APPLICATION ON NOTIFICATION – CALVARY NORTH ADELAIDE HOSPITAL

Applicant:	Little Company of Mary Health Care Ltd
Development Number:	020/A088/18
Nature of Development:	Alteration and additions to Calvary North Adelaide Hospital including the change of use of a residence to a hospital use directly associated with the Calvary Hospital. The proposal includes the demolition of a dwelling at 306 Ward Street, removal of a significant tree, construction of a new single storey hospital ward, ancillary two-level basement car parking, landscaping and associated building works.
Development Type:	Merit
Subject Land:	89 Strangways Tce, North Adelaide, South Australia, 5006 and 306 Ward Street, North Adelaide, South Australia, 5006
Development Plan:	Adelaide (City) Development Plan [Consolidated 7 June 2018]
Zone / Policy Area:	North Adelaide Historic (Conservation) Zone, Hill Street Policy Area 1
Contact Officer:	Karl Woehle
Phone Number:	7109 7169
Consultation Start Date:	21 June 2019
Consultation Close Date:	4 July 2019
During the notification period, hard copies of the application documentation can be viewed at the Department of Planning, Transport and Infrastructure, Level 5, 50 Flinders St, Adelaide, during normal business hours. Application documentation may also be viewed during normal business hours at the local Council office (if identified on the public notice).	

Written representations must be received by the close date (indicated above) and can either be posted, hand-delivered or emailed to the State Commission Assessment Panel.

Any representations received after the close date will not be considered.

Postal Address:
The Secretary
State Commission Assessment Panel
GPO Box 1815
ADELAIDE SA 5001

Street Address:
Development Division
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
ADELAIDE

Email Address: scapreps@sa.gov.au

STATE COMMISSION ASSESSMENT PANEL
A COMMITTEE OF THE STATE PLANNING COMMISSION

Level 5, 50 Flinders Street
Adelaide SA 5000

GPO Box 1815
Adelaide SA 5001

Telephone: 08 7109 7060
ABN 92 366 288 135

http://www.saplanningcommission.sa.gov.au/scap

Our Ref: *2018/21386/01*
Your Ref: *14090553*

13 June 2019

City of Adelaide
Ms Helen Dand
GPO Box 2252
Adelaide SA 5001

Dear Ms Dand

Applicant:	Little Company of Mary Health Care Ltd
Application Number:	020/A088/18
Proposed Development:	Alteration and additions to Calvary North Adelaide Hospital including the change of use of a residence to a hospital use directly associated with the Calvary Hospital. The proposal includes the demolition of a dwelling at 306 Ward Street, removal of a significant tree, construction of a new single storey hospital ward, ancillary two-level basement car parking, landscaping and associated building works.
Subject Land:	89 Strangways Tce, North Adelaide, South Australia, 5006 and 306 Ward Street, North Adelaide, South Australia, 5006

The State Commissioner Assessment Panel (SCAP) is seeking comment from the public and adjacent landowners on the above application (Category 2), and has advised that information pertaining to the application will be available at the City of Adelaide from 21 June 2019 to 4 July 2019.

Accordingly, could you please make the attached information available for inspection and, for payment of a fee determined by Council, provide copies as requested.

Council may also wish to take the opportunity to comment on the application pursuant to Regulation 38(2)(b) of the *Development Regulations 2008*.

If you have any questions relating to this matter, please contact Karl Woehle of this office by telephone on 7109 7169 or email karl.woehle@sa.gov.au .

Yours sincerely

Gabrielle McMahon
A/Team Leader – Inner Metro Development Assessment
as delegate of the
STATE COMMISSION ASSESSMENT PANEL

South Australian
DEVELOPMENT ACT, 1993
REPRESENTATION ON APPLICATION – CATEGORY 2

Applicant:	Little Company of Mary Health Care Ltd
Development Number:	020/A088/18
Nature of Development:	Alteration and additions to Calvary North Adelaide Hospital including the change of use of a residence to a hospital use directly associated with the Calvary Hospital. The proposal includes the demolition of a dwelling at 306 Ward Street, removal of a significant tree, construction of a new single storey hospital ward, ancillary two-level basement car parking, landscaping and associated building works.
Development Type:	Merit
Zone / Policy Area:	North Adelaide Historic (Conservation) Zone, Hill Street Policy Area 1
Subject Land:	89 Strangways Tce, North Adelaide, South Australia, 5006 and 306 Ward Street, North Adelaide, South Australia, 5006
Contact Officer:	Karl Woehle
Phone Number:	7109 7169
Close Date:	4 July 2019

My Name: _____ My phone number: _____

Primary method(s) of contact:

Email: _____

Postal Address: _____ **Postcode:** _____

You may be contacted via your nominated PRIMARY METHOD(s) OF CONTACT if you indicate below that you wish to be heard by the State Commission Assessment Panel in support of your submission.

My interests are:
(please tick one)

- ☐ owner of local property
- ☐ occupier of local property
- ☐ a representative of a company/other organisation affected by the proposal
- ☐ a private citizen

The address of the property affected is: _____

_____ **Postcode** _____

My interests are:
(please tick one)

- ☐ I support the development
- ☐ I support the development with some concerns
- ☐ I oppose the development

The specific aspects of the application to which I make comment on are: _____

_____

_____

_____

I:
(please tick one)

- ☐ wish to be heard in support of my submission
- ☐ do not wish to be heard in support of my submission
  (Please tick one)

By:
(please tick one)

- ☐ appearing personally
- ☐ being represented by the following person
  (Please tick one)

Signature: _____

Date: _____

Return Address: The Secretary, State Commission Assessment Panel, GPO Box 1815, Adelaide, SA 5001 /or
Email: scapreps@sa.gov.au

STATE COMMISSION ASSESSMENT PANEL

A COMMITTEE OF THE STATE PLANNING COMMISSION

Why have I received this notice?

The role of the State Commission Assessment Panel (SCAP) is to independently assess and determine specified kinds of development applications in South Australia in accordance with the *Development Act 1993*.

Some types of development application require public notification. This is determined by the relevant Development Plan and Schedule 9 of the *Development Regulations 2008*. Development applications fall into one of the following categories:

- Category 1: No public notification
- Category 2: Notice of the application to be given to an owner/occupier of adjacent land to where the development is proposed. A person contacted in this way has the right to make a written representation to the SCAP. Representations from those with a right to be heard must be taken into consideration by SCAP when assessing the development application.
- Category 3: Written notice of the application to be given to an owner/occupier of adjacent land to where the development is proposed and to any owner/occupier of land which the SCAP believes would be directly affected to a significant degree if the development were to proceed. Notice by newspaper advertisement to be given to the general public.

What is a valid representation?

Your representation must be made within the public notification period as described upon the notice you have received. Pursuant to the *Development Act 1993*, this period is 10 business days from the date notice is given.

Your representation must be signed, dated, set out the reasons for the representation and include your full name and address contact details.

What can I comment on?

It is important to be mindful that your representation should avoid raising matters that are not relevant to the planning assessment of the application. A planning assessment can only have regard to the relevant provisions of the Development Plan. A representation can raise issues both in support and in opposition to a development.

You can access the relevant Development Plan here: https://www.sa.gov.au/topics/planning-and-property/development-plans

What happens next?

All valid representations received through either a Category 2 or Category 3 process are forwarded to the applicant for a response and taken into consideration by a Planning Officer from the Department of Planning, Transport and Infrastructure in preparing their assessment.

Pursuant to the *Freedom of Information Act 1991* and *Development Act 1993* any information provided may become part of a public document and may be published as an attachment to the Planning Officer's report.

If you have indicated that you wish to be heard you will receive an invitation to appear personally before the SCAP, or be represented by counsel, solicitor or agent. This invitation must give five (5) business days notice of the meeting but, dependent on other issues to be assessed, this meeting may not occur for an indefinite period of time after your representation is made. Unfortunately, the meeting time and date cannot be adjusted to accommodate all attendees.

If you have not indicated that you wish to be heard in support of your submission, you will not receive any further correspondence on this matter until a decision is made.

What is a SCAP meeting?
SCAP meetings are generally held on the second and fourth Thursdays of each month in the Kardi Munaintya meeting room on the ground floor at 50 Flinders Street, Adelaide.

The SCAP will be assessing the development application against the relevant Council Development Plan. To assist, an assessment report will be prepared by a Planning Officer from the Department of Planning, Transport and Infrastructure. This report is publicly available from https://www.saplanningcommission.sa.gov.au/scap/agendas_minutes on the Monday afternoon prior to the meeting. This report will include a copy of your representation.

Representors wishing to be heard will be given the opportunity to make a short (5 minute maximum) verbal presentation to the SCAP. Please note that Representors are only provided with the opportunity to make a verbal presentation at the initial hearing of an application. At this meeting, the SCAP may also hear comments from the applicant, relevant agencies, and Council.

How do I know what decision is made?
You will be able to ascertain the outcome of the SCAP's deliberation when the meeting minutes are made available on the SCAP website on the afternoon of the day after a meeting.

Once a decision is made by the SCAP, valid representors will be sent a copy of the Decision Notification Form which includes any conditions relevant to the application.

Note: Dependent on the assessment process for the application, and if no Representors indicate that they wish to be heard, a decision may be made by a Delegate of the SCAP without the application being heard at a SCAP meeting.

Appeal rights
If the proposal is a Category 3 application, then you can appeal a decision made by the SCAP if you have made a valid representation

Such an appeal must be lodged at the Environment, Resources and Development Court fifteen (15) business days from the date of decision. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide (telephone number 8204 0300).

STATE COMMISSION ASSESSMENT PANEL

A COMMITTEE OF THE STATE PLANNING COMMISSION

Representors do not have a right of appeal in relation to Category 2 development applications.

For more information
Contact the SCAP Secretariat on:

Telephone: 1800 752 664 (Select Option 4)
Direct: 7109 7061
E-mail: scapadmin@sa.gov.au

Postal: GPO Box 1815, Adelaide SA 5001

Street: Level 5, 50 Flinders Street, Adelaide SA 5000

Website: https://www.saplanningcommission.sa.gov.au/scap

15 May 2019

Strategic Development Assessment - CBD & Inner Metro Team
Planning and Development
Department of Planning, Transport and Infrastructure
GPO Box 1815
ADELAIDE SA 5001

Attention: Karl Woehle

Dear Karl,

Re: Development Application: DA 020/A088/18
Proposed Alterations and Additions to Calvary North Adelaide Hospital
89 Strangways Terrace and 306 Ward Street, North Adelaide

On behalf of the Little Company of Mary Health Care Ltd ('Calvary' or 'our client'), we write to provide further information relating to the Development Application for alterations and additions to Calvary North Adelaide Hospital at 89 Strangways Terrace and 306 Ward Street, North Adelaide.

Development Application DA 020/A088/18 was lodged with the State Commission Assessment Panel in October 2018. Since submitting the Development Application, discussions have been held with the Office for Design and Architecture SA, which have resulted in further refinement of the elevations of the proposed building. **Enclosed** with this letter is the following documentation:

- Architectural drawings prepared by Health Projects International Architects and Health Facility Planners (HPI);
  - CNA9-D-G Existing Plan/Demolition Plan
  - CNA9-P-G-2 Ground Floor Plan
  - CNA9-P-B1 Basement Level 1 Floor Plan
  - CNA9-P-B2 Basement Level 2 Floor Plan
  - CNA9-E-1-3 Elevations
  - CNA9-P-Site Site Plan & Street Elevation
  - CNA9-P-R-2 Roof Plan
  - CNA9-S Sections
  - CNA9-SA-1 Site Analysis Plan
  - CNA9-SH-1 Shadow Diagrams

- Perspective and Material Board dated 6 May 2019 prepared by HPI;
- Landscape Plans prepared by Outer Space Landscape Architects:
  - OS637_CP01D Landscape Concept Plan
  - OS637_CP02B Schematic Sections
- A Development Plan Assessment Report by MasterPlan (51067REP02a dated 15 May 2019).

Please do not hesitate to contact the undersigned on 8193 5600 or 0413 832 616 should you require any further information.

Yours sincerely



Julie Jansen
MasterPlan SA Pty Ltd

enc: As detailed
cc: Calvary; Thomson Geer.

DEVELOPMENT PLAN ASSESSMENT REPORT

Alterations and Additions to an Existing Hospital

89 Strangways Terrace and 306 Ward Street, North Adelaide
The Little Company of Mary Health Care Ltd

Development Application: DA 020/A088/18

Prepared by
MasterPlan SA Pty Ltd
ABN 30 007 755 277, ISO 9001:2015 Certified
33 Carrington Street, Adelaide SA 5000
Telephone: 8193 5600, masterplan.com.au

May 2019

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1.0 INTRODUCTION

MasterPlan SA Pty. Ltd has been engaged by the Little Company of Mary Health Care Ltd ('Calvary' or 'our client'), to review and prepare supporting documentation in relation to the development application for alterations and additions to Calvary North Adelaide Hospital at 89 Strangways Terrace and 306 Ward Street, North Adelaide ('the subject site').

The proposed development incorporates alterations and additions to Calvary North Adelaide Hospital, comprising the demolition of a dwelling at 306 Ward Street and the construction of a new single storey hospital ward, with linkages to the existing hospital and associated alterations, removal of a significant tree, and the construction of two levels of basement car parking and alterations to vehicle driveways across both the existing hospital site and 306 Ward Street.

Development application DA 020/A088/18 was lodged with the State Commission Assessment Panel in October 2018. Since submitting the development application discussions have been held with the Office for Design and Architecture SA, which have resulted in further refinement of the elevations of the proposed building.

This report contains a description of the subject land, the locality and the proposed development, as well as an assessment of the proposed development against the relevant provisions of the Adelaide (City) Development Plan (consolidated 7 June 2018).

In preparing this assessment of the proposed development we have had regard to:

- *Development Act 1993* and *Development Regulations 2008*;
- Adelaide (City) Development Plan (consolidated 7 June 2018);
- documents submitted as part of Development Application 020/A077/17; and
- comments by representors and the Office for Design and Architecture SA made during the assessment of Development Application 020/A077/17 and initial discussions in relation to the current Development Application (020/A088/2018).

This planning report has been informed by, and should be read in conjunction with, the following documentation:

- the Certificates of Title and Deposited Plan;
- the Site and Locality Plan, prepared by MasterPlan SA (**Attachment A**);

- the full set of architectural drawings, prepared by Health Projects International Architects and Health Facility Planners (HPI);
- Perspective and Material Board prepared by HPI dated 6 May 2019;
- Landscaping Plans prepared by Outer Space dated April 2019;
- a Contextual Analysis Report dated 17 October 2018, prepared by Dash Architects;
- a Traffic Impact Assessment Report dated 17 October 2018, prepared by GTA Consultants;
- a Tree Management Report prepared by Arborman Tree Solutions; and
- an Environmental Noise Assessment Report dated October 2018, prepared by Sonus.

2.0 BACKGROUND

2.1 Calvary North Adelaide Hospital

Calvary North Adelaide Hospital was established in 1900 by the Sisters of the Little Company of Mary. An acute care 153 bed facility, the hospital provides an excellent standard of maternity, acute medical, surgical and oncology services along with the renowned Mary Potter Hospice Palliative Care Service. These services are supported by an intensive care, coronary care, high dependency unit and paediatric services.

Calvary North Adelaide Hospital provides a comprehensive range of surgical services and is well equipped with six operating theatres, Day Procedure Suite, public and private Lithotripsy Service and an Intensive Care Unit (ICU) with doctors on-site 24 hours a day. Calvary North Adelaide Hospital is accredited by the Australian Council on Healthcare Standards (ACHS) and supports a variety of surgical specialties.

Calvary North Adelaide Hospital continually adapts and improves the facilities of the hospital for its patients and staff, and to ensure ongoing compliance with current best practice. These improvements include various infrastructure improvements, building alterations and additions, internal fit-outs and conservation and maintenance work.

An opportunity has arisen to develop the property immediately to the east of the current hospital, at 306 Ward Street, as an extension of the hospital. The proposed development would provide Calvary North Adelaide Hospital with additional patient beds and additional on-site car parking.

2.2 Development Application 020/A077/17

Calvary submitted a development application to the State Commission Assessment Panel (SCAP) in or about November 2017 for alterations and additions to Calvary North Adelaide Hospital. This development application numbered 020/A077/17 incorporated a single storey extension to, and integrated with, the existing hospital and two levels of basement car parking. SCAP referred the application to the Government Architect (the Office for Design and Architect SA (ODASA)) and undertook Category 2 notification.

During the processing of the application, particularly in response to representations received during public consultation and comments by ODASA, the plans of the development were amended. Calvary wished to avoid any concern that the amendments exceed the scope of SCAP's ability to permit a variation under section 39 of the Development Act, and has therefore decided to lodge a fresh development application.

Development Application 020/A077/17 was accordingly withdrawn in October 2018.

2.3 Future Development

In determining the design of the proposed development, Calvary have sought to maximise the development potential of the site, both in terms of car parking and floor area. Maximising the provision of car parking on the site is a sensible response to the current lack of car parking provision for staff and visitors to the hospital. Simply developing a car park for demand generated by the current proposed development would not be an efficient or practical outcome. Maximising the provision of car parking is a beneficial outcome for the wider community as well as Calvary.

The development proposed by this application is approaching the maximum plot ratio, being 0.6. Under the current Development Plan policies any development which exceeds the current plot ratio on the site of 306 Ward Street would be a non-complying form of development.

Currently the existing hospital site has potential for substantial additional floor areas prior to reaching the applicable maximum plot ratio of 1.5. There is potential for future development adjacent to 306 Ward Street, but within the site of the existing hospital.

Furthermore, should the policies of the Development Plan change in the future to increase the allowable plot ratio of the property at 306 Ward Street to the same ratio currently applicable to the existing hospital site (being 1.5 max plot ratio), Calvary wishes to ensure that the current development is designed and constructed in a way that can facilitate further development on either 306 Ward Street or the main hospital site. Any such development is not currently proposed as it may be a non-complying development under the current plot ratio policies.

The proposed development is not the first stage of a larger development but rather a development in its own right which is designed and constructed to facilitate convenient and efficient future development of the site should Development Plan policies change over time. Health Projects International Architects have prepared a concept plan, which is attached (in **Attachment B**), that illustrates one concept for future development of the hospital should the plot ratio of 306 Ward Street be increased in the future. This concept plan does not form part of the development application and would not be submitted by Calvary under the current Development Plan policies.

3.0 SITE OF THE DEVELOPMENT

The site of the development is the whole of the existing Calvary North Adelaide Hospital commonly referred to as 89 Strangways Terrace and the property at 306 Ward Street, North Adelaide.

The site, for the purpose of the proposed development is currently contained within the following land parcels:

Certificate of Title	Parcel	Plan
Volume 5585 Folio 401	Allotment 10	Deposited Plan 12702
Volume 5187 Folio 584	Town Acre 763	T106101
Volume 5187 Folio 588	Allotment 5	Filed Plan 107755
Volume 5187 Folio 591	Allotment 4	Filed Plan 107754
Volume 5187 Folio 587	Allotment 3	Filed Plan 107753
Volume 5187 Folio 589	Allotment 11	Filed Plan 107761
Volume 5187 Folio 583	Allotment 5	Filed Plan 13015
Volume 5888 Folio 266	Allotment 2	Deposited Plan 60528

Overall the site of the existing Calvary North Adelaide Hospital is approximately 18,320 square metres with frontage to Strangways Terrace (and Ward Street) to the south, Hill Street to the west and Barnard Street to the north.

Calvary North Adelaide Hospital comprises a number of Local and State Heritage buildings, including:

- 88 Strangways Terrace – 1940's Maternity Ward – Local Heritage;
- 55 Barnard Street – St Joseph's House – Local Heritage;
- 63 Barnard Street – Kimberly House and fence – Local Heritage;
- 69 Barnard Street – Connery House – Local Heritage;
- Hill Street and Barnard Street – Boundary wall – Local Heritage; and
- 73-75 Barnard Street – Chapel – State Heritage.

A number of significant trees are identified in the Adelaide (City) Development Plan (Table Adel/5) on the site of Calvary North Adelaide Hospital. Table Adel/5 includes criteria for listing against Section 23(4a) of the *Development Act 1993*, that is, the designation for local heritage listing. It is understood that the trees are not local heritage places, but rather significant trees identified by the Development Plan pursuant to the definition of a significant tree of the *Development Act 1993*.

The property at 306 Ward Street is immediately east of the existing Calvary North Adelaide Hospital. Currently 306 Ward Street comprises a single storey double fronted cottage with rear additions, a freestanding outbuilding, in-ground pool and tennis court. There is no state or local heritage listing on 306 Ward Street. There are many mature trees on the property, however the Development Plan does not identify any significant trees.

No restrictive covenants or easements are illustrated on the Certificate of Title (Volume 5585 Folio 401) of 306 Ward Street, which demonstrates the following dimensions:

- a street frontage of 31.88 metres;
- a minimum site depth of 70.39 metres and a maximum site depth of 84.07 metres;
- the rear boundary is 'stepped' and comprises a total width of 31.9 metres; and
- comprising a total site area of 2,462 square metres.

In combination, the addition of 306 Ward Street to the existing Calvary North Adelaide Hospital site will result in a site area of approximately 2.08 hectares.



View of the existing dwelling at 306 Ward Street.



View of the eastern wing of Calvary North Adelaide Hospital (Mary Potter Hospice) and existing driveway which adjoins 306 Ward Street.

4.0 LOCALITY

Calvary North Adelaide Hospital, St Dominic's Priory School and the City of Adelaide Golf Links are the major non-residential land uses within the locality. These non-residential land uses provide vibrancy to the locality, creating extensive movement of people and vehicles around local street network. On-street parking servicing the non-residential land uses are a dominant element of the locality.

The locality has an attractive setting with the parklands and golf links to the south of Strangways Terrace and numerous tree-lined streets.

To the north, west and east of the hospital are a variety of residential dwellings, including several heritage listed places. The scale and form of residential dwellings within the locality ranges from one and two storey detached dwellings to six storey residential flat buildings. Within the locality there are dwellings of numerous styles and eras ranging from simple cottages to large mansions. This locality demonstrates a diversity of built form reflective of development of the area over time in terms of both institutional and residential land uses.

The attractive institutional and heritage listed places, gardens and public streets all combine to create an attractive streetscape within the locality, albeit that this varies between streets. Amenity within the locality varies depending on the extent of on-street parking and vehicle movements.

Attachment A contains an aerial photograph site and locality plan which illustrates the site of the development and its context with reference to heritage places and existing zoning.

5.0 PROPOSED DEVELOPMENT

The proposed development incorporates alterations and additions to Calvary North Adelaide Hospital, comprising the demolition of a dwelling at 306 Ward Street and the construction of a new single storey hospital ward, with linkages to the existing hospital and associated alterations, removal of a significant tree and the construction of two levels of basement car parking and alterations to vehicle driveways across both the existing hospital site and 306 Ward Street.

5.1 Drawing Schedule

A detailed description of the proposed development is outlined in the following sections and more fully illustrated in the compendium of architectural drawings which accompany the application as prepared by Health Projects International and Outer Space Landscape Architects identified in Table 1 – Drawing Schedule.

TABLE 1: DRAWING SCHEDULE

NO.	SHEET TITLE
Health Projects International	
CNA9-D-G	Existing Plan/Demolition Plan
CNA9-P-G-2	Ground Floor Plan
CNA9-P-B1	Basement Level 1 Floor Plan
CNA9-P-B2	Basement Level 2 Floor Plan
CNA9-E-1-3	Elevations
CNA9-P-Site	Site Plan & Street Elevation
CNA9-P-R-2	Roof Plan
CNA9-S	Sections
CNA9-SA-1	Site Analysis Plan
CNA9-SH-1	Shadow Diagrams
	Perspective and Material Board dated 6 May 2019
Outer Space Landscape Architects	
OS637_CP01D	Landscape Concept Plan
OS637_CP02B	Schematic Sections

5.2 Description of Development

The proposed development incorporates alterations and additions to Calvary North Adelaide Hospital, comprising the following:

- demolition of a dwelling and outbuildings at 306 Ward Street;
- a change of land use of the existing residential property at 306 Ward Street to hospital;
- construction of a new single storey hospital ward with linkages to the existing hospital;
- new ward to comprise 29 inpatient beds;
- a net increase of hospital beds of 27, as two beds will be removed to facilitate the link between existing and new building/wards;
- internal alterations to the hospital to facilitate the linkages to the new ward (east);
- removal of a significant tree being a "*Washingtonia filifera* Desert fan palm" on Certificate of Title Volume 5187 Folio 583;

- retention of areas of existing fencing along with areas of new boundary and internal fencing;
- construction of two levels of basement car parking comprising 112 car parking spaces;
- alterations to vehicle driveways to facilitate access to the new basement car park;
- associated services plant and equipment; and
- new landscaping.

5.3 Proposed Use

The site of the development comprises the Calvary North Adelaide Hospital (being a hospital land use) and the dwelling (residential land use) at 306 Ward Street. The proposed development seeks to demolish all existing structures (excluding some areas of existing boundary fencing) on 306 Ward Street and integrate an extension to the existing hospital, incorporating a new 29 bed inpatient ward physically linked to the existing hospital and new basement car parking.

The proposed development will result in a net increase of up to 27 hospital beds. Two beds will be removed from the existing Mary Potter Hospice area of the hospital to facilitate the link to the new ward.

At this time, Calvary North Adelaide Hospital (as operators of the hospital) have not designated or specified the use of the ward. However, the capacity to develop the ward is strategically important to the hospital. Calvary North Adelaide Hospital has identified the need to upgrade current wards within the hospital to provide for best practice single bed ensuite rooms. The proposed new ward allows for this space to be utilised to 'decant' an existing ward whilst other areas/wards are upgraded without closure and significant disruption to ongoing operations. As a flexible ward in the short term, the development provides Calvary North Adelaide Hospital with options for the ongoing long-term development of the hospital.

