a lasting benefit to the health and welfare of the population that this project directly seeks to positively influence.

Urbis

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