Physically and operationally the proposed new ward is directly associated with the existing hospital, as:

- the hospital ward will be administered as part of the existing Calvary North Adelaide Hospital;
- the hospital ward will be staffed by doctors, nurses and allied professionals currently operating/servicing the Calvary North Adelaide Hospital;
- medical services offered to patients in the new ward, including operating theatres, x-ray, radiology, pathology, pharmacy and allied medical services, are those available to all patients (as required) within the existing hospital;
- patient services such as meals, cleaning and pastoral care are an extension of the existing Calvary North Adelaide Hospital services;

- building services such as building maintenance and gardening are provided by staff of Calvary North Adelaide Hospital;
- access to the new ward for patients and visitors would be via the main entrance (with the exception of some direct access from the new car park). No new or separate entrance is proposed to the new ward;
- there is a physical link between the existing hospital and the proposed new ward via the "link bridge" to provide pedestrian movement within the hospital;
- all vehicular access associated with the new basement car park is within the boundary of the existing hospital; and
- the car park is for use by hospital staff and visitors.

5.4 Built Form

5.4.1 Boundary Setbacks

The proposed development seeks the following boundary setbacks from the new single storey ward:

BOUNDARY	PROPOSED SETBACKS
North (rear)	Varies between 6.0 and 15.4 metres
South (front)	Varies 6.074 to 7.504 metres
East (side)	5.85 to 6.15 metres
West (side)	To be constructed over Allotment Boundary of 306 Ward Street and within the Calvary North Adelaide Hospital property.

5.4.2 Site Coverage and Plot Ratio

Development of the new single storey inpatient ward is located in part on the existing hospital site and 306 Ward Street. A "link bridge" or enclosed walkway/passage is proposed over the altered (and excavated) driveway to join the existing and hospital to the new ward.

The total floor area of the proposed development is 1,513 square metres. The following table details the building areas and plot ratio:

	306 WARD STREET	EXISTING HOSPITAL	TOTAL
Site Area	2,462	18,320[1]	20,782
Building Area	1,387	126	1,516
Plot Ratio	0.56 (max 0.6)	0.89 (max 1.5)	

[1] Estimated site area

5.4.3 Building Height

The maximum building height, above natural ground level (N.G.L) is 5.35 metres. The wall height is 3.85 metres.

5.4.4 External Materials and Finishes

The proposed development seeks to utilise a varied materials pallet, that will include the following:

- masonry walls to match the existing hospital;
- rendered masonry;
- timber cladding;
- powder coated aluminium sheeting;
- metal roof; and
- glazed façade with feature pattern to the exterior of the glass bridge.

5.5 Vehicle Access and Parking

Access to the hospital and the proposed development will be retained from Strangways Terrace (Ward Street) via the existing driveway currently on the eastern side of the Mary Potter Hospice (hospital building). The access to 306 Ward Street will be closed.

Alterations are proposed to the driveway adjacent the eastern side of the hospital to accommodate access to the proposed basement car park. Other than the eastern driveway, there are no other alterations proposed to the internal driveways on the existing hospital site.

The proposed development seeks to construct a two-level basement car park which will comprise the following elements:

- a total 112 vehicle parks including two disabled spaces;
- the basement levels will comprise two fire stairwells, one lift, bicycle parking area and service/plant areas; and
- the existing vehicle access associated with 306 Ward Street will be reinstated to kerb and gutter, providing an additional on-street vehicle park.

Basement car parking is proposed to:

- provide car parking for staff, including doctors, nurses and administrative staff. As a historic land use, the hospital has developed without large or significant areas of car parking and does not provide the desired volume of car parking for staff on the site;
- provide car parking for visitors of long stay patients to the hospital. Currently there is a heavy reliance on on-street parking for visitors to the site; and
- provide car parking required for the additional hospital beds.

The car park is not proposed as a public or stand-alone car park for use by the wider community, but rather for staff and visitors, particularly visitors of long stay patients. Calvary North Adelaide Hospital currently operate a managed car parking scheme, whereby staff are provided with swipe card access to the existing on-site car parking. This managed system can restrict hours that staff can access the car park. It is proposed a similar swipe card managed system would operate in the basement car park for staff, with spaces identified for staff parking only. The car park design is shown with boom gates as part of this management. Visitor parking of long stay patients will be managed with the same swipe card system, which controls the time of entry and establishes applicable time limits depending on the patients' circumstances.

The current staff car park which is accessible from Hill Street would be retained as staff parking with options for future improved loading and delivery access to the service area of the hospital.

Car parking is an integral ancillary component of the hospital, particularly any development that increases inpatient beds or floor area. Provision of car parking has been the subject of comment from adjoining owners and occupiers in relation to various development applications for alterations and additions over the past decade. In addition to being ancillary and integral with the hospital land use, the proposed basement car park is physically integrated with the existing hospital in the following manner:

- vehicle access is via the current Strangways Terrace (Ward Street) crossover to the hospital;
- physical alterations are required to the existing driveway of the hospital to provide suitable ramps to the basement car park;
- pedestrian access to and from the basement car park is internal to the buildings only. There is no external access from the street; and
- pedestrian movement to and from the basement is via a lift, lift lobby and link bridge between the existing hospital ward and new building.

6.0 PROCEDURAL MATTERS

6.1 Development Plan

The relevant version of the Adelaide (City) Development Plan for procedural and assessment purposes was consolidated on 7 June 2018.

The subject land, under this version of the Adelaide (City) Development Plan, is situated entirely within the North Adelaide Historic (Conservation) Zone, as shown on Map Adel/7 and Adel/12 and more specifically within the Hill Street Policy Area 1 of that zone as shown on Map Adel/38 and Adel/43. Calvary North Adelaide Hospital is located within the Calvary Hospital Concept Plan Fig HS/1 and 306 Ward Street is immediately east, but not within this Concept Plan.

6.2 Nature of Development

Within the North Adelaide Historic (Conservation) Zone a change of land use to a hospital is a non-complying form of development, in accordance with PDC 27, except "*where directly associated with the Calvary Hospital site on Fig HS/1"*. This exception is stated as:

> *Hospital except:*
>
> *(i) where directly associated with the Calvary Hospital site on Fig HS/1*
> *(ii) in Policy Areas 4, 9 and 15.*

The proposed development involves the change of use of land from residential to hospital which is directly associated with the existing Calvary North Adelaide Hospital. It is our respectful submission that for all of these reasons outlined in Section 5.3 of this report, the development is directly associated with the Calvary Hospital site as shown on Fig HS/1. Our interpretation of the exception contained in PDC 27(a), is that development does not have to be located on the site of the hospital as shown on Fig HS/1 to be "directly associated".

A range of policy changes were introduced in the North Adelaide Historic (Conservation) Zone via the North Adelaide Large Colleges and Institutions Development Plan Amendment (the DPA) which was gazetted on 30 May 2017. We are aware that the intent of this "exception" in PDC 27(a) was the subject of much debate and discussion during consideration of the DPA by Adelaide City Council and the Minister of Planning.

The variation of the intent of the policy is clear when reviewing the policies of the City of Adelaide Development Plan prior to the DPA, which read as follows:

> *'The following kinds of development are non-complying: … Hospital except (i) for development to Calvary Hospital on its existing site in accordance with the Calvary Hospital Principle 9 in Policy Area 1*'

Following approval of the DPA, the wording of the Development Plan was changed in May 2017 to:

> '*The following kinds of development are non-complying: … Hospital except (i) where directly associated with Calvary Hospital site on Fig HS/1*'

The policy change for large institutions and colleges to develop specifically on their 'existing sites' was removed and replaced with the 'directly associated' wording as part of the implementation of the DPA in 2017.

It is noted that a "*car park except where ancillary to an approved or existing use*" is a non-complying form of development within the North Adelaide Historic (Conservation) Zone. It is our respectful opinion that the two-level basement car park is ancillary to the existing hospital land use, albeit the substantive component of the car park structure is on adjoining land, whilst access is via the existing site. The proposed operation of the car park is outlined in Section 5.5 of this report.

It is our respectful submission that the proposed development, incorporating the new ward and basement car parking, is integrated with the hospital via physical links, access and operationally. In terms of land use, the proposed development is a consent land use to be determined on merit.

The development does not involve the demolition of a State or Local Heritage Place and therefore is not non-complying for this reason (PDC 27(b)).

> **27 The following kinds of development are non-complying:**
>
> **(a) …**
>
> **(b) Building work involving any of the following:**
>
> **(i) Total demolition of a State Heritage Place, local heritage place or portion of a local heritage place being the frontage and side wall returns which are visible from the street, where the elements of heritage value of that place are so limited.**

PDC 27(c) states that development exceeding any applicable maximum plot ratio is a non-complying form of development.

27 The following kinds of development are non-complying:

(a) ...
(b) ...
(c) Development which exceeds any applicable maximum plot ratio (as prescribed in each Policy Area) except:...

(iii) on land identified as the Calvary Hospital site on Fig HS/1

The maximum plot ratio applicable for Calvary North Adelaide Hospital, being *"the land identified as the Calvary Hospital site on Fig HS/1"* is 1.5, in accordance with PDC 9(b) of the Hill Street Policy Area. In relation to 306 Ward Street, which is outside of the land identified on Fig HS/1, the maximum plot ratio is 0.6 in accordance with PDC 4(a) of the Hill Street Policy Area 1.

Hill Street Policy Area 1

PDC 4 The bulk and density of development should satisfy the following:

(a) Basic and maximum plot ratio: 0.6 (except for land identified as the Calvary Hospital site on Fig HS/1, the St Dominic's Priory College site on Fig HS/2 and the Helping Hand Aged Care site on Fig HS/3)...

PDC 9 Development of Calvary Hospital should:

(a) be in accordance with Concept Plan Fig HS/1;
(b) not exceed a plot ratio of 1.5...

PDC 27(d) states that development is non-complying if it exceeds both the building levels and maximum building height prescribed. The relevant maximum building height/levels for the Calvary Hospital site on Fig HS/1 is five building levels and a ceiling height of 15 metres. As proposed, the development within the Calvary Hospital site as shown on Fig HS/1 is one building level and has a maximum building height of approximately 5.325 metres. On this basis, the development within Fig HS/1 does not exceed the established maximums. In relation to the development outside of Fig HS/1 on the property at 306 Ward Street, the development is single storey (1 building level above natural ground level) and has a maximum building height of 5.325 metres, which are both less than the prescribed maximum of two building levels and 6.0 metres above the median or natural ground level.

Hill Street Policy Area

PDC 3 Development should not exceed 2 building levels or locate a ceiling more than 6 metres above the median natural or finished ground level at any point or any part of a building (except for land identified as the Calvary Hospital site on Fig HS/1, the St Dominic's Priory College site on Fig HS/2 and the Helping Hand Aged Care site on Fig HS/3).

It is our respectful submission that the proposed development is a consent land use, to be determined on merit.

6.3 Relevant Authority

In accordance with Schedule 10 (4B) of the *Development Regulations, 2008* the State Commission Assessment Panel (via the State Planning Commission) is the relevant planning authority, as the cost of the development exceeds $10 million. A cost estimate has been prepared by Rider Levett Bucknall, which estimates the development cost as $14,441,095.

6.4 Public Notification Category

In accordance with PDC 28(b)(i) of the North Adelaide Historic (Conservation) Zone the development is a Category 2 form of development.

> **PDC 28(b)** **Category 2, public notification required, third parties may, at the discretion of the relevant planning authority, appear before the relevant planning authority on the matter. Third parties do not have appeal rights:**
>
> **(i) all development, other than development classified as non-complying or which falls within Part (a) of this provision.**

6.5 Statutory Referrals

The proposed development does not directly affect a State Heritage Place, nor does it, in our respectful opinion, materially affect the State Heritage listed Chapel (73-75 Barnard Street) within the site of the development. On this basis, it is our respectful opinion that a referral to the Minister administering the *Heritage Places Act 1993* is not required.

7.0 DEVELOPMENT PLAN ASSESSMENT

The subject site is located within the North Adelaide Historic (Conservation) Zone, Hills Street Policy Area 1 of the Adelaide (City) Development Plan (consolidated on 20 June 2017). The following provisions of the Adelaide (City) Development Plan are considered relevant to the assessment of the proposed development:

North Adelaide Historic (Conservation) Zone

Statement of Heritage Value
Objectives: 1, 2, 3 and 4.
PDC's: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 16, 17, 19, 20, 21, 23, 27 and 28.

Hill Street Policy Area 1

Desired Character Statement
Objectives: 1, 2 and 3.
PDC's: 1, 3, 4, 7, 8, 9 and 10.

Council-wide

Community Facilities:
Objectives: 4 and 5.
PDC: 2.

Environmental:
Objective: 24.
PDC's: 82 and 84.

Noise Emissions
Objectives: 26 and 27.
PDC's: 89, 93, 94, 95, 97 and 100.

Waste Management
Objective: 28.
PDC's: 101, 102, 103 and 104.

Energy Efficiency
Objective: 30.
PDC's: 106, 107, 108, 109, 110, 111 and 112.

Micro-climate and Sunlight
Objective: 33 and 34.
PDC's: 119, 120, 121.

Stormwater Management
Objective: 35 and 36.
PDC's: 126, 127, 128, 129, 130, and 131.

Heritage and Conservation
Objectives: 42, 43 and 45.
PDC: 136. 137, 142, 145 and 146.

Heritage and Conservation- North Adelaide
PDC's: 153 and 158.

Built Form and Townscape

Objectives: 47 and 48.

PDC's: 168, 169, 170, 172, 175, 177, 178, 180, 182, 185, 186, 187, 188, 189 and 190.

Sky and Roof Lines

Objective: 49.

PDC's: 192, 193, 194 and 195.

Active Street Frontages

Objectives: 50 and 51.

PDC's: 196 and 198.

Demolition

Objective: 53.

PDC: 203.

Landscaping

Objective: 55.

PDC's: 207, 208, 209 and 210.

Transport and Access

Objectives: 60, 61, 62 63, 64, 65, 66, 67, 68, 70, 71 and 72.

PDC's: 224, 232, 234, 235, 236, 237, 239, 241, 242, 243, 246, 248, 251, 252, 253, 254, 256, 257, 263, 264 and 265.

Economic Growth and Land Use

Objectives: 73, 74, 75 and 76.

PDC: 271.

Overlay 2 – Noise and Air Emissions

Objective: 1.

PDC: 1.

The following assessment has been undertaken against all most relevant of these Council Wide and Zone Objectives, Desired Character and Principles of Development Control (PDC) of the Development Plan.

7.1 Land Use and Character

The North Adelaide Historic (Conservation) Zone specifically anticipates and supports the development and ongoing role of established health land uses, as stated in Zone Objective 4. Calvary North Adelaide Hospital is a recognised long standing and well established health sector land use, as stated in the Hill Street Policy Area 1 Desired Character Statement.

> **Objective 4:** **A Zone which continues to support the development of the role of the long established health and education sectors whilst reinforcing the heritage value of the Zone and maintaining residential amenity.**

Underlining of the Desired Character Statement has been added as an illustration of the statements which relate to development of Calvary North Adelaide Hospital.

The Desired Character Statement speaks of reinforcing and respecting the heritage and historic values and the amenity of the Policy Area. The Desired Character Statement does not seek to preclude development of institutions such as Calvary North Adelaide Hospital. The North Adelaide Historic (Conservation) Zone specifically anticipates and supports the development and ongoing role of established health land uses, as stated in Zone Objective 4.

> **Hill Street Policy Area 1 – Desired Character Statement**
>
> **The Hill Street Policy Area should remain one of the lowest density residential areas in Upper North Adelaide and should be protected and enhanced as one of the most historically intact residential areas in South Australia.**
>
> **...Helping Hand Aged Care will be a valuable multi-functional aged care facility providing a variety of levels of care and accommodation for the elderly community. St Dominic's Priory College will continue to be associated with educational land uses. Calvary Hospital will provide hospital uses such as patient care, research, consulting rooms, visitor accommodation and ancillary services. Development of these long established institutions should meet the community needs and future requirements whilst reinforcing the heritage values and amenity of the Policy Area.**
>
> **New development should respect the low scale, environmental quality character and historic value of the Policy Area, incorporating high standards of design, materials and landscaping....**
>
> **(j) Ward Street and Strangways Terrace (east of Hill Street)**
>
> **The Calvary Hospital is a prominent corner site that contributes to the character of the area. The visual prominence of Calvary Hospital should be retained. New development should be compatible with the Heritage Places and should maintain the orientation and frontage of the hospital to Strangways Terrace. The use of landscaped open space should be incorporated to break up building mass. Car parking and access areas should be consolidated and landscaping established.**
>
> **East of Calvary Hospital, the existing townscape along Ward Street is characterised by a number of single storey detached residences of consistent architectural style, form and siting.**

The State and Local Heritage Places (listed previously in Section 3.0 of this report and shown on the Site and Locality Plan in Attachment A) on the Calvary North Adelaide Hospital, which contribute to the heritage values and historic character of the area are retained, as sought to be retained and respected by the provisions of the Zone.

Objective 2 of the North Adelaide Historic (Conservation) Zone provides guidance to achieve development that is compatible with the heritage values and historic character of the Zone. It is our respectful position that the proposed development satisfies Objective 2 for the reasons stated below the provision:

> **Objective 2:** **Development compatible with the heritage values and historic character of the Zone achieved by:**
>
> **(a)** **supporting and reinforcing the Statement of Heritage Value for North Adelaide and the desired character for each Policy Area; ...**

The Statement of Heritage Value outlines the survey pattern established by Colonel William Light. The proposed development does not alter the grid pattern of land division which has evolved since the original Town Acre development.

> **Statement of Heritage Value**
>
> **...North Adelaide repeats the grid land division pattern created by Light's plan ...**
>
> **North Adelaide is essentially a group of three residential villages separated from the square mile of the City by the belt of Park Lands. It has developed in parallel with the southern part of the City but with a greater emphasis on residential growth and the provision of local services in each area for the immediate residents. Although the original Town Acres have been divided and further developed over time, Light's Plan has been preserved essentially as he conceived it.**

Calvary North Adelaide Hospital incorporates a range of State and Local Heritage places which reflect the built form of North Adelaide as it developed. The Statement of Heritage Value acknowledges that North Adelaide retains many non-residential buildings, including churches and institutional buildings which are part of the Calvary North Adelaide Hospital site, along with a range of residential buildings. This Statement recognises this diverse range of built form and does not simply focus on residential buildings.

> **The built form of North Adelaide is indicative of the social divisions and occupations of Adelaide society from early settlement. It retains many buildings and sites of State and local heritage value ranging from large mansions to simple row cottages, corner shops and hotels to major churches and institutional buildings that reflect the different periods of development. The diversity of scale and integrity of the remaining historic built form is a microcosm of development periods and traditional housing styles in the State as a whole.**

The final sentence in the above extract from the Statement of Heritage Value highlights the mix of housing styles in North Adelaide.

The property at 306 Ward Street has not been identified in the Development Plan as a "traditional housing style" or a built form which has specific historic merit, as it is not listed as a place of local heritage value. Whilst not a listed heritage place, it is acknowledged that the dwelling does contribute to a diversity of housing styles and this would be removed by the demolition of this building.

The importance of institutions in the growth of the colony and their development within North Adelaide is recognised in the following paragraphs of the Statement of Heritage Value. Calvary North Adelaide Hospital was developed on a prominent corner, namely the corner of Strangways Terrace and Hill Street, overlooking the parklands with views to the square mile of the city. "*The hospital was been initially established in 1883 by the Dominican Sisters in a large house on the corner of Strangways Terrace and Hill Street. In 1900, the Little Company of Mary took over the hospital from the Dominican Sisters to establish the Calvary Hospital and from 1905 began expanding the hospital to cater for the growing needs of the population. The ongoing expansion of the hospital reached peaks in 1917-18, 1921, 1926 and 1929, while the late 1930s saw a much greater building program that included the construction of the East wing, the Chapel, the Maternity Ward and the Mortuary*" (Grieve Gillett Andersen – Heritage Assessment Report – Former Mortuary – July 2017). The proposed development retains the prominence of the longstanding institutional use and proposes to add a further chapter to the ongoing development of the site via a new hospital ward to the east.

> **…As the colony grew, North Adelaide became the location for a number of major religious and institutional organisations and their buildings, and for the residences of many notable Adelaide community members.**
>
> **North Adelaide has historically developed a role in the health and education sectors through established public and private organisations on large land holdings. Many of the organisations are on prominent sites and provide an important range of education, student accommodation, health and aged care services.**

Description of the development of Upper North Adelaide, as per the extract below, recognises that the institutions create a contrast to the more intense residential subdivision and housing development. This remains true today and the proposed alteration and addition to Calvary North Adelaide Hospital as proposed continues this contrast. It is considered important to recognise that the character of North Adelaide results from residential properties, the institutions and non-residential land uses of the area including the area of Upper North Adelaide.

Upper North Adelaide

This area contains Policy Areas 1 to 7 and is the largest of the three North Adelaide areas.

...The introduction of the horse-drawn tramway along O'Connell Street in 1878 drew commercial development away from Tynte Street but also made the western Town Acres which were previously sparsely settled, more accessible and construction of substantial houses soon followed. Prior to this period the area of Upper North Adelaide west of Wellington Square was the least desirable place to live in the City. Several religious orders were able to afford to buy land here, such as St Lawrence's in Buxton Street in 1867 and St Dominic's Priory in Molesworth Street in 1893 (during an economic recession when land prices were low). These large institutions create a contrast to the more intense residential subdivisions and housing development around them. ...

The Desired Character Statement of the Hill Street Policy Area 1 seeks to protect the area as one of the lowest density residential areas in Upper North Adelaide and one of the most historically intact residential areas in South Australia. This is to be achieved by retaining heritage places and other large villas set on large allotments.

Demolition of the dwelling at 306 Ward Street as part of the proposed development does remove a large villa which is set on a large allotment. This dwelling however is not a heritage place. Given the dwelling is not protected by a heritage listing, it is a property within Upper North Adelaide that provides infill residential development potential. The dwelling could be demolished and the site redevelopment for at least three new residential dwellings, which could be in the form of a two storey residential flat building. This development potential is considered to be somewhat at odds with the introductory statement of the Desired Character statement.

Hill Street Policy Area 1 – Desired Character

The Hill Street Policy Area should remain one of the lowest density residential areas in Upper North Adelaide and should be protected and enhanced as one of the most historically intact residential areas in South Australia.

The variety of dwelling types should be retained by the conservation of Heritage Places characterised by nineteenth and early twentieth century elegant and finely detailed mansions and other large villas set on large allotments, together with low and medium density cottages, villas and terrace houses of one and two storeys.

Helping Hand Aged Care will be a valuable multi-functional aged care facility providing a variety of levels of care and accommodation for the elderly community. St Dominic's Priory College will continue to be associated with educational land uses. Calvary Hospital will provide hospital uses such as patient care, research, consulting rooms, visitor accommodation and ancillary services. Development of these long established institutions should meet the community needs and future requirements whilst reinforcing the heritage values and amenity of the Policy Area.

New development should respect the low scale, environmental quality character and historic value of the Policy Area, incorporating high standards of design, materials and landscaping.

The character of new residential development should be established by low density detached dwellings, semi-detached dwellings, group dwellings or residential flat buildings, all up to a maximum of two storeys, unless a particular dwelling type(s) and/or a lower building height is prescribed for development addressing the primary street frontage, to reinforce the character of the historic built form as described below: ...

(j) Ward Street and Strangways Terrace (east of Hill Street)

The Calvary Hospital is a prominent corner site that contributes to the character of the area. The visual prominence of Calvary Hospital should be retained. New development should be compatible with the Heritage Places and should maintain the orientation and frontage of the hospital to Strangways Terrace. The use of landscaped open space should be incorporated to break up building mass. Car parking and access areas should be consolidated and landscaping established.

East of Calvary Hospital, the existing townscape along Ward Street is characterised by a number of single storey detached residences of consistent architectural style, form and siting.

The specific reference in the Desired Character Statement to Ward Street and Strangways Terrace (east of Hill Street) recognises the prominence of Calvary North Adelaide Hospital. This Desired Character Statement does anticipate new development and does not seek to restrict it to its current site boundaries. New development is sought to be compatible with heritage places and incorporate areas of landscaped open space and consolidation of car parking and access. As proposed, the additional hospital ward is compatible with the scale and form of heritage places on the Calvary North Adelaide hospital site and those adjoining. The development is highly compatible with the desire to consolidate car parking and to provide landscaping to break up building mass.

The final sentence of the Desired Character Statement quoted above, is statement of fact, rather than providing any guidance to the form of development anticipated east of Calvary North Adelaide Hospital.

Part (b) of Objective 2 of the North Adelaide Historic (Conservation) Zone seeks development to maintain a regular allotment pattern and orientation of buildings to the street, and incorporate a high standard of design, building materials and landscaping to complement heritage values and historic character of the zone. As previously stated, the proposed development does not seek to vary the allotment pattern, but rather retain the allotment width and frontage to Ward Street.

Design and siting of the proposed new hospital ward adjacent Strangways Terrace/Ward Street frontage has been carefully considered in the context of the locality and Objective 2 and PDC 1 and 3 of the Zone. A contextual analysis undertaken by Dash Architects has informed the building design.

To complement the streetscape character and be compatible with the historic character of the locality, the proposed development:

- is single storey with orientation to Strangways Terrace/Ward Street;
- has a street setback that is consistent with that of the existing hospital and adjoining residential properties to the east;

- retains vehicular access to one side of the building, in a manner consistent with the pattern of development along the street;
- maintains a side setback that is consistent with residential properties in the locality;
- comprises building elements and materials that complement the existing hospital building;
- incorporates reference to the materiality of the hospital building whilst being of a contemporary design;
- provides for an attractive landscaped frontage with a variety of trees and shrubs;
- retains areas of the existing rubble fence adjacent Ward Street on the eastern boundary of 306 Ward Street (to a point adjacent to the setback of the building);
- provides an attractive appearance and pleasant pedestrian amenity; and
- provides for car parking in a consolidated manner that is not visually dominant to the streetscape.

Objective 2: **Development compatible with the heritage values and historic character of the Zone achieved by:**

(b) **maintaining a regular allotment pattern and orientation of buildings to public roads and incorporates high standards of design, building materials and landscaping to complement the:**
pattern of land division established by Heritage Places, particularly the width of frontage;

bulk and scale of residential Heritage Places;

front and side boundary building set-back patterns of adjacent Heritage Places in each Policy Area; and

established environmental quality of public and private landscaped open spaces and the adjacent Park Lands;

(c) **buildings interspersed with open space and landscaped front gardens forming a distinct edge to the majority of the perimeter of the Zone, visually defining the interface with the Park Lands;**

(d) **a high degree of pedestrian amenity and safety achieved through landscaping, paving and streetscape works, with convenient access to the Park Lands, Wellington Square and the Main Street Policy Areas; and**

(e) **managing vehicle access and parking to conserve and enhance the heritage value of North Adelaide.**

Objective 3 and PDC 2 of the Zone seek to retain heritage places. The property at 306 Ward Street is not a heritage place. An increase in dwelling density is anticipated within the North Adelaide Historic (Conservation) Zone by replacement of buildings that are not identified as heritage places. The property at 306 Ward Street is therefore able to be redeveloped. Any redevelopment of the property at 306 Ward Street, whether in the form proposed in the development application or in a form of a new residential development is likely to alter the character of the property.

Objective 3: **A Zone where the existing housing stock is maintained through the retention of Heritage Places and the number of dwellings increased primarily through:**

(a) **the replacement of buildings that are not identified Heritage Places;**
(b) **the development of vacant or under-utilised sites that does not compromise the established residential amenity and the identified heritage value of the Zone and Heritage Places; and**
(c) **a change in use of non-residential buildings for residential purposes.**

PDC 2 **Development should increase the amount of residential accommodation in the Zone by:**

(a) **a change in use of non-residential buildings to residential uses;**
(b) **development of vacant and under-utilised sites that can be achieved without adverse impact on the established residential amenity and the historic character of the Zone or relevant Policy Area; and**
(c) **the redevelopment of sites containing buildings that are not Heritage Places which are presently incompatible with the historic character of the Zone or the desired character of the Policy Area, particularly buildings that are visible from public roads.**

There is some conflict within the policies of the Hill Street Policy Area which seek to provide for the ongoing development of non-residential health and educational land uses, including Calvary North Adelaide Hospital, whilst endeavouring to retain residential housing stock and develop the policy area for residential purposes. Objective 1 and PDC 1 of the Hill Street Policy Area seek development that achieves and is consistent with the desired character for the Policy Area. As previously stated, the Desired Character Statement clearly anticipates development of the hospital and does not seek to limit that development to the boundaries of the existing hospital site.

Objective 2 of the Hill Street Policy Area does not reinforce the Desired Character Statement, as it only anticipates residential forms of development. Objective 3 seeks to maintain residential amenity by limiting non-residential development to institutional uses within existing sites. Whilst this objective seeks to limit non-residential development, its purpose is to protect residential amenity. It is acknowledged that the proposed development seeks to develop the hospital beyond the boundaries of the existing site, which are shown in Concept Plan Fig HS/1, the provisions of the Zone seek for this development to be assessed on merit, taking account of residential amenity (Objective 3) and built form (PDC 8 of the Hill Street Policy Area).

Hill Street Policy Area

Objective 1: **Development that strengthens, achieves and is consistent with the desired character for the Policy Area.**

Objective 2: **Development of the Policy Area for residential purposes at low density with landscaped setbacks to retain and reinforce the traditional character.**

Objective 3: **Development of the Policy Area that maintains residential amenity by limiting non-residential development to institutional uses within existing sites.**

PDC 8 **Non-residential development comprising new buildings should respect the generally lower scale of residential buildings and provide a transition of built form at site boundaries.**

Hill Street Policy Area 1 PDC 9 specifically addresses development of Calvary Hospital.

PDC 9 **Development of Calvary Hospital should:**

(a) **be in accordance with Concept Plan Fig HS/1;**
(b) **not exceed a plot ratio of 1.5**
(c) **ensure new buildings up to a maximum of 5 building levels or 15 metres above the median natural or finished ground level at any or any part of a building are designed to:**

(i) **be located in central areas of the site and in areas identified as Taller Built Form;**
(ii) **ensure buildings up to 4 building levels are located along Hill Street and in areas identified as Taller Built Form;**
(iii) **ensure buildings up to 3 building levels are in areas identified as Low Scale Built Form;**
(v) **provide a compatible set back from the street, adjoining residential allotments and State and Local Heritage Places; and**
(vi) **minimise building mass at the interface from an adjoining boundary by siting built form within a building envelope consisting of a 45 degree plane, measured from a height of 3 metres above natural ground level at the allotment boundary of an adjoining residential allotment, except where a variation to the building envelope demonstrates minimal adverse impacts upon adjacent housing in terms of massing and overshadowing through alternative design methods.**

As a single storey building, the mass of the proposed building respects the lower scale of residential buildings and provides for an appropriate transition of built form between the taller built form of the hospital and the lower scale residential properties to the east.

The proposed development addresses PDC 9 in the following manner:

- it incorporates low-scale built form as an interface to adjoining boundaries, albeit that the boundary or interface to the residential properties is further east than that shown in the Concept Plan HS/1;

- the proposal does not exceed the plot ratio of 1.5, but rather the additional floor area within the site of the hospital (as shown on Fig HS/1) is estimated to be 0.89;

- ensures low scale development of less than three building levels adjacent residential properties (adjacent to low-scale built form component of the Concept Plan);
- continues the front setback of the hospital and is consistent and compatible with adjoining residential properties to the east;
- provides for a setback in the vicinity of 6.0 metres between the single storey building and the eastern boundary;
- satisfies the test for building mass; and
- as single storey development with suitable side setbacks it does not create unreasonable overshadowing of adjoining residential properties.

The proposed development is a non-residential form as an extension to the existing hospital. Alterations, additions and extension to Calvary North Adelaide Hospital are required to continue to meet the needs and future requirements of the hospital and the community as identified in the Hill Street Policy Area Desired Character Statement, which states: "*development of these long established institutions should meet the community needs and future requirements whilst reinforcing the heritage values and amenity of the Policy Area….*".

As previously stated, the intent of the Development Plan in relation to expansion of non-residential land uses beyond the boundaries of the Concept Plans contained in the North Adelaide Historic (Conservation) Zone was the subject of much discussion during the formation of the policy as part of the North Adelaide Large Colleges and Institutions DPA. The result of the policies introduced in the Development Plan may be imperfectly worded, however the intent of the policies is for development "*directly associated with the Calvary Hospital site on Fig HS/1*" to be assessed on merit. This merit assessment of future development both within the boundaries of Calvary North Adelaide Hospital (as shown on Fig HS/1) and other properties, should be assessed in terms of the overall intent of the Development Plan, which is to allow development of this long-standing institution to meet the community needs and future requirements, in balance with heritage values and residential amenity.

Provision of community facilities are discussed in the general provisions of the Development Plan quoted below. The additions to the hospital allow for the provision of additional beds (net increase of 27 beds) and a substantial increase in car parking. The design and siting of the hospital extension is proposed in a manner to minimise impacts on the residential amenity of adjoining residential properties.

Community Facilities

Objective 5: **Location of appropriate community facilities (eg schools, hospitals and other institutions) where they are conveniently accessible to the population they serve.**

2 **Community facilities should:**

(a) **be located conveniently in relation to the population they serve;**
(b) **be designed for multi-purpose use where possible;**
(c) **meet the demonstrated needs of the various communities who will use them;**
(d) **be safe and easy to reach on foot, by bicycle and by public transport;**
(e) **be situated in suitable locations; and**
(f) **not unreasonably impact on the amenity of the surrounding locality through excessive traffic generation.**

3 **The redevelopment, alteration or change of use of community facilities should ensure the adequate provision of such facilities**

Calvary North Adelaide Hospital is a longstanding lawful land use and the proposed alterations and additions to the hospital continue the existing use in a manner sought by the general land use provisions of the Development Plan and Objective 4 of the Zone that specifically relates to the hospital within the North Adelaide Historic (Conservation) Zone.

7.2 Built Form - Design and Appearance

7.2.1 Development Potential

Calvary North Adelaide Hospital is one of the largest non-residential sites within the North Adelaide Historic (Conservation) Zone, with an estimated site area of approximately 1.8 hectares. The property at 306 Ward Street is a large allotment having a site area of 2,462 square metres.

In accordance with PDC's 3, 4 and 5 of the Hill Street Policy Area, the site at 306 Ward Street could accommodate a floor area of 1,477 square metres, which could be in the form a residential flat building comprising at least three dwellings. Any such residential flat building could be two building levels with ceiling heights up to 6.0 metres.

Whilst a residential development is not proposed for 306 Ward Street, the development opportunities on the site are noted relative to the development that is being proposed, particularly in relation to building height and floor area. In relative terms, the proposed new hospital ward is less than the floor area that may be developed on the site and smaller in building height. It is acknowledged that the single large footprint of the new hospital ward is likely to vary from a residential footprint, however the site is able to accommodate this footprint without significant adverse impact on the residential amenity of the adjoining residential properties.

PDC 3 **Development should not exceed 2 building levels or locate a ceiling more than 6 metres above the median natural or finished ground level at any point or any part of a building (except for land identified as the Calvary Hospital site on Fig HS/1, the St Dominic's Priory College site on Fig HS/2 and the Helping Hand Aged Care site on Fig HS/3).**

PDC 4 **The bulk and density of development should satisfy the following:**

(a) **Basic and maximum plot ratio: 0.6 (except for land identified as the Calvary Hospital site on Fig HS/1, the St Dominic's Priory College site on Fig HS/2 and the Helping Hand Aged Care site on Fig HS/3).**

(b) **Dwelling Unit Factor:**

(i) **600 square metres - detached dwelling and group dwelling;**
(ii) **450 square metres - semi-detached dwelling;**
(iii) **500 square metres - residential flat building not contained within an existing building;**
(iv) **250 square metres - residential flat building contained within an existing building;**
(v) **350 square metres - residential redevelopment of a site occupied by a non-complying use.**

In relation to Principle 4(b), satisfying the minimum site area for a dwelling (described as the Dwelling Unit Factor) may not be sufficient to address heritage considerations relevant to a particular place or streetscape.

In relation to Principle 4(b), in the case of a hammerhead allotment or similar allotment design where the only public road frontage represents the proposed vehicle access, the area of the 'handle' or right of way is excluded from the site area when performing the calculation of Dwelling Unit Factor.

PDC 5 **Residential development at a greater density than that prescribed for desired dwelling types should only occur where buildings which will be visible from the primary street frontage are consistent with the desired character for the Policy Area or the street where prescribed (eg single storey detached dwellings) and only in the following circumstances:**

(a) **on land greater than 2000 square metres; or**
(b) **on land where the existing dwelling unit factor is 250 square metres or less and the development replaces a building that is not an identified Heritage Place; and**
(c) **in either case, the resultant Dwelling Unit Factor should not vary more than 20 percent from that required.**

7.2.2 Built Form

The single storey addition to the hospital has been designed in a manner consistent with the existing building on the hospital site and in the locality. Constructed with a mix of building materials including:

- masonry walls (PGH bricks – Corium 45005);
- timber look aluminium cladding (Covet – Oku) to niches;
- aluminium cladding (Colorbond^{tm} – Surfmist (light)) to fascia edges;
- aluminium frames and roofing (Colorbond^{tm} – Jasper (dark)); and

- perforated sheet (anodised powder coated) as a feature;

the building would present as a low scale modern addition to the hospital from the street and surrounding properties. The height, scale and massing of the building does not offend the streetscape of the Zone or Policy Area and satisfies Council-wide Principles of Development Control 170, 180 and 187 in the following manner:

- the development maintains a consistent floor level and ceiling height;
- a portion of the façade incorporates masonry walls to reflect the existing heritage listed maternity ward of the hospital;
- the façade has varied setbacks, a mix of building elements and materials with one of these building elements being the glazed link between the old and new building;
- the glazed link incorporates a perforated screen to add visual interest and draw the eye of a passing pedestrian to this element and away from the driveway under;
- incorporates a new fence in similar form and materials to the existing fence to the street. The front fence would complement the existing character to the street and neighbouring properties, along with the elements of the existing rubble fence which is retained on the eastern boundary;
- the design of the building allows a clear interpretation that it is a new addition to the hospital; and
- attractive planting of the front setback will provide a pleasant environment and street frontage.

Built Form and Townscape

PDC 170 The height, scale and massing of buildings should reinforce:

(a) the desired character, built form, public environment and scale of the streetscape as contemplated within the Zone and Policy Area, and have regard to:

(i) maintaining consistent parapet lines, floor levels, height and massing with existing buildings consistent with the areas desired character;
(ii) reflecting the prevailing pattern of visual sub-division of neighbouring building frontages where frontages display a character pattern of vertical and horizontal sub-divisions; and
(iii) avoiding massive unbroken facades…

(b) a comfortable proportion of human scale at street level by:

(i) building ground level to the street frontage where zero set-backs prevail;
(ii) breaking up the building facade into distinct elements;
(iii) incorporating art work and wall and window detailing; and
(iv) including attractive planting, seating and pedestrian shelter.

Composition and Proportion

PDC 180 Development should respect the composition and proportion of architectural elements of building facades that form an important pattern which contributes to the streetscape's distinctive character in a manner consistent with the desired character of a locality by:

(a) establishing visual links with neighbouring buildings by reflecting and reinforcing the prevailing pattern of visual sub-division in building facades where a pattern of vertical and/or horizontal sub-divisions is evident and desirable, for example, there may be strong horizontal lines of verandahs, masonry courses, podia or openings, or there may be vertical proportions in the divisions of facades or windows; and

(b) clearly defining ground, middle and roof top levels.

Materials, Colours and Finishes

PDC 187 The design, external materials, colours and finishes of buildings should have regard to their surrounding townscape context, built form and public environment, consistent with the desired character of the relevant Zone and Policy Area.

North Adelaide Historic (Conservation) Zone

PDC 4 New buildings should utilise stone, brick and/or brick render as the main external finish to walls to complement the historic built form in the Zone. Coated surfaces that are visible from the street should be finished in natural render, limewash, cement or mineral paints, not plastic coatings or renders. Buildings with brightly coloured or highly reflective surfaces should not be developed.

7.2.3 Building Setbacks

The proposed building setbacks of the new building are:

BOUNDARY	PROPOSED SETBACKS
North (rear)	Varies between 6.0 and 15.4 metres
South (front)	Varies between 6.07 and 7.50 metres to new building 30 metres (approx.) to the glass link between the existing and new buildings
East (side)	5.85 to 6.15 metres
West (side)	Approximately 10.5 metres between the existing (Mary Potter Hospice building) and the new buildings

Provisions of the Development Plan seek to maintain established pattern of setbacks so as to reinforce the established character. The setbacks in the immediate locality incorporate the existing hospital buildings, along with the residential dwellings to the east and north. There are varied setbacks to boundaries within the Calvary North Adelaide Hospital site, both street and side boundary setbacks.

The setback proposed for the new hospital ward has taken its setback from the existing Mary Potter Hospice to the west and is complementary to the residential setbacks on the northern side of Ward Street to the east of the site.

All works associated with the proposal are located with a minimum 5.85 metre setback from common boundaries shared with residential allotments. The rear and side setbacks increase to 16.1 metres in part due to the irregular shape of the allotment. These setbacks enable substantial physical separation of buildings and areas for landscaping between the proposed additions and adjacent residential allotments/dwellings.

North Adelaide Historic (Conservation) Zone

PDC 9 Where consistent building set-backs from front, side and rear allotment boundaries prevail, new development should be consistent with these established setbacks. Where a consistent building set-back is not evident in a particular locality, new buildings should not project forward of Heritage Places adjacent the development site. Building to side boundaries (other than for party walls in semi-detached, row dwellings or residential flat buildings) or to a rear boundary is generally inappropriate, but may be considered where it is demonstrated that there will be no detrimental effect on residential amenity or adjacent Heritage Place(s).

Council Wide - Building Set-backs

PDC 178 In the City Living Zone, the Adelaide Historic (Conservation) Zone and the North Adelaide Historic (Conservation) Zone, buildings should maintain the prevailing set-back established by adjoining buildings, provided the resultant character reinforces the desired character for the locality.

7.2.4 Plot Ratio and Site Coverage

As discussed in Section 5.0, the maximum plot ratio applicable for Calvary North Adelaide Hospital, being "the land identified as the Calvary Hospital site on Fig HS/1" is 1.5, in accordance with PDC 9(b) of the Hill Street Policy Area 1 (as quoted below). In relation to 306 Ward Street, which is outside of the land identified on Fig HS/1, the maximum plot ratio is 0.6 in accordance with PDC 4(a) of the Hill Street Policy Area 1.

Hill Street Policy Area 1

PDC 4 The bulk and density of development should satisfy the following:

(a) Basic and maximum plot ratio: 0.6 (except for land identified as the Calvary Hospital site on Fig HS/1, the St Dominic's Priory College site on Fig HS/2 and the Helping Hand Aged Care site on Fig HS/3)…

PDC 9 Development of Calvary Hospital should:

(a) be in accordance with Concept Plan Fig HS/1;
(b) not exceed a plot ratio of 1.5…

The additional floor area within "the land identified as the Calvary Hospital site on Fig HS/1" is approximately 126 square metres establishing a plot ratio of approximately 0.89, well below the maximum 1.5. A floor area of approximately 1,387 square metres is proposed on the property at 306 Ward Street, which given it is outside of the identified Calvary Hospital site pursuant to Figure HS/1, has a maximum plot ratio of 0.6. As proposed, the single storey hospital ward has a plot ratio of 0.56, which is less than the maximum.

PDC 7 of the Hill Street Policy Area seeks to ensure significant landscaped open space is provided on the site of a development. The requirement for 50 percent landscaped open space is not currently met on the Calvary North Adelaide Hospital site given the nature of the land use and its ongoing development over the past 100 years. PDC 7 does not provide a distinction between residential and non-residential development in terms of the provision of open space.

Provision of landscaping between the proposed new single storey hospital ward is provided at both the front, side and rear of the site. In total it is estimated that the landscaped area is in the vicinity of 1,000 square metres, but is less than the desired 50 percent of the total site area (of 306 Ward Street).

The development application is accompanied by a landscaping plan prepared by Outer Space Landscape Architects. The landscaping proposed for the development incorporates the following features:

- a variety of trees within the front setback adjacent to Ward Street;
- a variety of trees within the eastern landscape garden area;
- a range of groundcovers and shrubs;
- elevated garden beds; and
- a tiered garden bed to the retaining walls adjacent the driveway.

In designing the landscaping concept, Outer Space has taken account of the basement car park and has incorporated raised garden beds and selected appropriate species that can be developed adjacent the eastern boundary (deep root zone) and above the car park. The methodology for developing the landscaping is illustrated and described on the Schematic Section drawing by Outer Space.

This landscaping concept provides an attractive outlook for patients, visitors and pedestrians and a pleasant amenity along Ward Street. The eastern landscaped area is visual amenity planting for patients in the beds with this orientation. The landscape garden areas to the north of the new building provide for some quiet enjoyment by patients and their visitors.

Whilst the development does not satisfy the quantitative landscape open space provision, it is not considered fatal to the proposal, as the proposal has attractive and substantial landscape and garden areas to provide an attractive amenity for patients of the hospital and for adjoining residential occupiers.

Hill Street Policy Area

PDC 7 A minimum of 50 percent of the total site area should be provided for landscaped open space on the site of development. Each dwelling in a development should provide as part of the landscaped open space, a private open space area in accordance with the Council Wide principles of development control.

7.2.5 Building Height

The proposed development is a single storey built form above natural ground level (N.G.L) with two levels of basement vehicle parking below, which will be accessed by vehicles via the existing driveway of the hospital.

The relevant maximum building height/levels for Calvary Hospital site on Fig HS/1 is five building levels and a ceiling height of 15 metres. As proposed, the development within the Calvary Hospital site as shown on Fig HS/1 is one building level and has a maximum building height of approximately 5.325 metres. On this basis, the development within Fig HS/1 does not exceed the established maximums.

In relation to the development outside of Fig HS/1 on the property at 306 Ward Street, the development is single storey (one building level above natural ground level) and has a maximum building height of 5.325 metres, which are both less than the prescribed maximum of two building levels and 6.0 metres above the median or natural ground level.

Hill Street Policy Area 1

PDC 3 Development should not exceed 2 building levels or locate a ceiling more than 6 metres above the median natural or finished ground level at any point or any part of a building (except for land identified as the Calvary Hospital site on Fig HS/1, the St Dominic's Priory College site on Fig HS/2 and the Helping Hand Aged Care site on Fig HS/3).

7.2.6 External Materials and Finishes

The proposed development seeks to utilise a range of external materials and finishes which will complement the built form character of the immediate locality. The proposed finishes are:

- constructed with a mix of masonry walls to complement the existing hospital and contemporary building materials such as timber look aluminium cladding, aluminium cladding and perforated sheeting;
- the proposed development seeks to incorporate these elements into the design of the new building, whilst ensuring there is a clear and defined separation between old and new; and
- the use of masonry walls and aluminium cladding is considered a contemporary and complementary response to this interface, as well as the buildings presentation to the street and adjacent residential allotments.

7.3 Amenity

Provisions of the Development Plan for the Hill Street Policy Area 1 seek to ensure that residential amenity is maintained. To assist in achieving this objective, the provisions seek to limit non-residential development to existing institutional sites and then establish a range of design criteria in Principle of Development Control 9. Potential impacts on residential amenity from the extension of the hospital are noise emissions, overlooking and overshadowing and vehicle movements.

The residential dwellings to the east (296 Ward Street) and north 47 and 43 Barnard Street immediately adjoin the proposed development. A driveway servicing the property at 296 Ward Street is located on its western boundary and immediately adjoins the proposed dwelling. The rear yards of 43 and 47 Barnard Street adjoin the hospital extension within the property at 306 Ward Street. Within the rear areas of the residential properties is private open space which contains a range of landscaping and a swimming pool on the property at 47 Barnard Street. Landscaping is proposed between the proposed building and the adjoining residential properties, as shown on the Landscaping Plan accompanying the application.



View of the existing driveway of 306 Ward Street and fencing on the eastern boundary.

Fencing on the site of 306 Ward Street is of varying materials and heights. It is proposed to retain some existing fencing, whilst replace other fencing to provide visual and acoustic privacy to adjoining residents. Fencing proposed for the development incorporates:

- a new front fence to Ward Street with domestic character incorporating metal slat and rendered brick piers;
- a 2.0 metre acoustic fence on the northern boundaries;

- retention of the existing rubble fence on the eastern boundary between Ward Street and the setback of the new building (without new or additional fencing);
- retention of the existing rubble fence on the eastern boundary for the entirety of the length of common boundary with 35 Barnard Street; and
- incorporation of a new fence inside the existing rubble fence on the eastern boundary (from a point in line with the proposed building to the norther boundary) to a height of 2.0 metres.



View of the driveway and fencing at 296 Ward Street, immediately adjoining (to the east) the site of the proposed development.

Potential interface matters between residential and non-residential uses are anticipated to include the noise and vibration from plant and equipment; noise and fumes from mechanical ventilation of the car park; noise from patients, staff and visitors particularly in the outdoor areas; headlight impacts from additional vehicles movements; visual and acoustic privacy.

The intended use of the outdoor area is to provide a high level of visual amenity for patients within the hospital ward, that is, a pleasant garden outlook. The area between the ward and the eastern boundary does not contain seating or designated pathways that would support or encourage active outdoor engagement of staff, patients or visitors. Areas that support passive outdoor activity, that is areas of seating are located north of the building within areas that currently abut outbuildings and outdoor living areas of adjoining dwellings.

The outdoor area of the new ward is not proposed to be a smokers' court for staff, patients or visitors. Calvary North Adelaide Hospital is a smoke free zone. Utilisation of the outdoor area around the proposed new hospital ward is generally to create attractive amenity, which provide scope for low key outdoor gatherings between patients and visitors in the area north of the proposed new building. The scale and extent of the level of activity during daylight hours is not anticipated to be significantly different from activity that may occur within an area of residential private open space.

The development is a single storey building with suitable setback to the east, separated by 2.0 metre fencing and attractive landscaping. Windows of the new ward are not openable. It is not considered that noise from patients would be audible outside of the building, however, to address any potential concerns the boundary fences are to be constructed of an acoustic material in accordance with the recommendation of the environmental noise assessment report.

As a single storey development potential for overlooking is negligible, particularly when combined with the proposed 2.0 metre boundary fencing and landscaping. Similarly, overshadowing of the adjoining residential properties is insignificant, as shown on the shadow diagrams for the winter solstice on the architectural plans. On this basis the development does not significantly reduce daylight to private open space to the adjoining residential property and satisfies Council-wide Objective 34 and Principles of Development Control 117 and 119.

Micro-climate and Sunlight

Objective 33 **Buildings which are designed and sited to be energy efficient and to minimise micro-climatic and solar access impacts on land or other buildings.**

PDC 119 **Development should be designed and sited to minimise micro-climatic and solar access impact on adjacent land or buildings, including effects of patterns of wind, temperature, daylight, sunlight, glare and shadow.**

PDC 121 **Development should not significantly reduce daylight to private open space, communal open space, where such communal open space provides the primary private open space, and habitable rooms in adjacent City Living Zone, Adelaide Historic (Conservation) Zone and North Adelaide Historic (Conservation) Zone.**

Noise that may interfere with the adjoining residential properties is considered to be limited to vehicle noise and plant and equipment. Vehicle access is physically separated from adjoining residential properties as the basement car park is serviced by the existing driveway from Strangways Terrace (Ward Street). The basement car park would be fully enclosed and designed to minimise transmission of noise to the proposed hospital ward and adjoining residential properties. Ventilation from the basement car park would be designed to minimise impacts to adjoining residential properties.

Plant and equipment will be required to service the new hospital ward and the basement car parking. At this time the specifications of the required plant and equipment has not been finalised.

To assist in minimising the potential impact of noise from ventilation of the car park, the location of the ventilation is located to the western side of the proposed building. Ventilation from the basement car park would be designed to comply with the SA Environment Protection (Air Quality) Policy 2016.

Advice from Sonus acoustic engineers has been sought in relation to the potential environmental noise associated with the development, particularly potential noise from patients and visitors in the outdoor areas, car parking activity and mechanical services. The Environmental Noise Assessment report includes recommendations for the location of acoustic fences to the northern outdoor area of the building. In addition to this recommendation, an acoustic fence is also proposed to be located along the eastern boundary. In conclusion the environmental noise assessment states: "*With the inclusion of the recommendations detailed in this report, the environmental noise from the site will achieve the relevant criteria of the Development Plan and the Environment Protection (Noise) Policy 2007 and will therefore avoid unreasonable interference with the desired character of the locality and will not generate unduly annoying or disturbing noise*".

Access to the basement car park is via the existing two-way driveway from Strangways Terrace (Ward Street). The volume of traffic utilising this existing access will increase as a result of the basement car park. It is not considered that this additional vehicle movement would adversely impact on the residential amenity of properties on the southern side of Ward Street (including 311 and 313 Ward Street) due to headlight intrusion. It is noted that Strangways Terrace/Ward Street in the locality of the existing driveway is approximately 30 metres in width, with a central median comprising low level landscaping and deciduous street trees on the southern side of the street.

The traffic sensitivity analysis undertaken by GTA Consultants indicates that during the PM peak period (3.00 pm-4.00 pm) there would be less than 10 seconds delay for vehicles turning onto Ward Street. Given this is the peak period, it is anticipated that the delays outside of peaks and during night time hours would be less, meaning that vehicles would not spend long periods of time at the exit with headlights pointing across the road into the residential properties to the south. Whilst an increase in the number of vehicles turning onto Ward Street and Strangways Terrace is anticipated, the road has the capacity to accommodate these vehicles and the potential impact of headlight glare is not considered to be unreasonable.

For the above stated reasons, the development is appropriately acoustically designed to satisfy the Council-wide Objectives and Principles of Development Control quoted below.

Noise Emissions

Objective 26	**Development that does not unreasonably interfere with the desired character of the locality by generating unduly annoying or disturbing noise.**

Objective 27 **Noise sensitive development designed to protect its occupants from existing noise sources and from noise sources contemplated within the relevant Zone or Policy Area and that does not unreasonably interfere with the operation of non-residential uses contemplated within the relevant Zone or Policy Area.**

PDC 89 **Development with potential to emit significant noise (including licensed entertainment premises and licensed premises) should incorporate appropriate noise attenuation measures in to their design to prevent noise from causing unreasonable interference with the amenity and desired character of the locality, as contemplated in the relevant Zone and Policy Area.**

PDC 93 **Mechanical plant or equipment should be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site should not exceed**

- **(a) 55 dB(A) during daytime (7.00am to 10.00pm) and 45 dB(A) during night time (10.00pm to 7.00am) when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.**
- **(b) 50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) in or adjacent to a City Living Zone, the Adelaide Historic (Conservation) Zone, the North Adelaide Historic (Conservation) Zone or the Park Lands Zone when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.**

PDC 94 **To ensure minimal disturbance to residents:**

- **(a) ancillary activities such as deliveries, collection, movement of private waste bins, goods, empty bottles and the like should not occur:**
  - **(i) after 10.00pm; and**
  - **(ii) before 7.00am Monday to Saturday or before 9.00am on a Sunday or Public Holiday.**
- **(b) typical activity within any car park area including vehicles being started, doors closing and vehicles moving away from the premises should not result in sleep disturbance when proposed for use after 10.00pm as defined by the limits recommended by the World Health Organisation.**

The residential amenity of the adjacent residential properties is not unreasonably adversely affected by the proposed development, given the building setbacks, single storey built form, location and design of the basement car park, location of the plant and equipment and incorporation of acoustic fencing.

7.4 Vehicle Access and Parking

As previously described, the proposed development incorporates construction of a two level basement carpark comprising a total 112 car parks. Access to the car park is proposed via the existing hospital driveway from Strangways Terrace (Ward Street). Alterations to the driveway in terms of site levels are proposed to facilitate access to the basement car park, however the vehicle movement throughout the remainder of the hospital is unaltered.

The vehicle access to 306 Ward Street would be closed and the net result of the proposed development is vehicle access being consolidated and in accordance with the intent of PDC's 17 and 19 of the North Adelaide Historic (Conservation) Zone.

Utilisation of the existing access point from Strangways Terrace (Ward Street) ensures that vehicle movements do not immediately adjoin a residential property, thereby minimising potential noise and inconvenience from the movement of vehicles.

PDC 21 of the North Adelaide Historic (Conservation) Zone supports basement parking. Development of two levels of basement car parking as part of this development is a significant advantage for the staff and visitors to Calvary North Adelaide Hospital and will assist in alleviating ongoing concerns raised by residential owners and occupiers regarding on-street parking and the adverse impact on residential amenity. Designed so that the access to the basement car park is not directly visible from Strangways Terrace/Ward Street, but rather from within the site, the car park has been designed and sited to minimise the impact on the historic character of the area.

The design of the driveway access and car parking spaces has been undertaken in consultation with GTA Traffic Consultants to ensure the internal design complies with relevant Australian Standards.

Access and Car Parking

PDC 17 **Vehicle access to land should be via minor streets, rear lanes and existing crossovers wherever possible. In a street where vehicle access does not prevail on the primary street frontage, new crossovers should be avoided.**

PDC 19 **Vehicle access points to development should be consolidated and located to minimise the impact on residential amenity from parking, loading and access.**

PDC 20 **Vehicle parking arrangements should not incorporate undercroft parking (unless specifically expressed in a Policy Area as a possible development option in a particular street) or other parking or access arrangements that are not in keeping with the heritage character of the Zone.**

PDC 21 **Other than low scale residential development, car parking should be provided at basement level to optimise the use of land and to limit the visual impact on the amenity and historic street character of the Zone.**

Table Adel/7 – On-Site Car Parking Provision of the Development Plan indicated a hospital has a minimum provision for car parking at a rate of 1.5 car park spaces per bed, with no maximum rate indicated. The proposed development has a net increase in hospital beds of up to 27 inpatient beds (29 additional beds minus 2 beds that will be lost as result of the pedestrian link to the existing building). On the basis of this minimum requirement, the development would require the provision of 41 car parking spaces. A total of 112 car parking spaces are to be provided, which provides a surplus of 71 spaces.

In determining the development potential of the property at 306 Ward Street, Calvary considered it was appropriate and efficient to maximise the provision of car parking on the site and not simply develop a car park for current demand. Maximising the potential for onsite car parking is considered a sensible response to the current lack of car parking provision for staff and visitors to the hospital.

The proposed development would meet community expectation for parking supply, as sought by Council Wide Objective 71.

Objective 71: **To meet community expectation for parking supply while supporting a shift toward active and sustainable transport modes.**

PDC 251 Car parking areas should be located and designed to:

- **(a)** **ensure safe and convenient pedestrian movement and traffic circulation through and within the car parking area;**
- **(b)** **include adequate provision for manoeuvring and individually accessible car standing areas;**
- **(c)** **enable, where practical, vehicles to enter and leave the site in a forward direction;**
- **(d)** **minimise interruption to the pattern of built form along street frontages;**
- **(e)** **provide for access off minor streets and for the screening from public view of such car parking areas by buildings on the site wherever possible;**
- **(f)** **minimise adverse impacts on adjoining residential properties in relation to noise and access and egress;**
- **(g)** **minimise loss of existing on-street parking spaces arising through crossovers and access;**
- **(h)** **incorporate secure bicycle parking spaces and facilitate convenient, safe and comfortable access to these spaces by cyclists; and**
- **(i)** **provide landscaping, such as semi-mature trees, to shade parked vehicles and reduce the visual impact of the car parking area while maintaining direct sight lines and informal visual surveillance.**

In accordance with Council Wide PDC 251 the proposed carparking areas has been designed and located to:

- provide safe pedestrian movement and traffic circulation;
- ensure all vehicles will be able to enter and exit the site in a forward direction;
- minimise interruption to the pattern of built form along the Strangways Terrace/Ward Street frontage with access to be gained via an existing access;
- ensure the carparking area is not visible from the public realm;
- incorporate secure bicycle parking space;
- provide an additional on-street vehicle park as a result of the existing crossover associated with 306 Ward Street being reinstated to kerb and gutter; and
- the proposed basement level parking will not sit above natural ground level (N.G.L).

Analysis of the traffic movements associated with the development has been undertaken by GTA. They estimate that a net increase of 27 hospital beds would generate 8 new vehicle trips during the site peak hour. The proposed basement car park would result in additional vehicle movements utilising the Strangways Terrace access of the hospital. A sensitivity analysis and SIDRA analysis undertaken by GTA following traffic surveys of the hospital indicated that Strangways Terrace/Ward Street can accommodate the proposed vehicle movements, with delays of less than 10 seconds during the peak to exit to Strangways Terrace/Ward Street and the existing right turn opening can accommodate anticipated vehicle movements. GTA state that "*based on the SIDRA analysis (above), the forecast associated with the proposed development and the redistribution of 60 trips to the Strangways Terrace access is anticipated to minimal impact on the surrounding road network. The operation of the right turning movements for the Strangways Terrace access is anticipated to continue to operate effectively*" (page 17).

On the basis of the analysis undertaken by GTA consultants in relation to the car parking design and vehicle movements and the provision of car parking in addition to that required by the Development Plan, it is considered that matters of parking and access appropriately and adequately address the relevant provisions of the Development Plan.

7.5 Significant Tree

The property at 306 Ward Street comprises a large number of mature trees, the majority of which are exotic species and none of which are within the class of trees defined in the *Development Regulations 2008*. Development Plan Table Adel/5 – Significant Trees identifies a number of trees within the Calvary North Adelaide Hospital site as being significant. Table Adel/5 states that on Certificate of Title Volume 5187 Folio 583 that Tree Ref 270, which is located 2.0 meters from the right-hand boundary and 25 metres from Strangways Terrace, being a "*Washingtonia filifera* Desert fan palm, petticoat palm" is a significant tree.

Table Adel/5 includes criteria for listing against Section 23(4a) of the *Development Act 1993*, that is, the designation for local heritage listing. It is understood that the tree is not a local heritage place, but rather a significant tree identified by the Development Plan pursuant to the definition of a significant tree of the *Development Act 1993*.

The Desert fan palm is proposed to be removed. In accordance with Objective 108 – Significant Trees, trees of important aesthetic or environmental benefit should be conserved. The Desert Palm is visible from the southern side of Strangways Terrace/Ward Street when looking at Calvary North Adelaide Hospital in its streetscape context, as the palm is a tall vertical element. However, the tree is not clearly visible from the northern side of Strangways Terrace/Ward Street as it is hidden behind the building and other vegetation. The aesthetic importance is therefore considered to be negligible from a streetscape perspective and from the local area. Furthermore, under current definition of significant and regulated trees in the *Development Act 1993*, the Desert Palm would not qualify as significant.

Given this genus of tree is not identified as significant or regulated by the Act, it is questionable as to whether this palm has an environmental benefit.

Significant Trees

Objective 108: The conservation of significant trees which provide important aesthetic and environmental benefit to Metropolitan Adelaide.

In accordance with the Development Plan PDC 299, development should be designed and sited to retain existing trees of substantial size and merit and existing street trees. Whilst the palm tree is tall, its setting or location on the site does not make it a strong visual element in the streetscape.

PDC 299 Development should be designed and sited to retain:

(a) any existing tree of substantial size and merit; and
(b) existing street-trees, and accommodating and protecting their normal growth pattern.

PDC 300 Where a significant tree or group of trees:

(a) makes an important contribution to the character or amenity of the local area; or
(b) is indigenous to the local area and its species is listed under the National Parks and Wildlife Act as a rare or endangered native species; or
(c) represents an important habitat for native fauna; or
(d) is part of a wildlife corridor of a remnant area of native vegetation; or
(e) is important to the maintenance of biodiversity in the local environment; or
(f) forms a notable visual element to the landscape of the local area;
development should preserve these attributes.

Note: Trees or groups of trees are declared as significant in Table Adel/5. A tree not listed or identified in Table Adel/5 may also be significant if it falls within the class of trees declared to be significant by the Development Regulations 2008.

The Desert Palm is proposed to be removed as part of the development, given the excavation and construction of the basement car park would be undertaken where the tree is located. Advice has been sought from Arborman Tree Solutions regarding the options and likely cost of transplanting the tree within the site of the hospital or transporting it for replanting elsewhere as an alternative that retains the tree, as sought by PDC 302. Arborman have concluded that "*the costs of both transplanting options are unreasonable as the tree offers a limited contribution to the area. Normally, a tree would offer a substantial contribution to the amenity/environment of the area to warrant such expenses. In summary, the subject tree is restricting the upgrade to essential public health services and the transplanting costs are unreasonable. This assessment therefore supports the removal of the tree.*"

Landscaping, which includes a variety of trees and shrubs is proposed for the development to create an attractive streetscape setting and environment for hospital patients and visitors. A landscaping plan is included in the application documents to illustrate the form and quality that is proposed, as sought by PDC 303.

PDC 302 Significant trees should be preserved and tree-damaging activity should not be undertaken unless:

(a) in the case of tree removal;

(1)
- **(i) the tree is diseased and its life expectancy is short; or**
- **(ii) the tree represents an unacceptable risk to public or private safety; or**
- **(iii) the tree is shown to be causing or threatening to cause substantial damage to a substantial building or structure of value; or**
- **(iv) the tree is known to cause health problems; and all other reasonable remedial treatments and measures have been determined to be ineffective; or**

(2) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.

(b) in any other case;

- **(i) the work is required for the removal of dead wood, treatment of disease, or is in the general interests of the health of the tree; or**
- **(ii) the work is required due to unacceptable risk to public or private safety; or**
- **(iii) the tree is shown to be causing, or threatening to cause damage to a substantial building or structure of value; or**
- **(iv) the aesthetic appearance and structural integrity of the tree is maintained; or**
- **(v) it is demonstrated that all reasonable alternative development options and design solutions have been considered to prevent substantial tree-damaging activities occurring.**

PDC 303 Where a significant tree is proposed for removal, such tree should be replaced on the same site within three months of Development Approval, subject to the season, by:

- **(a) a mature tree of appropriate species and sufficient size when fully grown; or**
- **(b) landscaping of equivalent landscape value in accordance with a comprehensive landscaping plan for the site and the desired character for the locality.**

8.0 SUMMARY

Following an assessment of the proposal against the relevant provisions of the Development Plan, alterations and additions to Calvary North Adelaide Hospital are supported by the Desired Character Statement and Statement of Heritage Significance of the Zone and Hill Street Policy Area. The proposed development adequately and appropriately addresses historic character and residential amenity and demonstrates the following planning merits:

- the development continues the lawfully approved land use of the Calvary North Adelaide Hospital;
- continues to meet the community's needs for health services;
- does not require the removal of a heritage listed place;

- does not require the removal of a heritage listed place;
- provides significantly improved on-site car parking for the hospital over and above the needs generated by the provision of an addition 27 in-patient beds (41 car parking spaces), providing a 112 car park, that is, a net gain of 71 spaces;
- provides an attractive single storey built form to Strangways Terrace/Ward Street integrated with the existing hospital;
- locates the new built form with suitable setbacks to residential boundaries and creates suitable areas for attractive landscaping;
- residential amenity of adjoining properties is not affected by overlooking or overshadowing;
- the development is appropriately designed to minimise impacts on acoustic privacy of adjoining residential owners and occupiers;
- alterations to internal access driveway and creation of the basement car parking have been designed to be in accordance with Australian Standards;
- the addition to the building is designed in a form and scale and of materials that are complementary to the hospital and residential properties in the locality; and
- a pleasant and attractive streetscape is proposed to Ward Street.

It is anticipated that the proposed development would have a positive effect on the locality from a social perspective. The provision of car parking to service the hospital has always been a contentious matter with some residents within the locality. The proposal achieves a significant improvement in parking supply, thereby reducing demand for on-street parking and reducing the associated impacts on residential amenity.

The proposed development has been assessed against the relevant provisions of the Adelaide (City) Development Plan.

On balance, the proposed development is considered to display substantial planning merit insofar as it accords with the relevant provisions of the Development Plan and warrants the granting of Development Plan Consent.

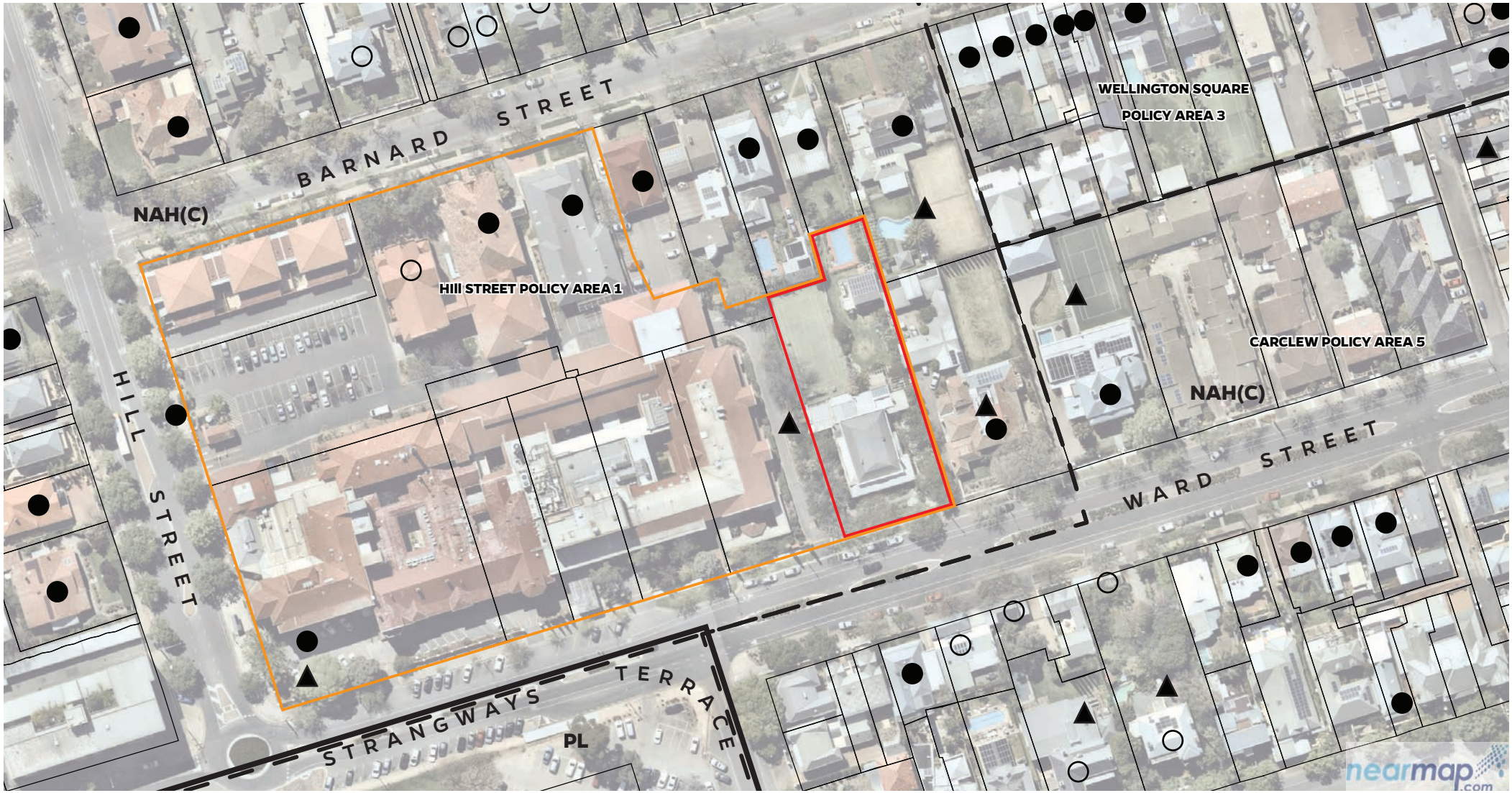


Julie Jansen PIA (Fellow)
BA, BA (Hons), GDURP

15 May 2019

Attachment A

Site and Locality Plan



306 Ward Street
Calvary North Adelaide Hospital site of development
Zone Boundary
NAH(C) North Adelaide Historic (Conservation) Zone
PL Park Lands Zone
Policy Area Boundary

State Heritage Place
Local Heritage Place
Significant Tree

Site and Locality Plan

306 Ward Street &
89 Strangways Terrace
NORTH ADELAIDE

CALVARY NORTH ADELAIDE HOSPITAL

1:1500 @ A4
0 20m

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TOWN + COUNTRY PLANNERS

Attachment B

Concept Plans



LEVEL 1 - FUTURE EXPANSION

LEVEL 2 - FUTURE EXPANSION

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE AND DISCREPANCIES IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER FOR RESOLUTION

"CLOUDS" & REVISIONS ARE INTENDED AS GUIDES AND DO NOT NECESSARILY DESCRIBE THE FULL EXTENT OF REVISIONS. ASCERTAIN FULL EXTENT BY COMPARISON WITH PREVIOUS VERSION.

Quality Endorsed Company

Subject	By	Date	Subject	By	Date	Subject	By	Date
RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
AUT			SERV					

Block/ Zone	Drawn	Checked	Date	Scale/s
-	YL	HST	17.10.17	1:200

Drawing Title: BLOCK PLAN - FUTURE EXPANSION

REV	REVISION DESCRIPTION	DATE	BY
1	FIRST ISSUE	XX	YL

Project: CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal: LITTLE COMPANY OF MARY HEALTH CARE LTD

KEY PLAN

HEALTH PROJECTS INTERNATIONAL
Architects and Health Facility Planners
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Ph: (02) 9460 4199 Fax: (02) 9460 4299

CAD File: CNA9-BLOCK | Dwg.No.: CNA9-P-PRO | Issue: 1

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Tree Management Report

Site: Calvary North Adelaide Hospital, 89 Strangways Terrace, North Adelaide

Date: Thursday, 18 October 2018

ATS5271-CalHosWfilTMR

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Assessment 2

Observations 2

Development Plan Principles of Development Control 3

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Appendix A – Tree Location 10

Report Reference Number: ATS5271-CalHosWfilTMR

Report prepared for

Calvary North Adelaide Hospital

Author

Marcus Lodge, Consulting Arborist, Arborman Tree Solutions Pty Ltd

Brief

Arborman Tree Solutions was engaged to conduct a Level 2 assessment of the *Washingtonia filifera* (Petticoat Palm) located at Calvary North Adelaide Hospital, 89 Strangways Terrace, North Adelaide and provide information in relation to the following points: -

- Assess the health and structure of the subject tree.
- Assess the tree against the City of Adelaide Development Plan relating to Significant Trees.
- Provide comment on the viability of transplanting the tree within the site and provide an estimated cost.
- Provide comment on the viability of transplanting the tree to another site and provide an estimated cost.
- Provide any additional relevant information.

Assessment: *An assessment of the significant tree was undertaken in March 2018. It is understood that a new development application is proposed to be submitted for redevelopment of the hospital, which proposes to remove the Petticoat Palm. Marcus Lodge of Arborman Tree Solutions has reviewed the proposal plans prepared by HPI Architects and the findings and recommendations of the previous tree assessment undertaken.*

Executive Summary

Arborman was engaged to assess a Significant Tree which is in direct conflict with the redevelopment of the Calvary Hospital. This assessment aims to comment on the viability and costs of transplanting the tree within the site and relocating the tree to another site.

The tree is identified as *Washingtonia filifera* (Petticoat Palm) and is listed as Tree 270 on the City of Adelaide Significant Tree Register.

The tree has a tall slender trunk and a small crown. The species is not indigenous to the area. Additionally, the tree is inconspicuous from public vantage points and from much of Strangways Terrace and therefore offers a limited contribution to the area.

The species responds to transplanting well and the estimated costs of transplanting are below;

- Within the site: $19,000.00
- Relocation to another site: $32,000.00

The costs of both transplanting options are unreasonable as the tree offers a limited contribution to the area. Normally, a tree would offer a substantial contribution to the amenity/environment of the area to warrant such expenses.

In summary, the subject tree is restricting the upgrade to essential public health services and the transplanting costs are unreasonable. This assessment therefore supports the removal of the tree.

Assessment

Observations

The subject tree is identified as ***Washingtonia filifera*** **(Petticoat Palm)** and its status is as follows:-



Assessment Date:
13 March 2018

GPS Location:
34°54'35.79" S | 138°35'23.16" E

Height:
18 metres

Spread:
4 metres

Age:
Mature

Useful Life Expectancy:
>10 years

Health:
Good

Structure:
Good

Circumference:
1.61 metres

Legislative Control Status:
Significant Tree 270 on the City of Adelaide Significant Tree Register

- The location of the subject tree is highlighted on the attached plan (See Appendix A).
- The tree consists of a tall slender trunk will a small round crown which is typical of the species.
- There is a stone boundary wall and adjacent trees to the east.
- Health is good as indicated by the normal frond colour and density. No acute levels of pests or disease are evident within the form.
- Structure is good as no unstable defects are evident within the form.
- The species responds well to transplanting.

Development Plan Principles of Development Control

The subject tree is listed as Significant Tree 270 on the City of Adelaide Significant Tree registry. The tree has been assessed against the Principles of Development Control within the Adelaide City Council Development Plan:-

a) The tree does not make an important contribution to the character or amenity of the local area; the tree has a small crown and the species is not consistent with the character of the area (see Photo 2).

b) The species is not indigenous to the local area. The species is indigenous to the south western United States.

c) The subject tree does not represent important habitat for indigenous fauna; as an exotic species that does not display suitable nesting hollows, this tree has limited habitat value.

d) The subject tree is not linked to a wildlife corridor or remnant area of native vegetation; the original vegetation in this area was cleared during the area's development.

e) The subject tree is not important to the maintenance of biodiversity in the local environment; as an exotic species, this tree has limited biodiversity value.

f) The tree does not form a notable visual element to the landscape of the local area; the tree is not considered to be remarkable, striking, eminent or worthy of particular note from public vantage points including from Strangways Terrace (see Photo 1).

This tree is listed as Significant Tree 270 on the Significant Tree Register of the Adelaide City Council with the register indicating it has been assessed as achieving criteria a. and f. This suggests it achieves important character and/or amenity in the local landscape.

The Significant Tree Registers were compiled at the introduction of the Significant Tree Legislation in 2001 before these criteria were defined or tested in the Environment, Resource and Development (ERD)Court. Since 2001, the ERD Court has defined these criteria and this tree would no longer achieve the criteria if it were assessed taking into consideration the ERD Court's decisions and definitions.

Photographs




Photo 2
The small crown in context with larger adjacent trees.
Note there are no other trees of the species in this image
indicating the inconsistent character of the tree.

Discussion

Arborman was engaged to assess a Significant Tree which is in direct conflict with the redevelopment of the Calvary Hospital located at 89 Strangways Terrace, North Adelaide. This assessment aims to comment on the viability and costs of transplanting the tree within the site as well as relocating the tree to another site.

The tree is identified as *Washingtonia filifera* (Petticoat Palm) and is listed as Tree 270 on the City of Adelaide Significant Tree Register.

The tree has a tall slender trunk and a small crown with a four metre spread and for context, nearby street trees have a crown spread of approximately 15 metres. The species is indigenous to the south western United States and not the local area. As an exotic species with a small crown, the tree offers an extremely limited contribution of amenity, shade and habitat to the area and environment. Additionally, the tree is inconspicuous from public vantage points and from much of Strangways Terrace (see Photo 1). Additionally, the species is not consistent with the area.

The species responds to transplanting well and therefore transplanting the tree is possible. Listed in the tables below are the estimated costs of transplanting. To ensure the likelihood of a successful transplant and to minimise potential transplant shock, thorough preparation of the tree, new site, follow up consultation and treatments are required. In my experience, transplants are often conducted where 'corners have been cut' to reduce costs which has resulted in the death of the tree.

Estimated costs for transplanting the tree within the site.

Item	Cost
Initial and follow up arboricultural assessments, consultation and soil ameliorations.	$5,000
HydroVac excavation around the stone boundary wall.	$3,000
Machinery costs- crane, backhoe, transport.	$10,000
Stabilisation braces and wires	$1000
	Total
	$19,000

Estimated costs for relocating the tree to another site

Item	Cost
Initial and follow up arboricultural assessments, consultation and soil ameliorations.	$5,000
HydroVac excavation around stone boundary wall.	$3,000
Machinery costs including crane, backhoe and transport.	$10,000
Truck and dog trailer.	$5,000
Police escort and traffic control for long vehicles	$8000
Stabilisation braces and wires	$1000
	Total
	$32,000

In my opinion, the costs of both transplanting options are unreasonable for a tree which offers an extremely limited contribution to the area.

In summary, this assessment supports the removal of the tree as;

- The tree is restricting the upgrade to essential public health services.
- The transplanting costs are unreasonable.
- The species is not consistent with the character of the area.
- The tree offers a limited contribution to the area and environment.
- The tree is not notable visual element.
- The tree does not meet any important criteria of a Significant Tree within the City of Adelaide Development Plan.

Recommendation

- The tree should be removed to achieve the redevelopment of the hospital.
- A development application should be submitted to the Adelaide City Council to remove the Significant Tree.
- Written development approval is required from the Adelaide City Council prior to removing the tree.

Thank you for the opportunity to provide this report. Should you have any questions or require further information, please contact me and I will be happy to be of assistance.

Yours sincerely



MARCUS LODGE
Senior Consulting Arboriculturist
Diploma in Arboriculture
International Society of Arboriculture – Tree Risk Assessment

Glossary

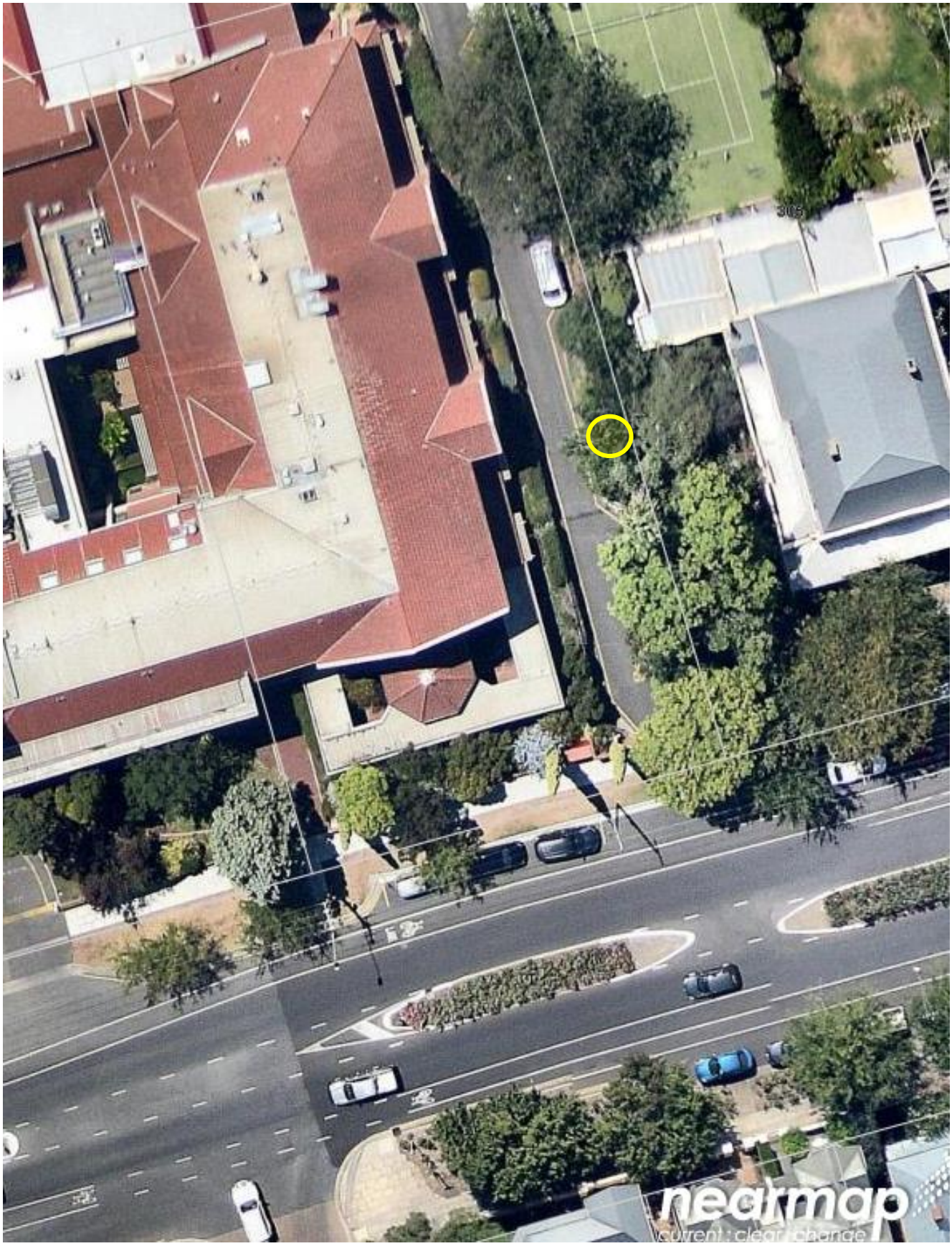
Size:	approximate height and width of tree in metres.
Age:	identification of the maturity of the subject tree.
Useful Life Expectancy:	expected number of the years that the subject specimen will remain alive and sound in its current location and/or continues to achieve the relevant *Principles of Development Control*.
Health:	visual assessment of tree health.
Structure:	visual assessment of tree structure.
Circumference:	trunk circumference measured at one metre above ground level. This measurement is used to determine the status of the tree in relation to the *Development Act 1993*.
Root Buttressing:	area of root development as it joins to the trunk base.

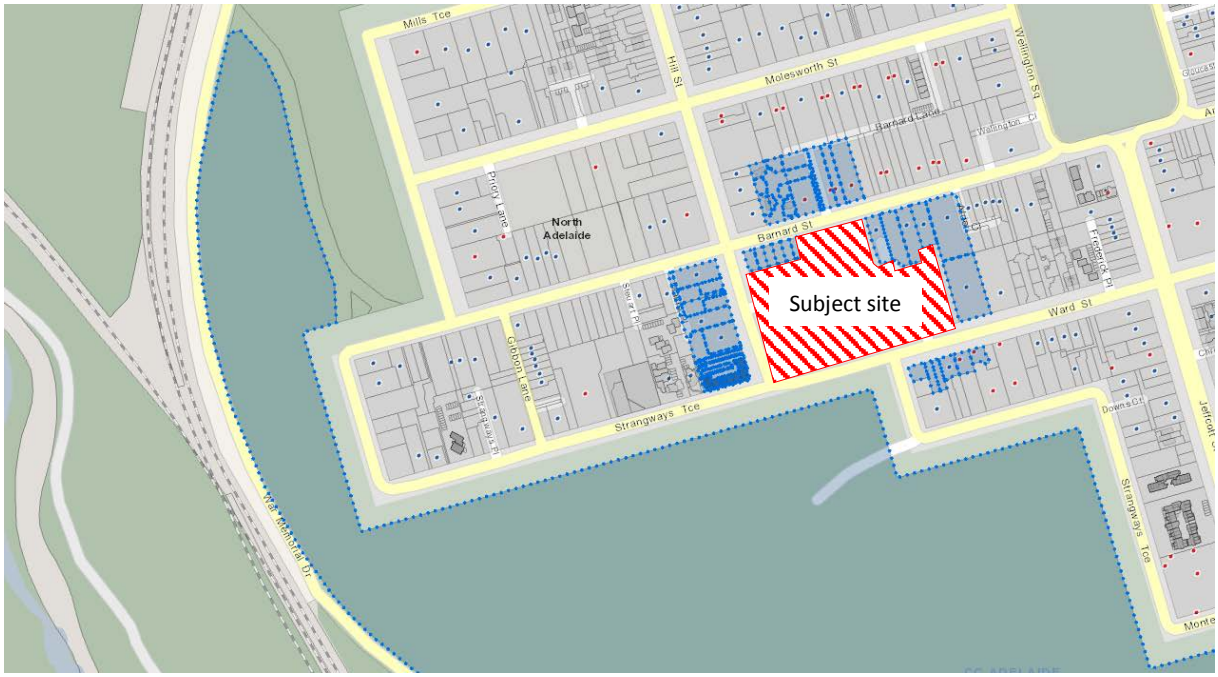
References

Australian Standard AS4970–2009 ***Protection of trees on development sites***: Standards Australia.

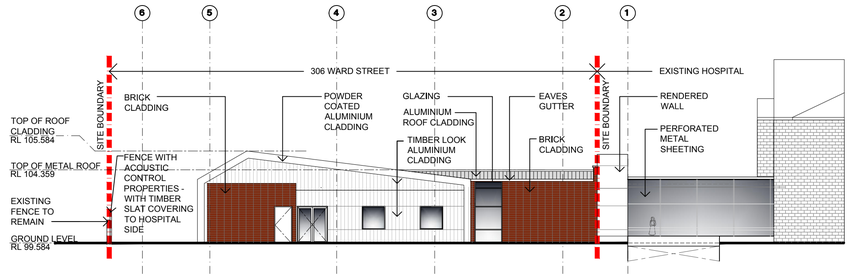
Matheny N. Clark J. 1998: ***Trees and Development a Technical Guide to Preservation of Trees During Land Development***: International Society of Arboriculture, Champaign, Illinois, USA.

Appendix A – Tree Location

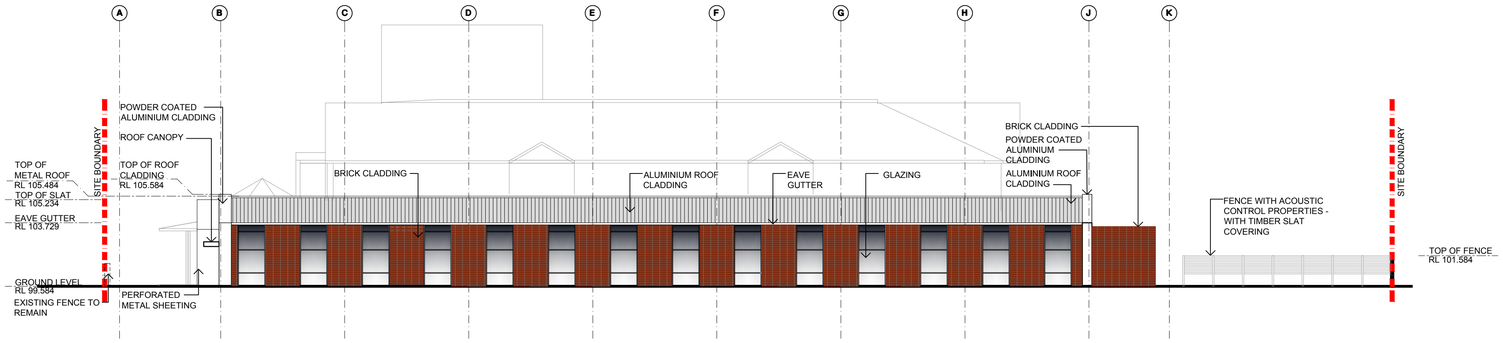



Mills Tce
Hill St
Molesworth St
Wellington Sq
Barnard Lane
Wellington Pl
Priory Lane
North Adelaide
Barnard St
Subject site
Frederick Pl
Ward St
Gibbon Lane
Strangways Tce
Downes Ct
Strangways Tce
Montefiore Rd
Jeffcott St
War Memorial Dr

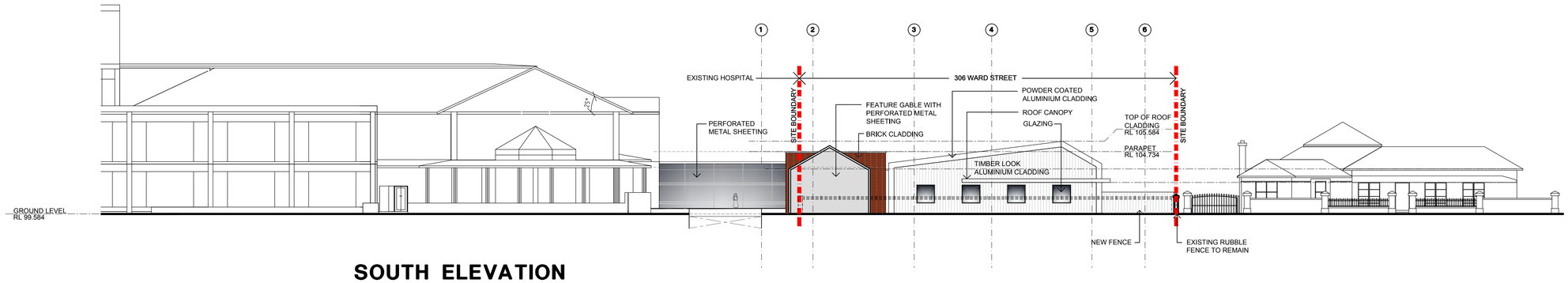

EXISTING HOSPITAL
306 WARD STREET
SITE BOUNDARY
EXISTING CARPARK TO REMAIN
EXISTING GRATED DRAIN TO REMAIN
EXISTING DRIVEWAY TO REMAIN
EXISTING PAVILLION
EXISTING TREE TO REMAIN
EXISTING TREE TO REMAIN
EXISTING TREE TO REMAIN



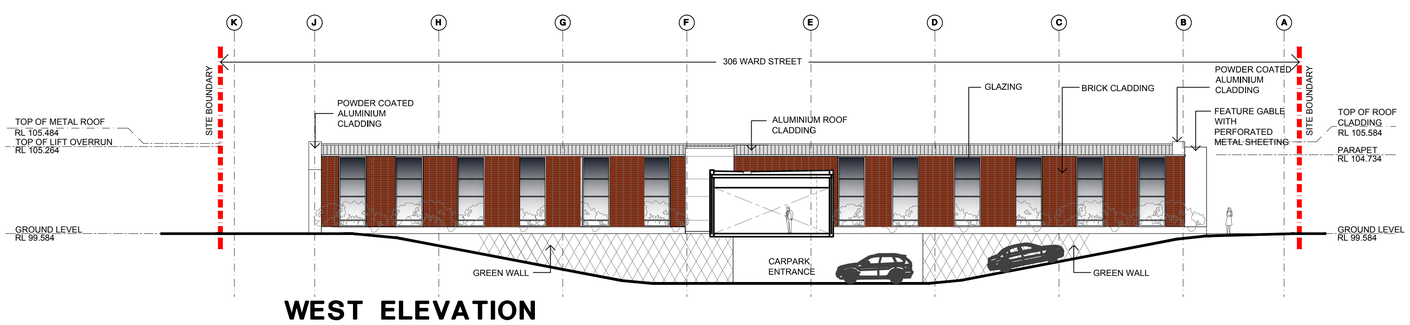
NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE AND DISCREPANCIES IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER FOR RESOLUTION

Reason for Issue:
DA SUBMISSION

Quality Endorsed Company

Subject	By	Date
RDS		
ARCH		
AUT		
STRUCT		
SPEC. CONS		
SERV		
PROJ. ARCH		

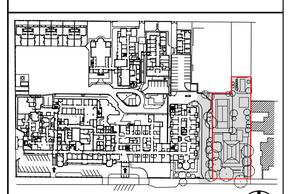
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Drawing Title
ELEVATIONS

REV	REVISION DESCRIPTION	DATE	BY
3	MATERIALS UPDATED TO MATCH PERSPECTIVES	03.05.19	AH
2	AMMENDED TO MATCH PERSPECTIVES	30.04.19	AH
1	FIRST ISSUE	16.10.18	YL

Project
CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

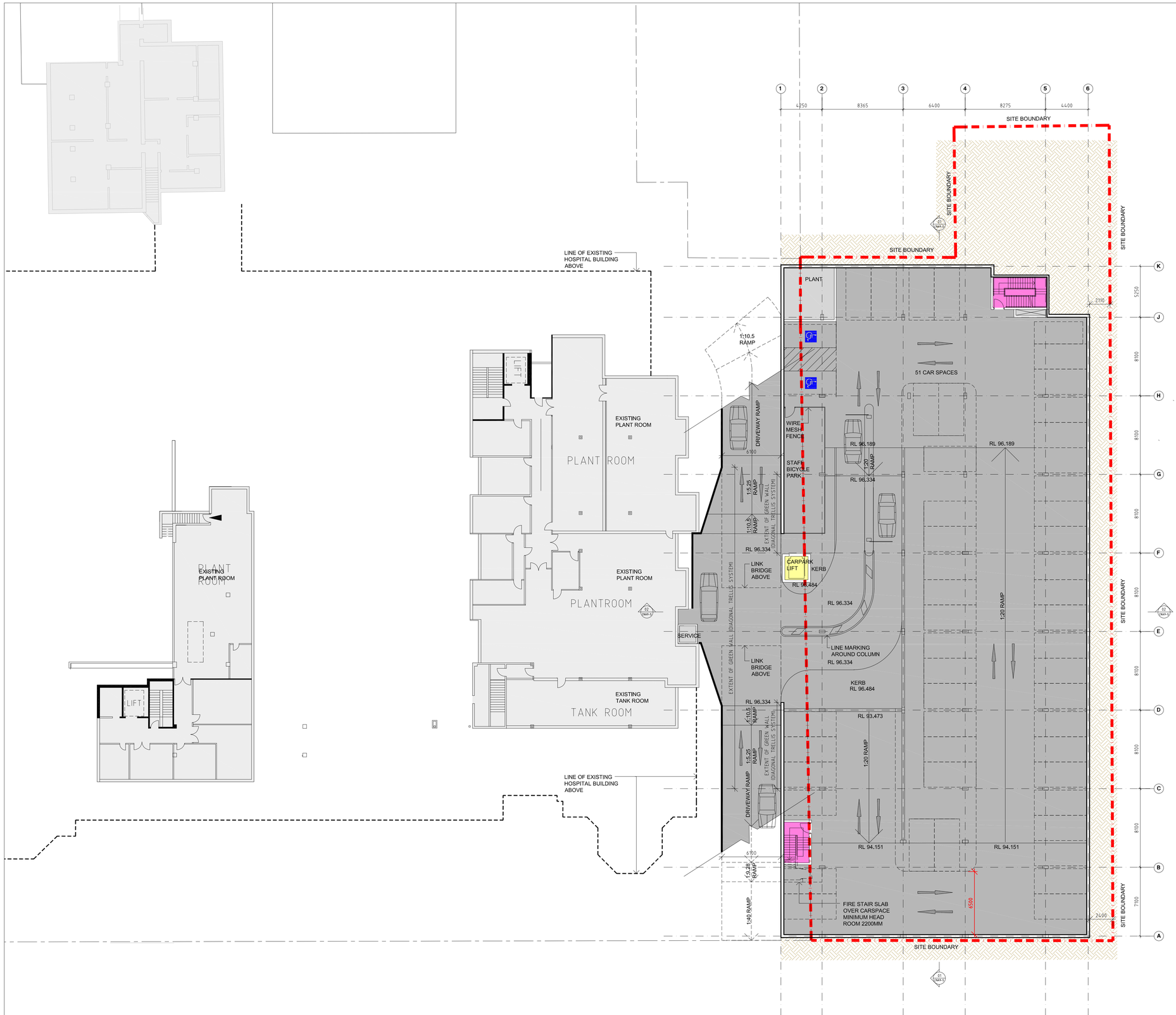
Principal
LITTLE COMPANY OF MARY HEALTH CARE LTD



KEY PLAN

HEALTH PROJECTS INTERNATIONAL
Architects and Health Facility Planners
ACN 066 856 595
Suite 1, Ground Floor, 68 Milsons Point, NSW 2061
Ph: (02) 9460 4199 Fax: (02) 9460 4299

CAD File: CNA9-E-1
Dwg.No.: **CNA9-E-1**
Issue: **3**



LEGEND

- EXISTING CONDITION NOT PART OF SCOPE
- SITE BOUNDARY OF 306 WARD STREET

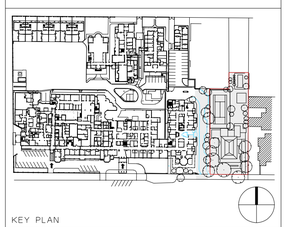
REV	REVISION DESCRIPTION	DATE	BY
1	FIRST ISSUE	15.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal

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KEY PLAN

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Reason for Issue: DA SUBMISSION

Quality Endorsed Company

Subject	By	Date	Subject	By	Date	Subject	By	Date
RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
AUT			SERV					

Block/ Zone: -

Drawn: YL

Checked: HST

Date: 15.10.18

Scale/s: 1:200

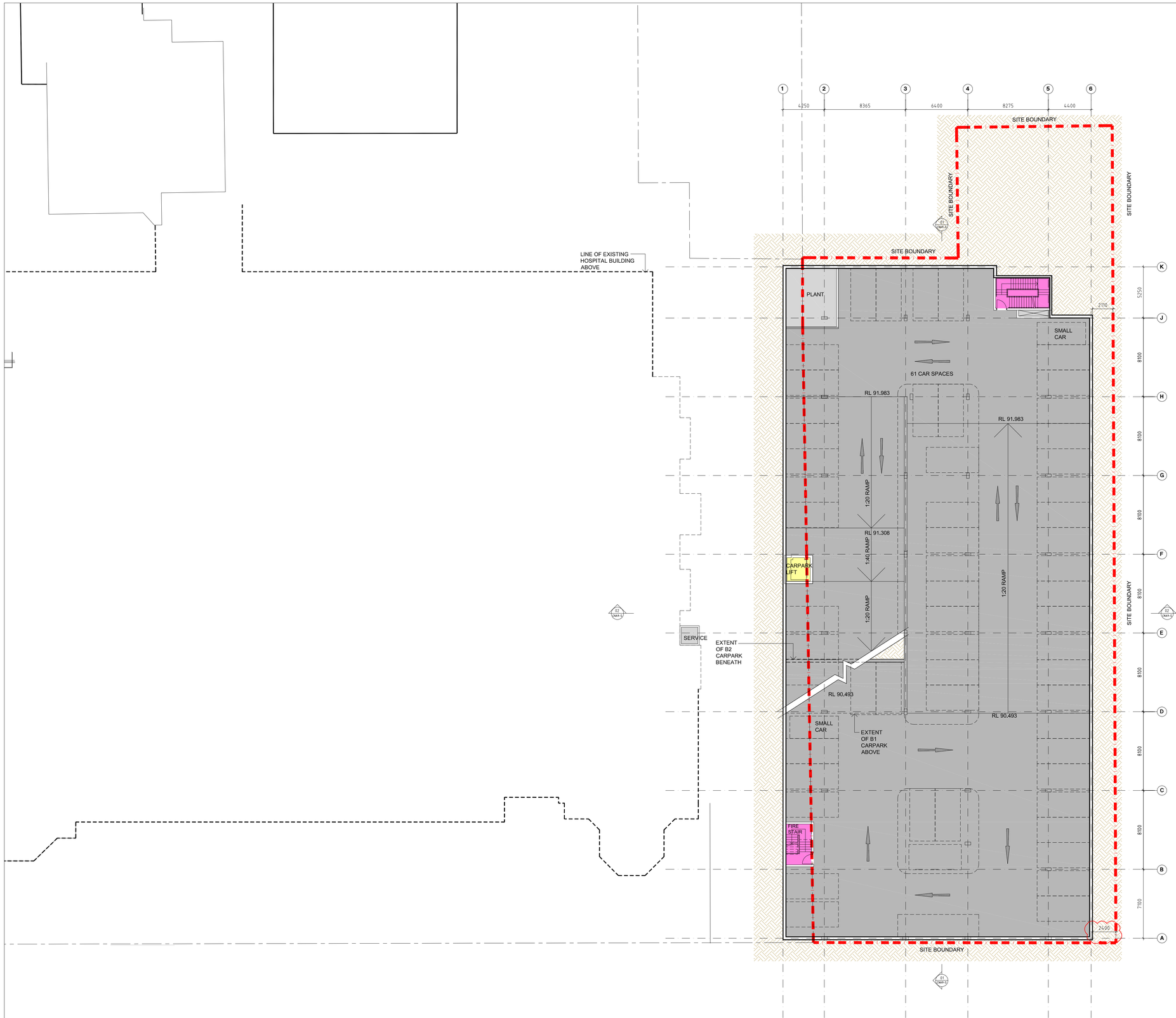
Drawing Title: **BASEMENT LEVEL 1 FLOOR PLAN**

CAD File: CNA9-P-B1

Dwg.No.: **CNA9-P-B1**

Issue: **1**

HEALTH PROJECTS INTERNATIONAL
Architects and Health Facility Planners
ACN 066 856 595
Suite 1, Ground Floor, 68 Milsons Point, NSW 2061
Ph: (02) 9460 4199 Fax: (02) 9460 4299



LEGEND

EXISTING CONDITION NOT PART OF SCOPE

SITE BOUNDARY OF 306 WARD STREET

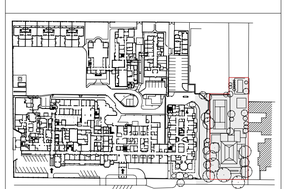
REV	REVISION DESCRIPTION	DATE	BY
1	FIRST ISSUE	15.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal

LITTLE COMPANY OF MARY HEALTH CARE LTD



KEY PLAN

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE AND DISCREPANCIES IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER FOR RESOLUTION

Reason for Issue:

DA SUBMISSION

Quality Endorsed Company

Subject	By	Date	Subject	By	Date	Subject	By	Date
RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
AUT			SERV					

Block/ Zone	Drawn	Checked	Date	Scale/s
-	YL	HST	15.10.18	1:200

Drawing Title

BASEMENT LEVEL 2 FLOOR PLAN

HEALTH PROJECTS INTERNATIONAL
Architects and Health Facility Planners
ACN 066 856 595
Suite 1, Ground Floor, 68 Milsons Point, NSW 2061
Ph: (02) 9460 4199 Fax: (02) 9460 4299

CAD File	Dwg.No.	Issue
CNA9-P-B2	CNA9-P-B2	1

Build area table

	306 Ward St	Existing hospital site	**Total new build area**
Site area (SQ M)	2462	N/A	
Total building floor area (SQ M)	1387	126	**1513**

Plot ratio

	306 Ward Street
Maximum plot ratio by ACC development plan	0.6
Existing plot ratio	N/A
Proposed plot ratio	**0.56**

Car spaces study

	Proposed car space quantity
Ground Floor	0
Basement 1	51
Basement 2	61
Total	**112**

44 Car space required for new 29 bed ward

75 additional car spaces in proposed layout for existing hospital use

Bed number comparison

	New inpatient ward	Existing hospice	**Net bed number change**
Added	29		
Minus		2	
Total			**27 (added)**



LEGEND

EXISTING CONDITION NOT PART OF SCOPE

SITE BOUNDARY OF 306 WARD STREET

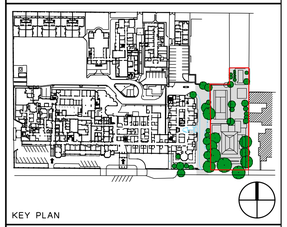
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2	NOTES FOR FEATURE GABLE AND NEW FENCE	03.05.19	AH
	ADDED		
1	FIRST ISSUE	15.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal

LITTLE COMPANY OF MARY HEALTH CARE LTD



KEY PLAN

HEALTH PROJECTS INTERNATIONAL
Architects and Health Facility Planners
ACN 066 856 595
Suite 1, Ground Floor, 68 Milsons Point, NSW 2061
Ph: (02) 9460 4199 Fax: (02) 9460 4299

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Reason for Issue: DA SUBMISSION

Quality Endorsed Company

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ARCH			SPEC. CONS					
AUT			SERV					

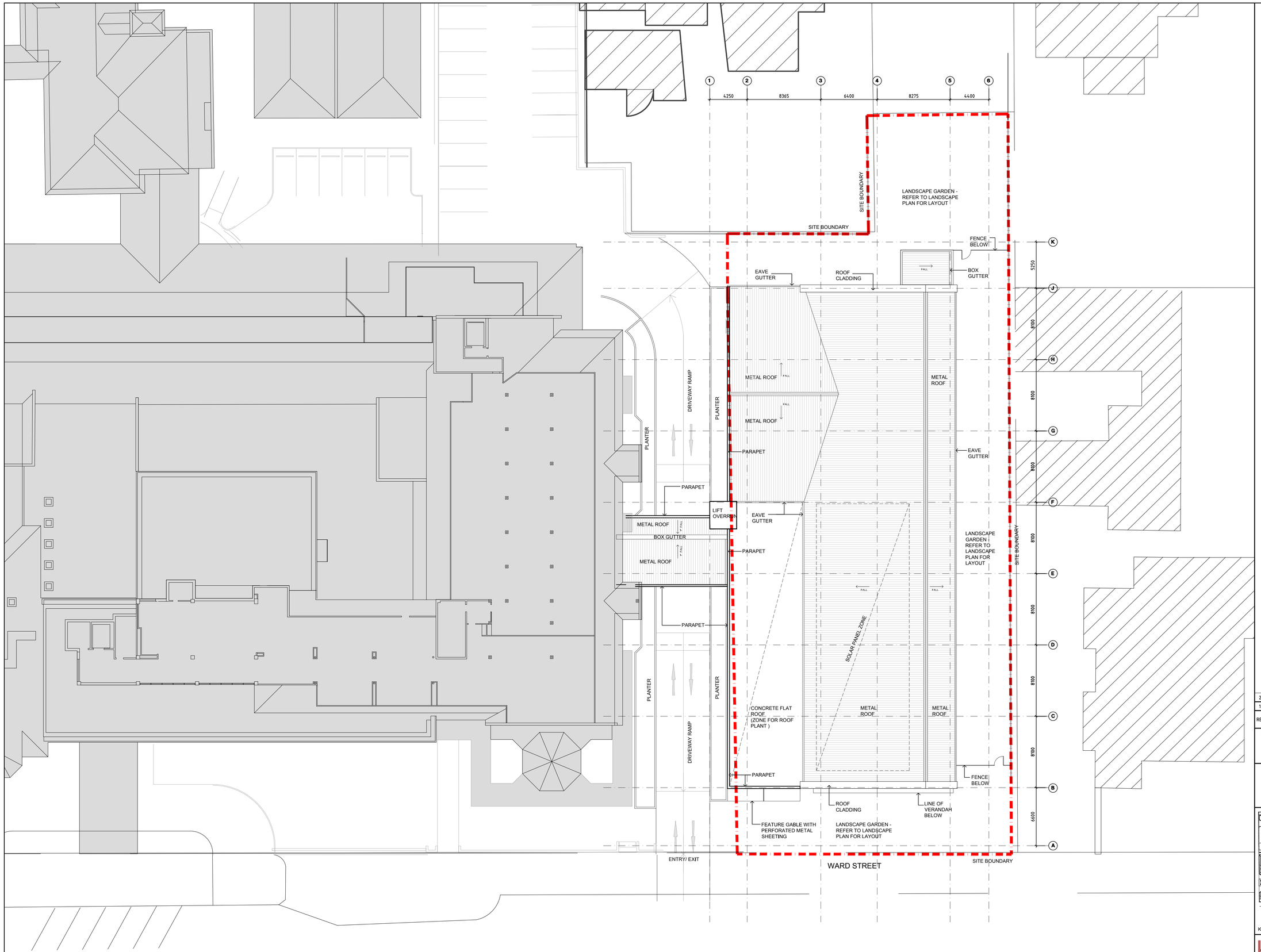
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Drawing Title: **GROUND FLOOR PLAN**

CAD File: CNA9-P-G

Dwg.No.: **CNA9-P-G**

Issue: **2**



LEGEND

- EXISTING CONDITION NOT PART OF SCOPE
- SITE BOUNDARY OF 306 WARD STREET

REV	REVISION DESCRIPTION	DATE	BY
2	NOTES FOR FEATURE GABLE ADDED	03.05.19	AH
1	FIRST ISSUE	16.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

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LITTLE COMPANY OF MARY HEALTH CARE LTD

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Subject	By	Date	Subject	By	Date	Subject	By	Date
RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
AUT			SERV					

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Drawn: YL

Checked: HST

Date: 16.10.18

Scale/s: 1:200

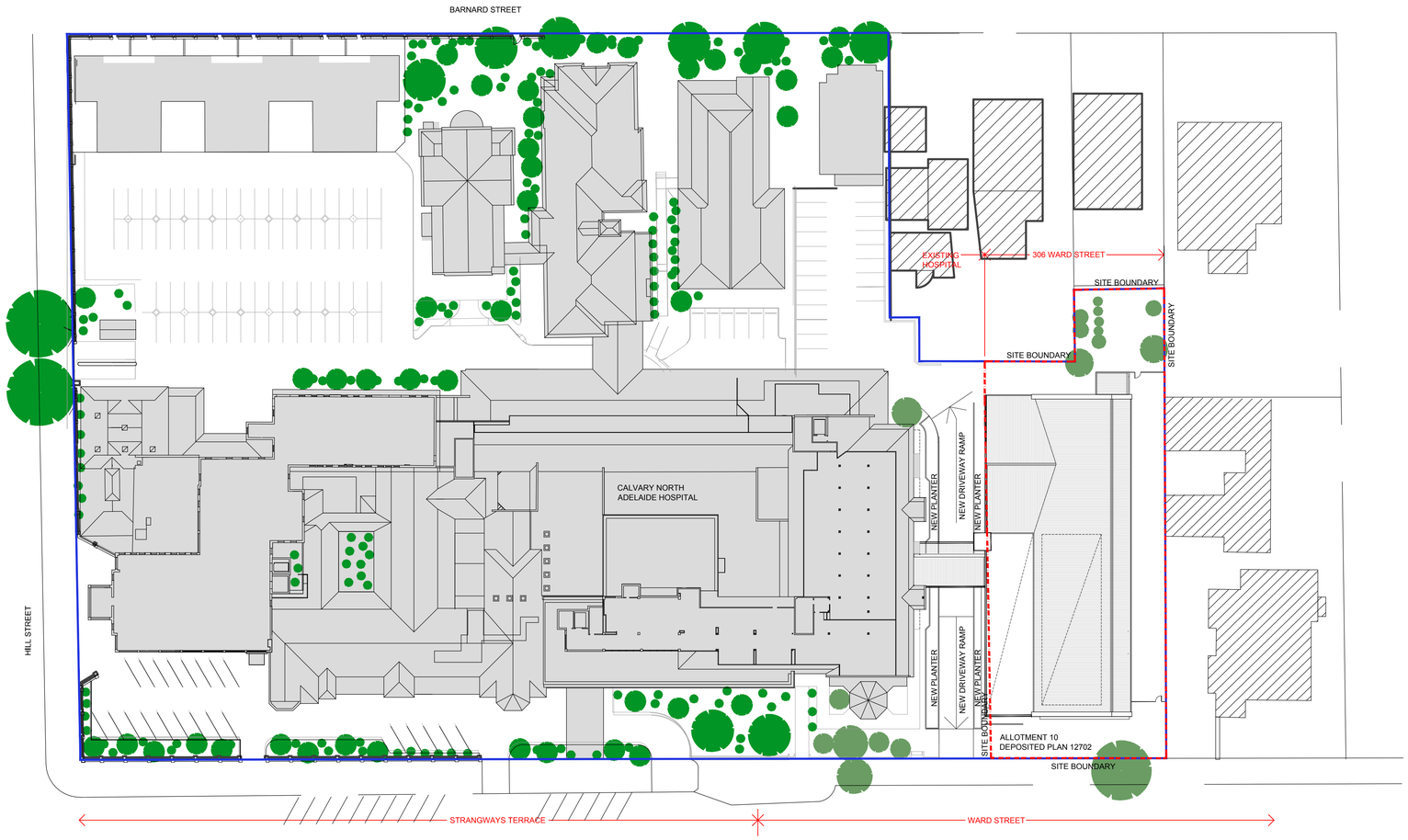
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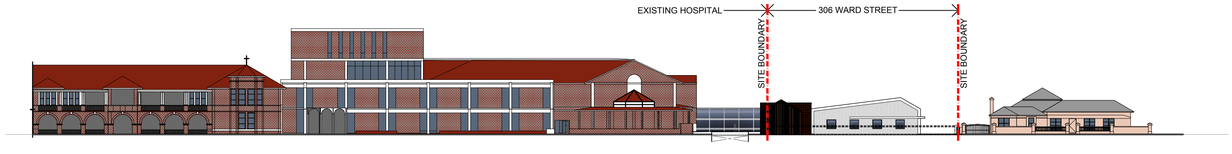
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Issue: **2**

HEALTH PROJECTS INTERNATIONAL
Architects and Health Facility Planners
ACN 066 856 595
Suite 1, Ground Floor, 68 Milsons Point, NSW 2061
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SITE PLAN



STREET ELEVATION

SITE OF DEVELOPMENT

SITE BOUNDARY OF 306 WARD STREET

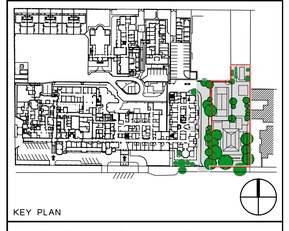
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1	FIRST ISSUE	16.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal

LITTLE COMPANY OF MARY HEALTH CARE LTD



KEY PLAN

HEALTH PROJECTS INTERNATIONAL
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Reason for Issue: DA SUBMISSION

Quality Endorsed Company

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ARCH			SPEC. CONS					
AUT			SERV					

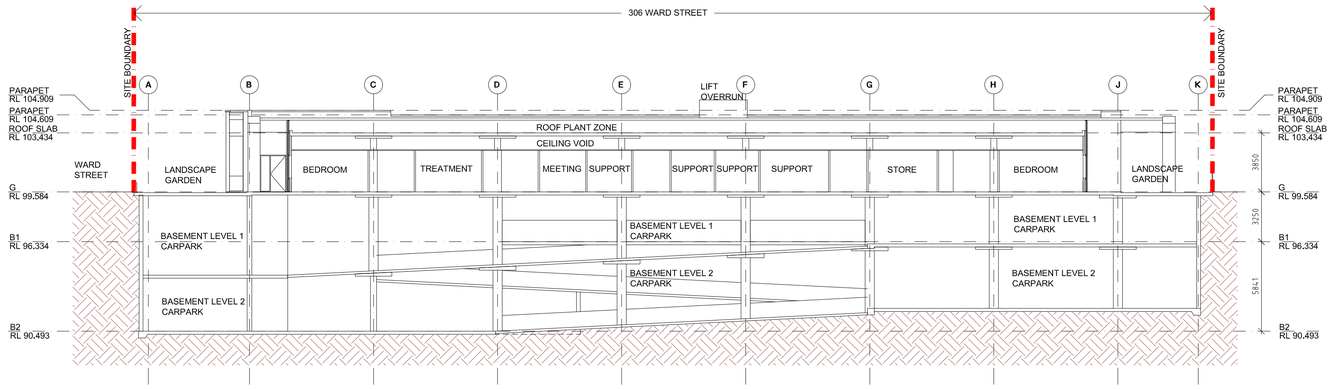
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16.10.18	YL	HST	17.10.17	1:500

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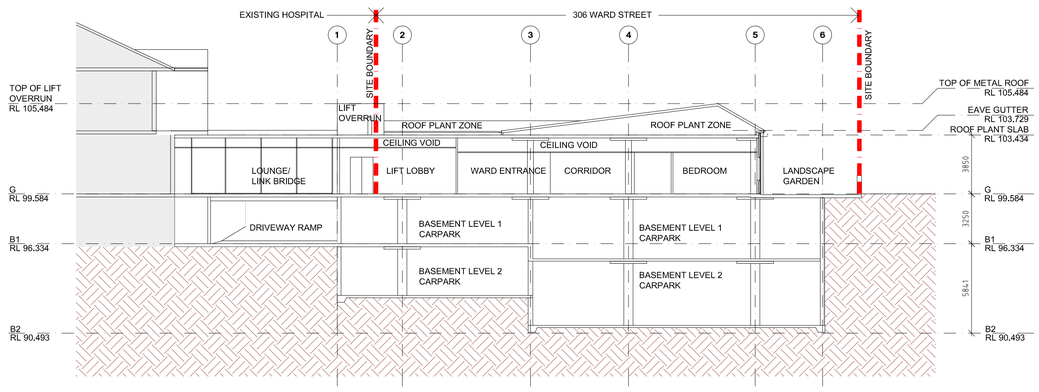
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Issue: 2



01 - SECTION



02 - SECTION

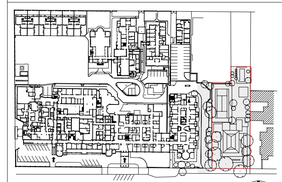
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1	FIRST ISSUE	16.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal

LITTLE COMPANY OF MARY HEALTH CARE LTD



KEY PLAN

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Reason for Issue

DA SUBMISSION

Quality Endorsed Company

Subject	By	Date	Subject	By	Date	Subject	By	Date
RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
AUT			SERV					

Block/ Zone: -

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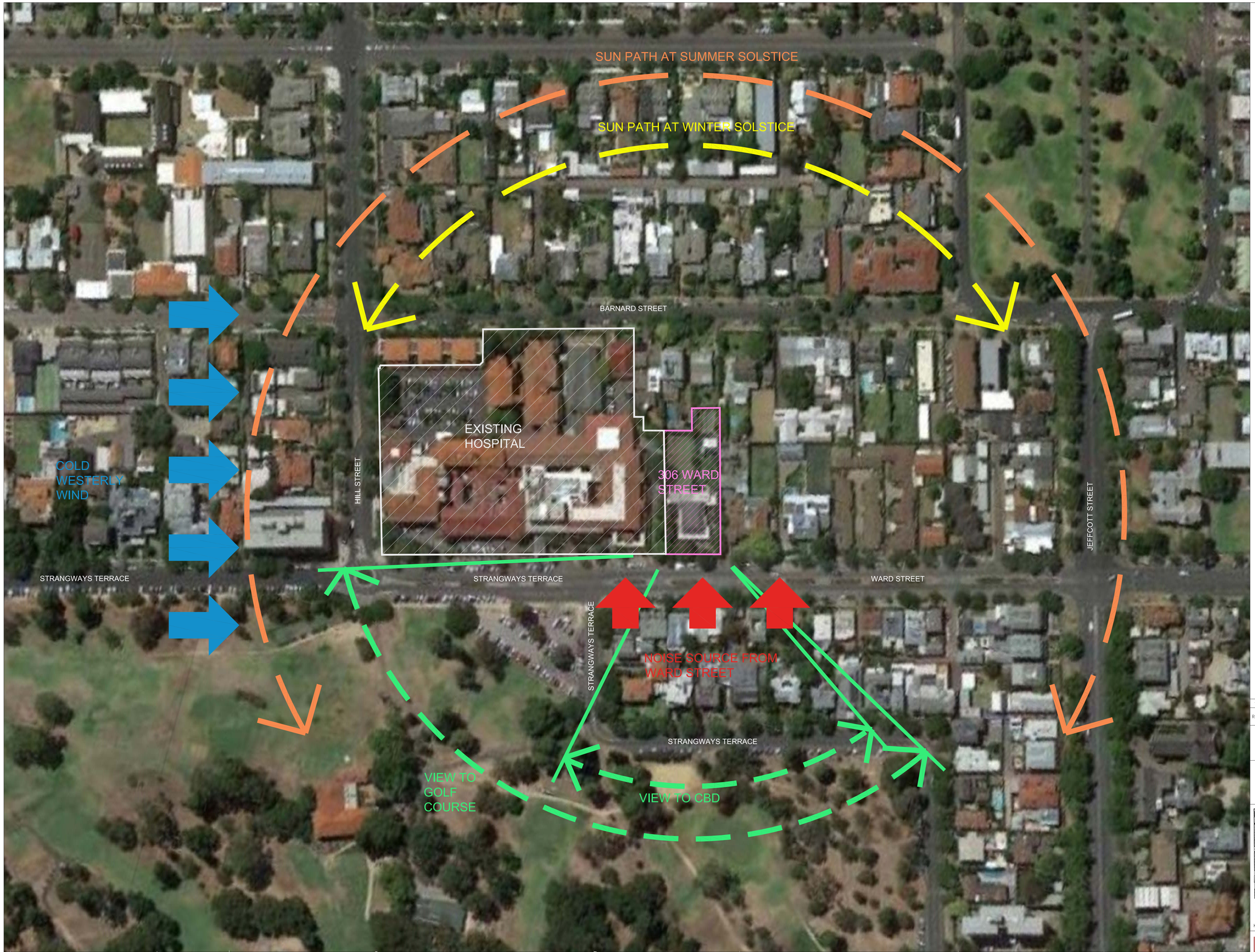
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CAD File: CNA9-S

Dwg.No.: **CNA9-S**

Issue: **1**

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REV	REVISION DESCRIPTION	DATE	BY
1	FIRST ISSUE	16.10.18	YL

Project
CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal
LITTLE COMPANY OF MARY HEALTH CARE LTD

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Reason for Issue
DA SUBMISSION

Quality Endorsed Company

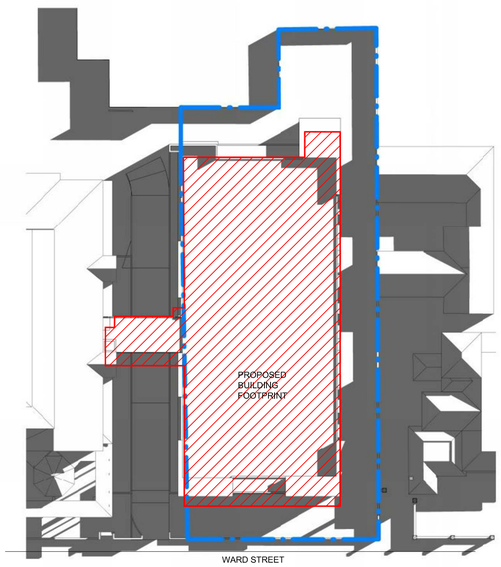
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RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
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HEALTH PROJECTS INTERNATIONAL
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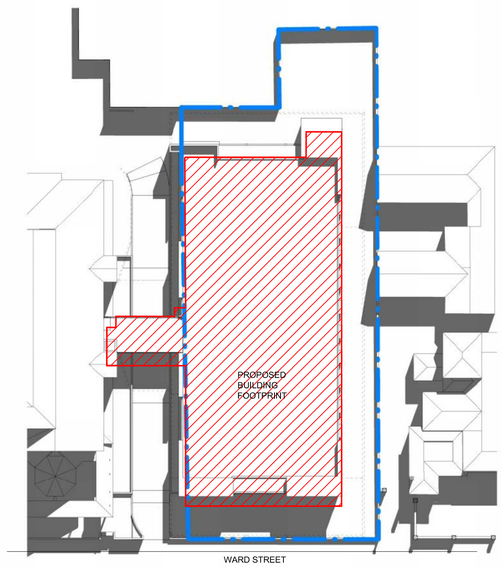
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SITE ANALYSIS PLAN

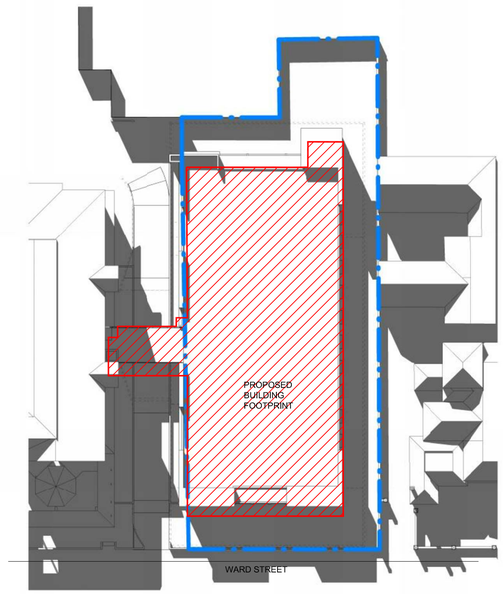
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22ND JUNE 9AM



22ND JUNE 12PM



22ND JUNE 3PM

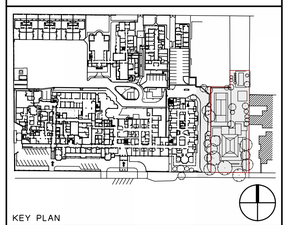
REV	REVISION DESCRIPTION	DATE	BY
1	FIRST ISSUE	16.10.18	YL

Project

CALVARY NORTH ADELAIDE HOSPITAL EXPANSION OVER 306 WARD STREET

Principal

LITTLE COMPANY OF MARY HEALTH CARE LTD



KEY PLAN

HEALTH PROJECTS INTERNATIONAL
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Reason for Issue:
DA SUBMISSION

Quality Endorsed Company

Subject	By	Date	Subject	By	Date	Subject	By	Date
RDS			STRUCT			PROJ. ARCH		
ARCH			SPEC. CONS					
AUT			SERV					

Block/ Zone	Drawn	Checked	Date	Scale/s
-	YL	HST	16.10.18	1:500

Drawing Title
SHADOW DIAGRAMS

CAD File	Dwg.No.	Issue
CNA9-SH-1	**CNA9-SH-1**	**1**

Product	Register Search (CT 5187/588)
Date/Time	21/11/2017 04:28PM
Customer Reference	50522
Order ID	20171121011708
Cost	$28.25

REAL PROPERTY ACT, 1886
South Australia

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.

Certificate of Title - Volume 5187 Folio 588

Parent Title(s) CT 745/47

Creating Dealing(s) CONVERTED TITLE

Title Issued 18/05/1994 **Edition** 9 **Edition Issued** 02/01/2007

Estate Type

FEE SIMPLE

Registered Proprietor

LCM CALVARY HEALTH CARE HOLDINGS LTD. (ACN: 105 355 306)
OF CORNER HAYDON DRIVE & BELCONNEN WAY BRUCE ACT 2617

Description of Land

ALLOTMENT 5 FILED PLAN 107755
IN THE AREA NAMED NORTH ADELAIDE
HUNDRED OF YATALA

Easements

NIL

Schedule of Dealings

Dealing Number	Description
10293466	LEASE TO CALVARY HEALTH CARE ADELAIDE LTD. COMMENCING ON 1/7/2004 AND EXPIRING ON 30/6/2074
10580037	MORTGAGE TO THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE ARCHDIOCESE OF CANBERRA AND GOULBURN, THE CORPORATION OF THE TRUSTEES OF THE ROMAN CATHOLIC ARCHDIOCESE OF BRISBANE, THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE ARCHDIOCESE OF SYDNEY AND THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE DIOCESE OF BATHURST AS JOINT TENANTS
10580038	MORTGAGE OF LEASE 10293466 TO THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE ARCHDIOCESE OF CANBERRA AND GOULBURN, THE CORPORATION OF THE TRUSTEES OF THE ROMAN CATHOLIC ARCHDIOCESE OF BRISBANE, THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE ARCHDIOCESE OF SYDNEY AND THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE DIOCESE OF BATHURST AS JOINT TENANTS

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL

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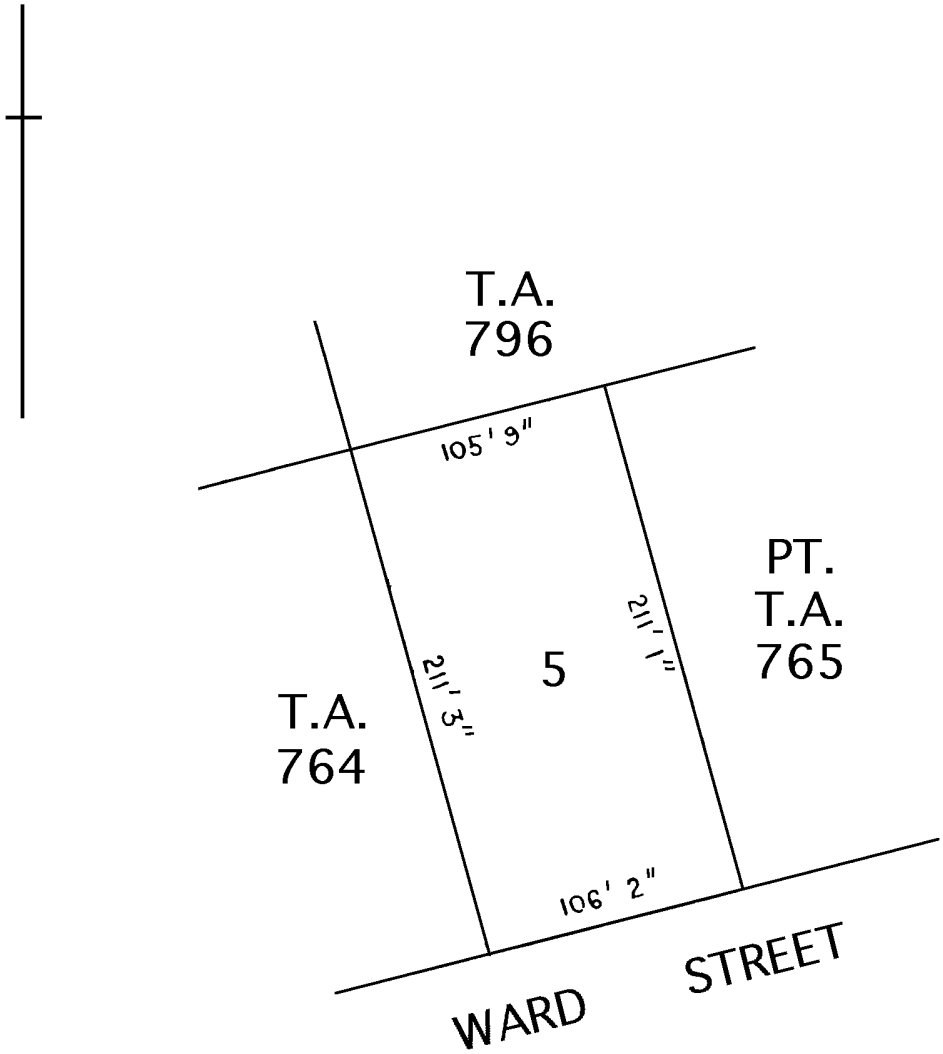
Administrative Interests

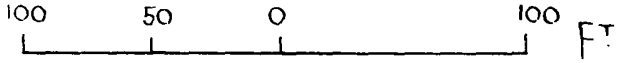
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Product	Register Search (CT 5187/588)
Date/Time	21/11/2017 04:28PM
Customer Reference	50522
Order ID	20171121011708
Cost	$28.25

This plan is scanned from Certificate of Title 745/47





DISTANCES ARE IN FEET AND INCHES
FOR METRIC CONVERSION
1 FOOT = 0·3048 metres
1 INCH = 0·0254 metres

Note : Subject to all lawfully existing plans of division

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Product	Register Search (CT 5585/401)
Date/Time	05/10/2018 08:34AM
Customer Reference	51067
Order ID	20181005000666
Cost	$28.75

REAL PROPERTY ACT, 1886
South Australia

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Certificate of Title - Volume 5585 Folio 401

Parent Title(s)	CT 1420/77, CT 2289/53				
Creating Dealing(s)	RTD 5127247, T 8509624				
Title Issued	15/10/1998	**Edition**	5	**Edition Issued**	28/11/2017

Estate Type

FEE SIMPLE

Registered Proprietor

LCM CALVARY HEALTH CARE HOLDINGS LTD. (ACN: 105 355 306)
OF L 12 135 KING STREET SYDNEY NSW 2000

Description of Land

ALLOTMENT 10 DEPOSITED PLAN 12702
IN THE AREA NAMED NORTH ADELAIDE
HUNDRED OF YATALA

Easements

NIL

Schedule of Dealings

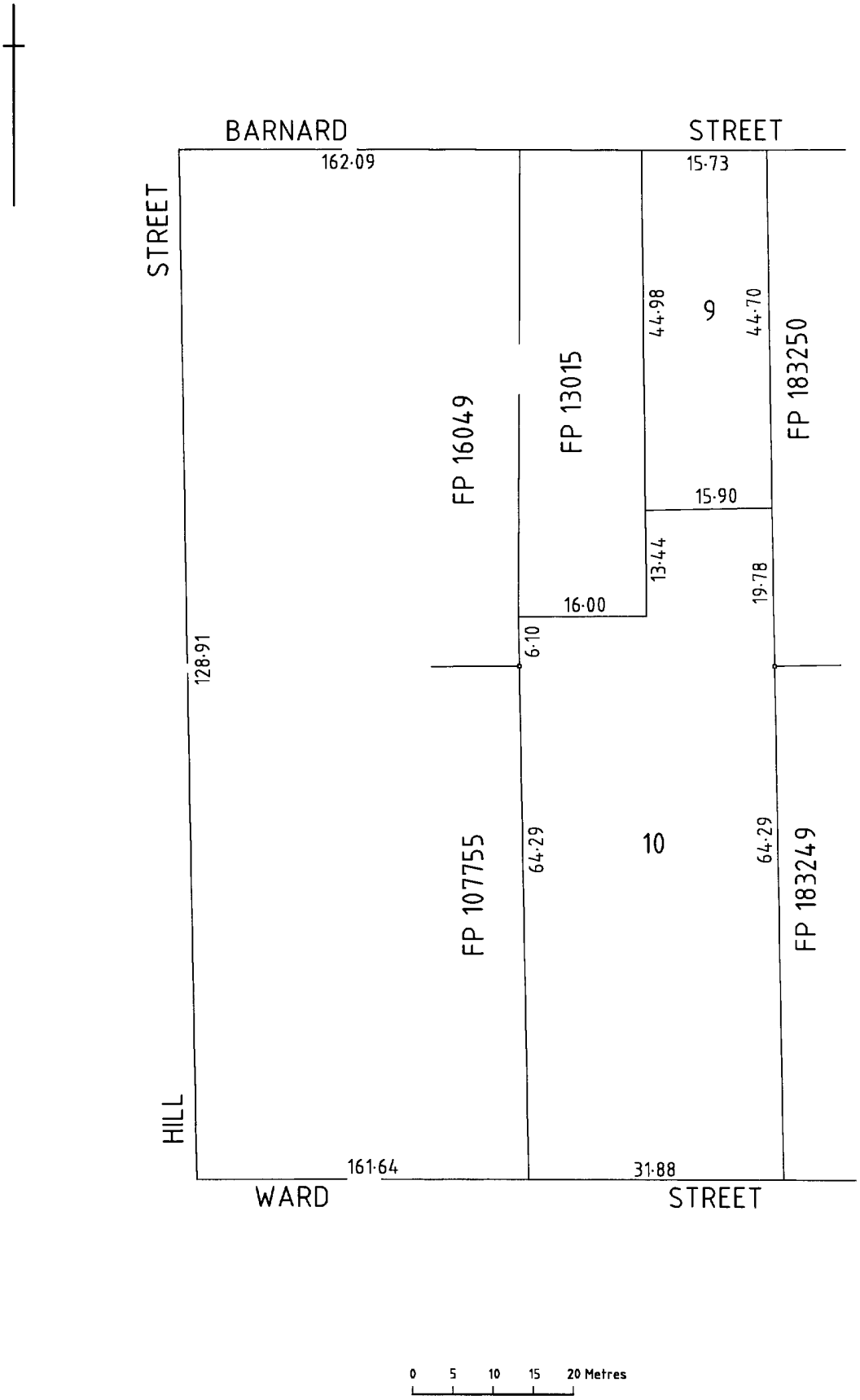
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Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

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Product	Register Search (CT 5585/401)
Date/Time	05/10/2018 08:34AM
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Calvary North Adelaide Hospital

Heritage / Character Analysis

Heritage Places

Heritage Places within the Locality

Heritage Context.

The site is located within a Historic (Conservation) Zone, and immediately adjacent a Local Heritage Place. The broader historic character is mixed, especially to the northern side of the street where only 2 dwellings are Local Heritage listed.



LOCAL HERITAGE PLACE

STATE HERITAGE PLACE

Development Plan

Relevant Heritage and Character Provisions

Heritage and Conservation North Adelaide

Development Adjacent to a Local Heritage Place

PDC 162 Development on land adjacent to land containing a Heritage Place should demonstrate design consideration of the relationship with the Heritage Place (without necessarily replicating its historic detailing) by establishing compatible:

(a) scale, bulk and setbacks;

(b) proportion and composition of design elements;

(c) form and visual interest (as determined by play of light and shade, treatments of openings and depths of reveals, roofline and silhouette, colour and texture of materials and details, landscaping and fencing);

(d) width of frontage and boundary set-back patterns; and

(e) vehicle access and carparking arrangements.

PDC 163 Development on land adjacent to a Heritage Place and sited in prominent locations, such as corners or at the termination of vistas where a strong presence is desirable, should have a scale and detail equal to that of the Heritage Place.

PDC 164 In a locality where single-storey Heritage Places prevail at or close to the primary street frontage, single storey development and a consistent building set-back should be maintained. Sympathetically designed second storey components that utilise or extend roof space to the rear of a building may be appropriate subject to scale, views from the street, overshadowing and privacy considerations.

PDC 165 Development that is visible from the street should match the building levels and storey heights of adjacent Heritage Places.

PDC 166 The division of land adjacent to a Heritage Place should:

(a) create allotment(s) of a size and dimensions to accommodate new development that will complement adjacent Heritage Place(s) and reinforce the desired character of the streetscape;

(b) be of a size and dimensions that will provide for the siting and setback of new buildings from property boundaries so that new development does not overshadow, dominate, encroach on or otherwise impact on the setting of adjacent Heritage Place(s); and

(c) provide areas for landscaping of a size and dimensions that complement the landscape setting of adjacent Heritage Place(s) and is consistent with the desired character of the Zone or Policy Area.

demonstrate consideration of the design relationship with the heritage place

scale, bulk setbacks

proportion and composition of design elements

form and visual interest

Scale and detail equal to that of the heritage place

Landscaping of a size and dimensions that complement the landscape setting of adjacent Heritage Places

Development Plan

Relevant Heritage and Character Provisions

North Adelaide Historic Conservation Zone

Obj 2: Development compatible with the heritage values and historic character of the Zone achieved by:

(b) maintaining a regular allotment pattern and orientation of buildings to public roads and incorporates high standards of design, building materials and landscaping to complement the:

(ii) bulk and scale of residential Heritage Places;

(iii) front and side boundary building set-back patterns of adjacent Heritage Places in each Policy Area; and

(iv) established environmental quality of public and private landscaped open spaces and the adjacent Park Lands;

(d) a high degree of pedestrian amenity and safety achieved through landscaping, paving and streetscape works…

PDC 1: Development should:

(b) reflect the historic built form and its visual character through residential development of complementary design, form and density consistent with the desired character for each Policy Area; and

(c) contribute to the landscape character of private and public open spaces and incorporate attractive landscaping to street frontages where building set-backs permit.

PDC 3: Development of new buildings or building additions of innovative and contemporary design should demonstrate a compatible visual relationship with adjacent Heritage Places and other buildings prevailing in the Policy Area that reinforce the desired character by compatible:

(a) bulk and scale;

(b) width of frontage and the front and side boundary building set-back patterns;

(c) proportions and vertical and/or horizontal emphasis, exhibiting vertical openings and a high solid to void ratio in the composition of the principal building facade and other elevations presenting to a public road; and

(d) form and level of visual interest…

PDC 4: New buildings should utilise stone, brick and/or brick render as the main external finish to walls to complement the historic built form in the Zone.

PDC 6: Development should not introduce building styles that are out of character with the desired character of the relevant Policy Area.

PDC 11: Appropriately pitched roofs to visibly reinforce the prevailing character of historic roof forms in the Zone should be incorporated in development rather than mono-pitch or flat roof forms falling to the street frontage or asymmetrically to a side boundary

high standards of design, building materials and landscaping

innovative and contemporary design

reflect the historic built form

contribute to landscape character

scale, bulk setbacks

proportion and vertical / horizontal emphasis

utilise brick and stone

pitched roof

Site and Context Analysis

Street Setback Patterns

Heritage Context.

Street setback patterns within locality vary between 0m and 12m, with setbacks in the immediate vicinity of the subject site being at the high end of this range.



Site and Context Analysis

Built Form Character – Broad

Heritage Context.

Street setback patterns within locality vary between 0m and 12m, with setbacks in the immediate vicinity of the subject site being at the high end of this range.









Site and Context Analysis

Built Form Character – Detail Positive Attributes



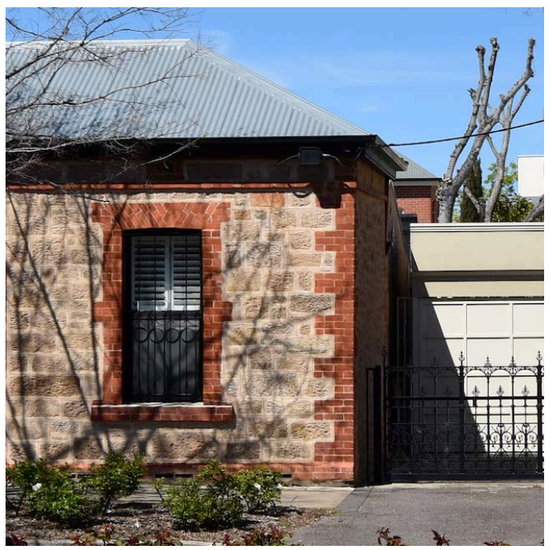


High solid to void
Face masonry
Pitched roofs – hipped and gabled
Vernadahs
High narrow eaves
Landscaped front yard









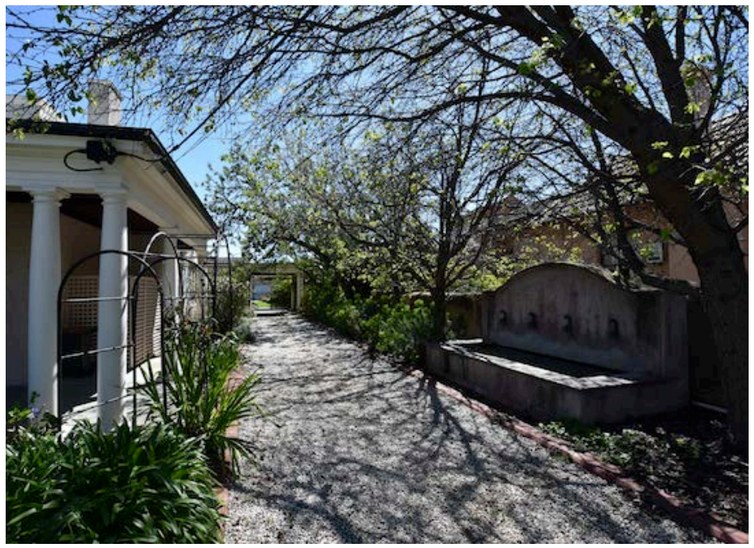
Site and Context Analysis

Built Form Character – Existing Dwelling on Subject Site





Residential / domestic qualities
High solid to void
Stone wall to side boundaries
Verandah
Parapet with hipped roof
Landscape front and side setting







Recommendations

Innovative and Contemporary Design

Open front fence with domestic character





Pitched roof forms / high solid to void







Face stone / masonry







Recommendations

Innovative and Contemporary Design in Historic Residential Contexts – Case Studies

Jackson Clements Burrows Architects – Harold St Residence



McBride Charles Ryan Penleigh and Essendon Junior Boys School



Jackson Clements Burrows Architects – Old House

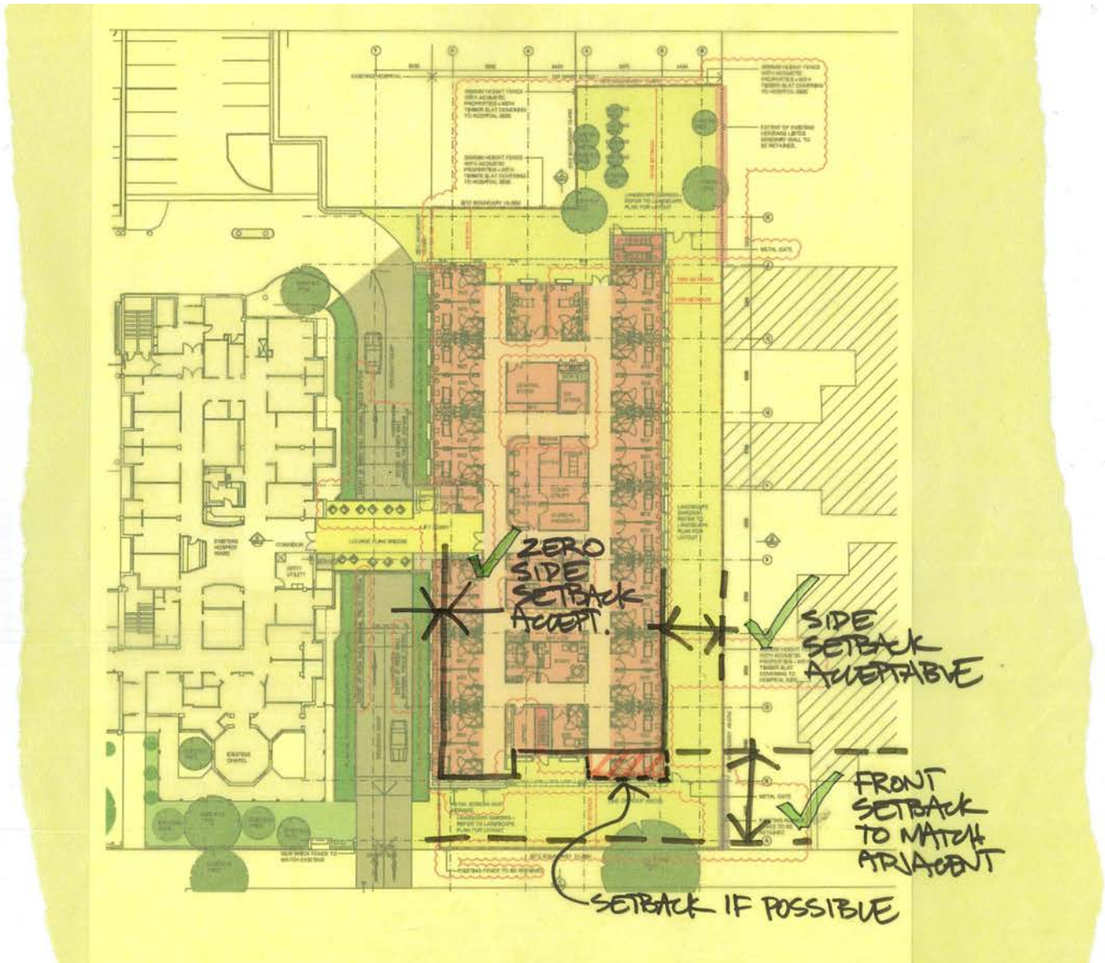




Recommendations
Landscaping / Setout

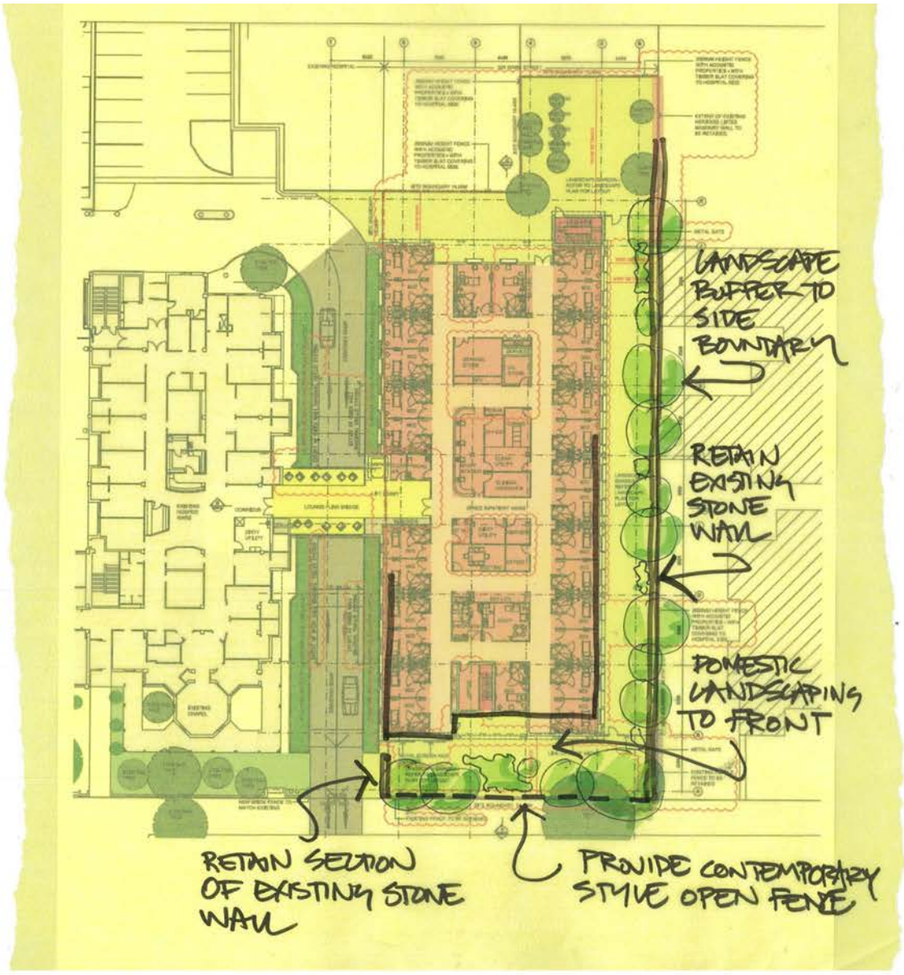
Setbacks

- Setback of main façade to be compatible with dwellings immediately to the east (nominally 11-12m). Remove or setback eastern encroachment to the southern façade if possible;
- Eastern setback is consistent with existing and acceptable; and
- Zero western setback is acceptable.



Landscaping

- Retain eastern stone wall to property boundary if possible;
- Provide landscaping to eastern boundary consistent with existing;
- Provide new contemporary front fence, open in style with domestic references;
- Provide domestic scale front landscaping; and
- Retain section of stone wall to the western boundary in the south-west corner of the site.



Recommendations
Built Form

Streetscape Analysis

Provide streetscape elevation that shows adjacent heritage places.

Materials

Ulitlse face materials with a high texture: stone, brick, tile, timber. Reference should be made to materials on surrounding heritage places, but need not be literal.

Relief

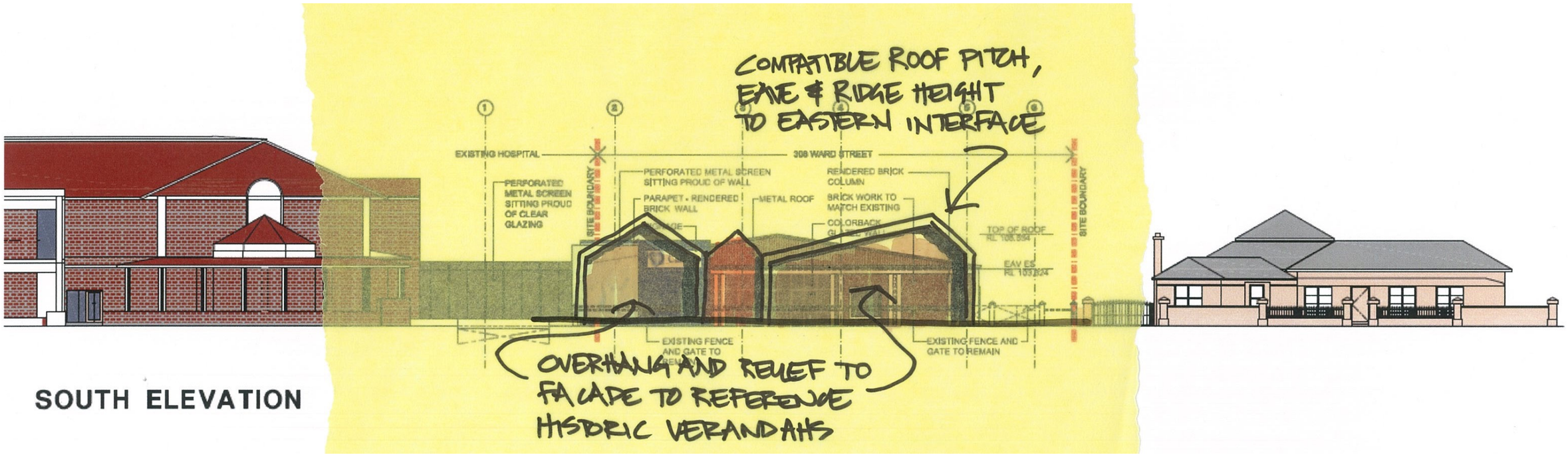
Provide relief the the southern façade through eave overhang (or other measures) to draw reference to historic verandahs, and create shadow and horizontal alignments with eastern heritage listed dwellings.

Roof Pitch

Southern and eastern elevations should incorporate pitched roof, with reference drawn from eastern heritage list dwellings regarding pitch, eave height and ridge height. Reference need not be literal.

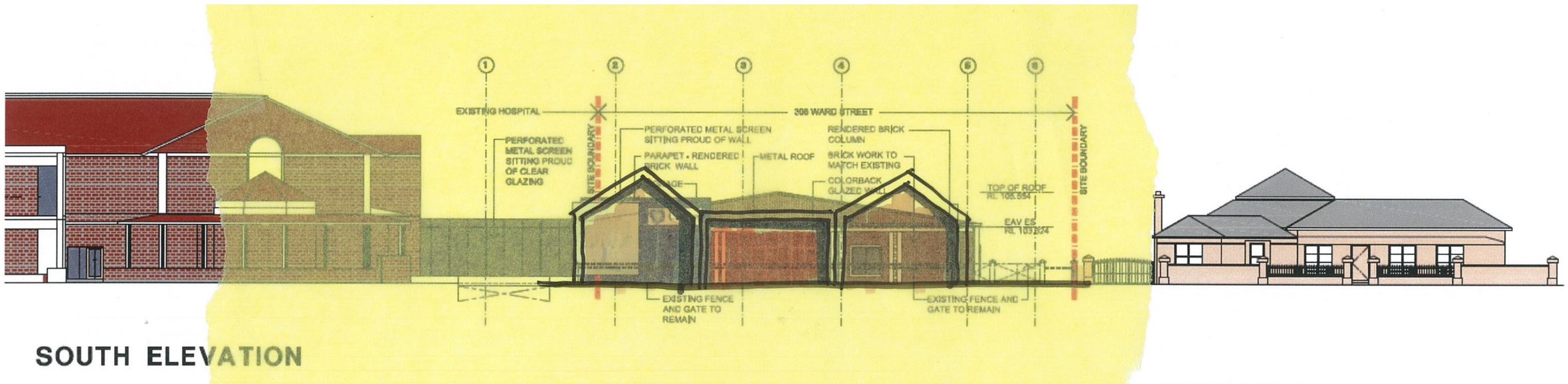
Solid to Void / Proportion / Articulation / Visual Interest

Create a high solid to void, compatible proportion and overall articulation compatible with the eastern heritage listed dwellings.

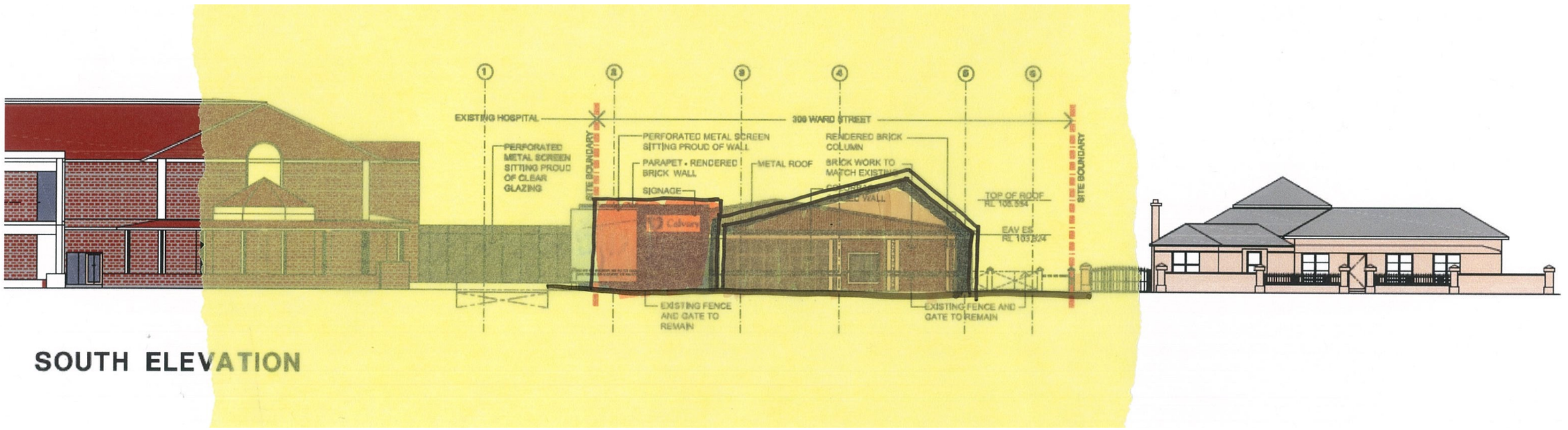


Recommendations

Alternative Approaches



SOUTH ELEVATION



SOUTH ELEVATION

WARNING CREASING OR FOLDING WILL LEAD TO REJECTION

PLAN OF DIVISION

PTS T.A's. 765 and 796

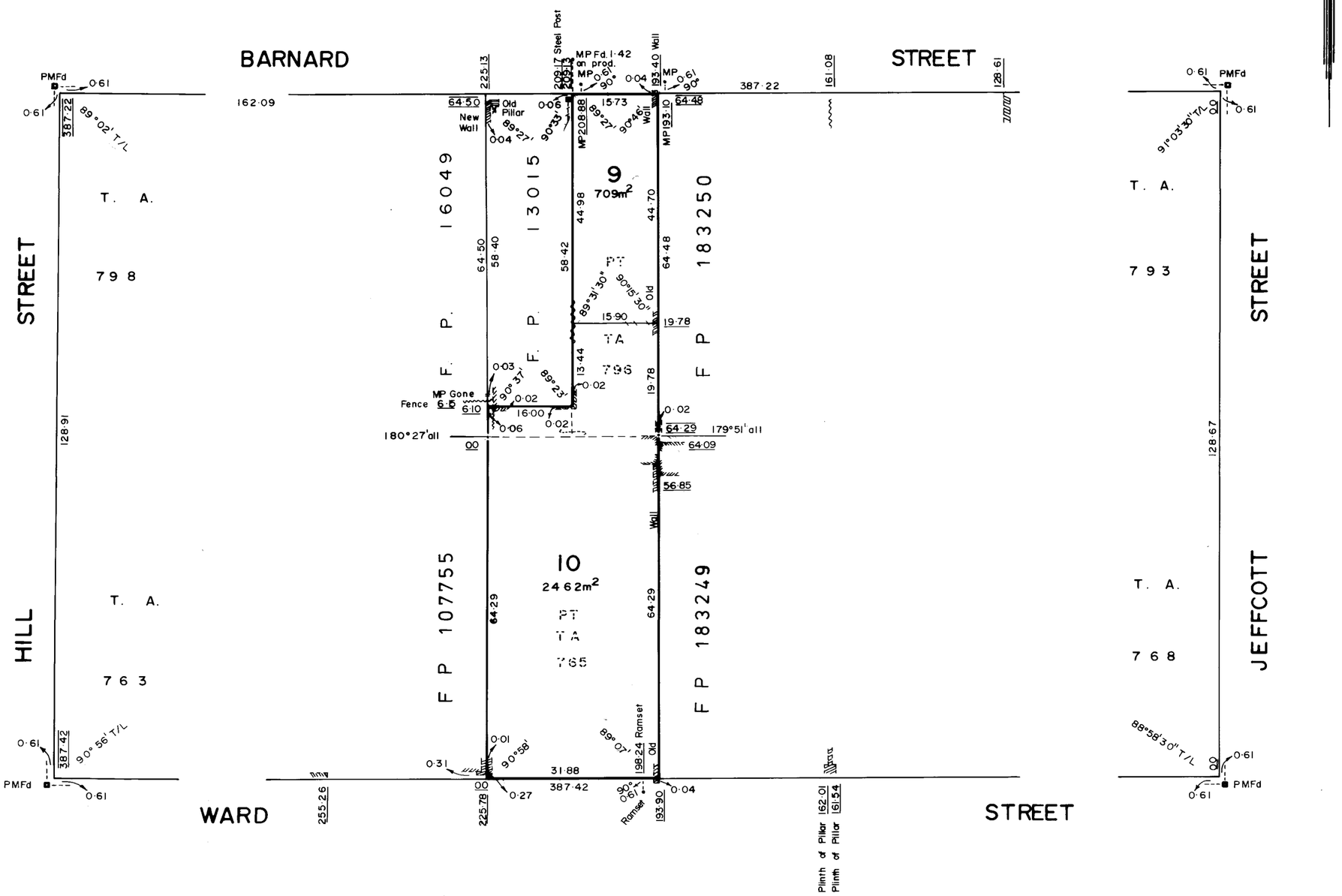
CITY OF ADELAIDE

HUNDRED OF YATALA in the area named NORTH ADELAIDE

SCALE

0 10 20 30 40 50 metres

C.T. 1420 / 77
N. F. Rischbieth
C.T. 2289 / 53
N. F. Rischbieth
G. J. Rischbieth



DEPOSITED PLAN NUMBER

DP 12702

ACCEPTED FOR DEPOSIT

pro Registrar-General

6 / 7 / 1998

Reference Map No. 6628-41-d

COUNCIL
CITY OF ADELAIDE

Development No. — : — :

THIS IS SHEET 1 OF 1 SHEETS

PERMANENT MARKS ADOPTED

PLAN EXAMINATION

Closure Checked	Plan Examined	Data Approved (X)
A.O.	R.A.P.	pro Principal Drafting Officer 16/9/1998

I, John Damian O'Callaghan
Licensed Surveyor, of South Australia
do hereby certify –

(1) That this plan has been made from surveys executed by me or under my supervision;

(2) that the field work was completed on the 25th day of August 1983;

(3) that both plan and field work are to the best of my knowledge correct and have been made in accordance with the Regulations under the Surveyors Act, 1975.

Date 6 / 9 / 83

Licensed Surveyor

Metal Pins shown thus .....•MP
Permanent marks shown thus ... ◘ PM

O'CALLAGHAN, HENNIG & CO. PTY.
LICENSED SURVEYORS
CADASTRE HOUSE
108 GILLES STREET, ADELAIDE, 5000
PHONE 223 6346 REFER 5936

LTO E



89 Strangways Terrace and 306 Ward Street, North Adelaide Transport Impact Assessment

Client //	The Little Company of Mary Health Care Ltd
Office //	SA
Reference //	S162540
Date //	17/10/18

89 Strangways Terrace and 306 Ward Street, North Adelaide

Transport Impact Assessment

Issue: A 17/10/18

Client: The Little Company of Mary Health Care Ltd
Reference: S162540
GTA Consultants Office: SA

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	17/10/18	Final	Timothy Jones	David Kwong	David Kwong	

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1. Introduction

1.1 Background

A development application is proposed by the Little Company of Mary Health Car Ltd('Calvary' or 'our client') for a proposed hospital ward as part of the Calvary North Adelaide Hospital at 89 Strangways Terrace and 306 Ward Street , North Adelaide. The proposal incorporates 29 new hospital beds within the ward, with a two-level ancillary basement car park.

GTA Consultants was commissioned by 'our client' to undertake a transport impact assessment of the proposed development.

1.2 Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

i existing traffic and parking conditions surrounding the site
ii parking demand likely to be generated by the proposed development
iii suitability of the proposed parking in terms of supply (quantum) and layout
iv traffic generation characteristics of the proposed development
v proposed access arrangements for the site
vi transport impact of the development proposal on the surrounding road network.

1.3 References

In preparing this report, reference has been made to the following:

- Adelaide City Council Development Plan, consolidated 7 June 2018
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2002
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- documents submitted as part of Development Application 020/A077/17
- comments made during the assessment of Development Application 020/A077/17
- plans for the proposed development prepared by Health Projects International
- various technical data as referenced in this report
- an inspection of the site and its surrounds
- other documents as nominated.

2. Existing Conditions

2.1 Subject Site

The subject site is the existing Calvary North Adelaide Hospital and the property at 306 Ward Street, North Adelaide. The site of approximately 2,440m^2 has a frontage of approximately 31.1m to Ward Street.

The site is located within the North Adelaide Historic (Conservation) zone and is currently occupied by a residential dwelling.

The surrounding properties are primarily residential, with the exception of the North Adelaide Golf Course to the south-west of the site.

The location of the subject site and the surrounding environs is shown in Figure 2.1.

Figure 2.1: Subject Site and its Environs



(PhotoMap courtesy of NearMap Pty Ltd)

2.2 Road Network

2.2.1 Adjoining Roads

Ward Street

Ward Street functions as a collector road under the care and control of Adelaide City Council. It is a two-way road aligned in an east/west direction. Adjacent the subject site, Ward Street is configured as a dual carriageway separated by a raised median. It is configured with a single travel lane and bicycle lane in each direction, with 5.3-metre-wide carriageways for both the east and west bound carriageways. Timed on-street parallel parking is permitted on each side of Ward Street. Ward Street is subject to the default urban speed limit of 50km/h.

Strangways Terrace

Strangways Terrace functions as a collector road under the care and control of Adelaide City Council. It is a two-way road aligned in an east/west direction adjunct the site. Strangways Terrace adjacent the site is configured as a dual carriageway separated by a raised median. It is configured with a single travel lane and bicycle lane in each direction, with 4.8-metre-wide carriageways for both the east and west bound carriageways. Timed on-street angled parking is permitted on each side of Strangways Terrace. Strangways Terrace is subject to the default urban speed limit of 50km/h.

Local Roads

Other local roads within the vicinity of the site include Hill Street and Barnard Street

2.2.2 Surrounding Intersections

The following intersections currently exist in the vicinity of the site:

- Strangways Terrace/Ward Street (unsignalised)
- Strangways Terrace/Hill Street (roundabout).

2.2.3 Traffic Volumes

GTA Consultants undertook traffic movement counts for the site access points along Hill Street and Strangways Terrace on 21 June 2018 for a 13-hour period between 6.30am and 7.30pm.

The AM and PM peak hour traffic volumes at the site accesses are shown in Figure 2.2 to Figure 2.5. During the survey period, it was found that no vehicles were observed travelling between the two access points.

Figure 2.2: Existing AM Peak Hour Traffic Volumes – Strangways Terrace Access

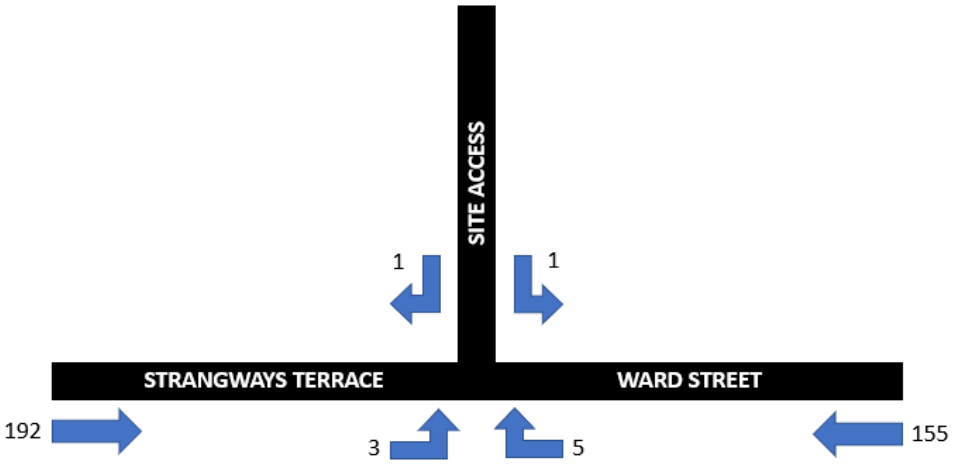


Figure 2.3: Existing PM Peak Hour Traffic Volumes – Strangways Terrace Access

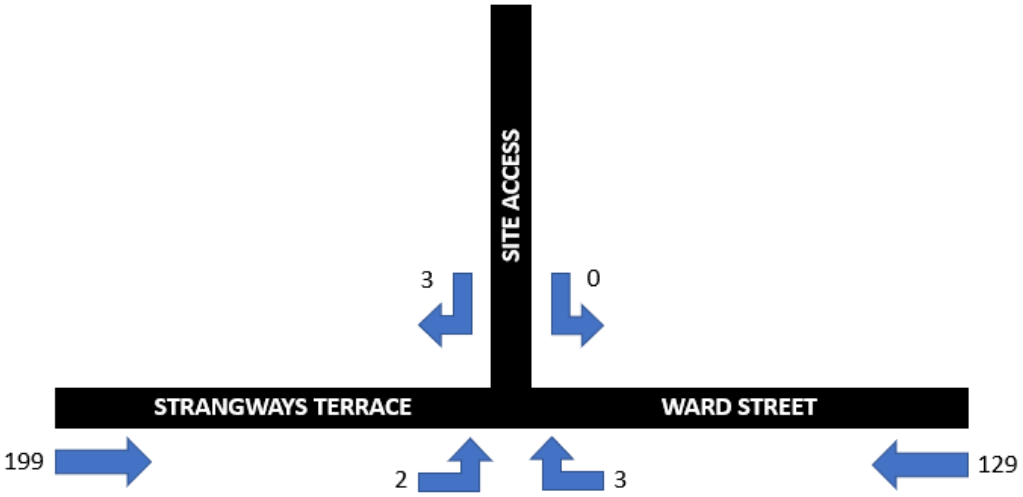


Figure 2.4: Existing AM Peak Hour Traffic Volumes – Hill Street Access

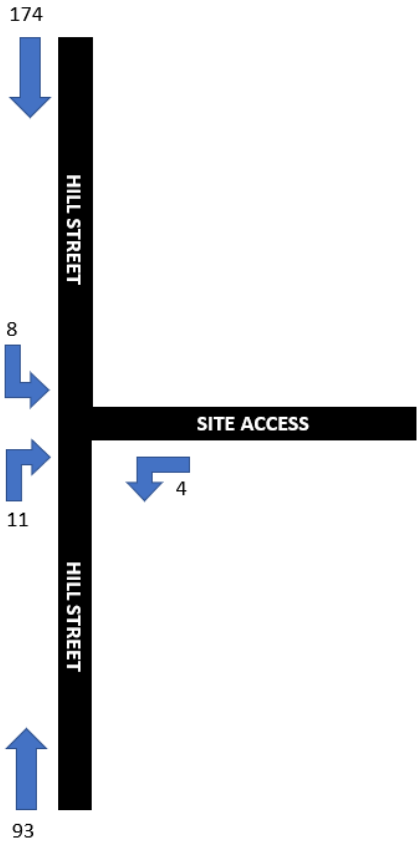
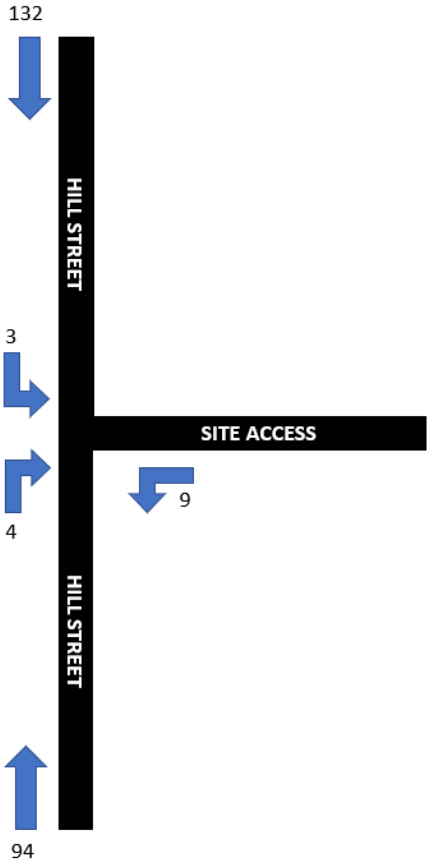


Figure 2.5: Existing PM Peak Hour Traffic Volumes – Hill Street Access



2.2.4 Crash Data

A review of the reported accident casualty history for the roads and intersections adjoining the subject site has been sourced from the Department of Planning, Transport and Infrastructure (DPTI) accident database. A summary of the accidents for the last available five-year period (2012 to end of 2016) is presented in Figure 2.6.

Figure 2.6: Crash Data (2011-2016)



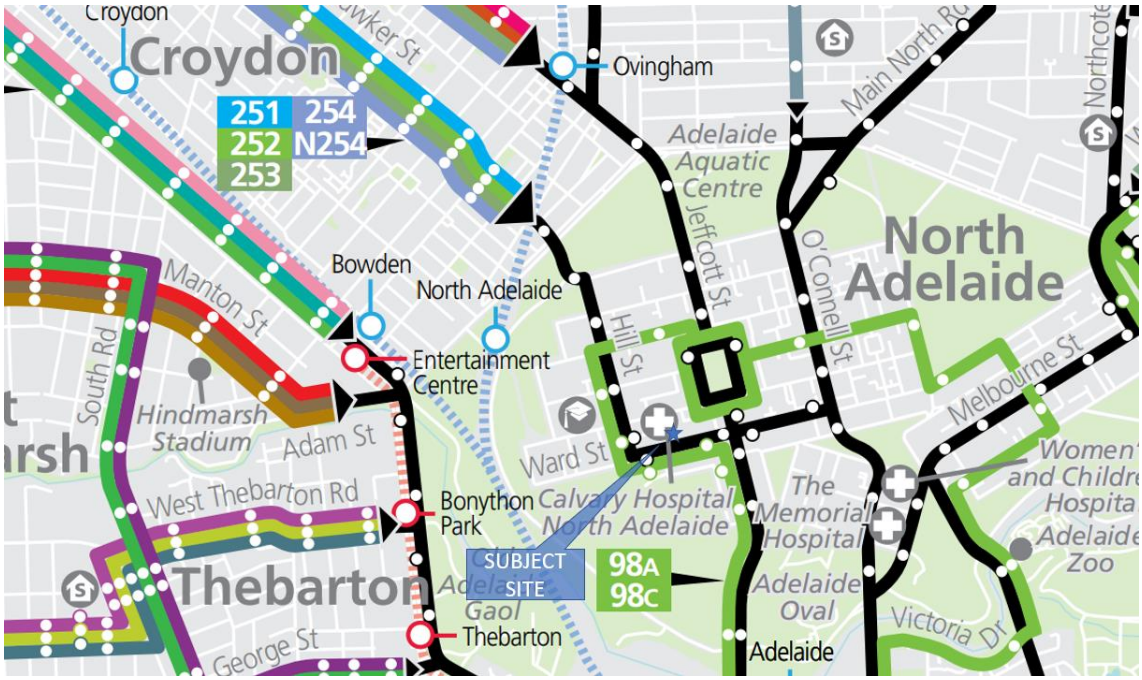
2.3 Sustainable Transport Infrastructure

2.3.1 Public Transport

Figure 2.7 shows the subject site in relation to existing public transport routes. The site is serviced by the following routes:

- 98C & 98A City and North Adelaide Loop
- 251 Mansfield Park to City
- 252 Port Adelaide Interchange to City
- 253 Mansfield Park to City
- 254 Port Adelaide Interchange to City

Figure 2.7: Public Transport Map



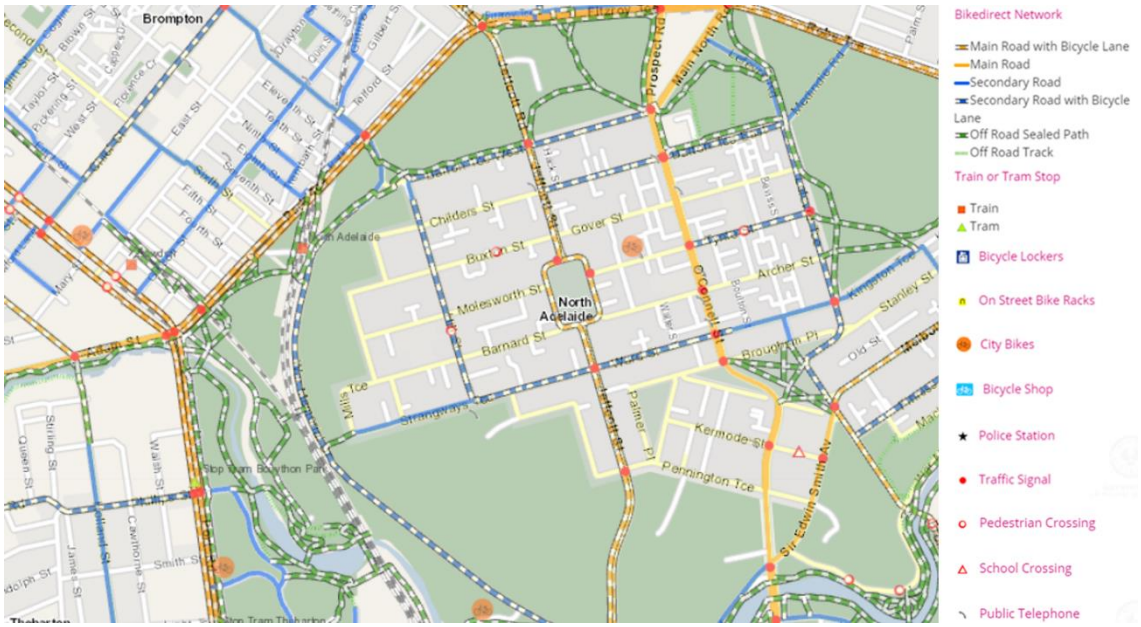
2.3.2 Pedestrian Infrastructure

Pedestrian paths are located on both sides of Ward Street and Strangways Terrace adjacent to the site. Pedestrian refuges are provided on Strangways Terrace in proximity to the Calvary North Adelaide Hospital main entrance and the roundabout.

2.3.3 Cycle Infrastructure

Figure 2.8 shows the subject site in relation to existing cycling infrastructure within its vicinity. Existing bicycle parking rails are provided within the Calvary North Adelaide Hospital site.

Figure 2.8: Cycling Infrastructure



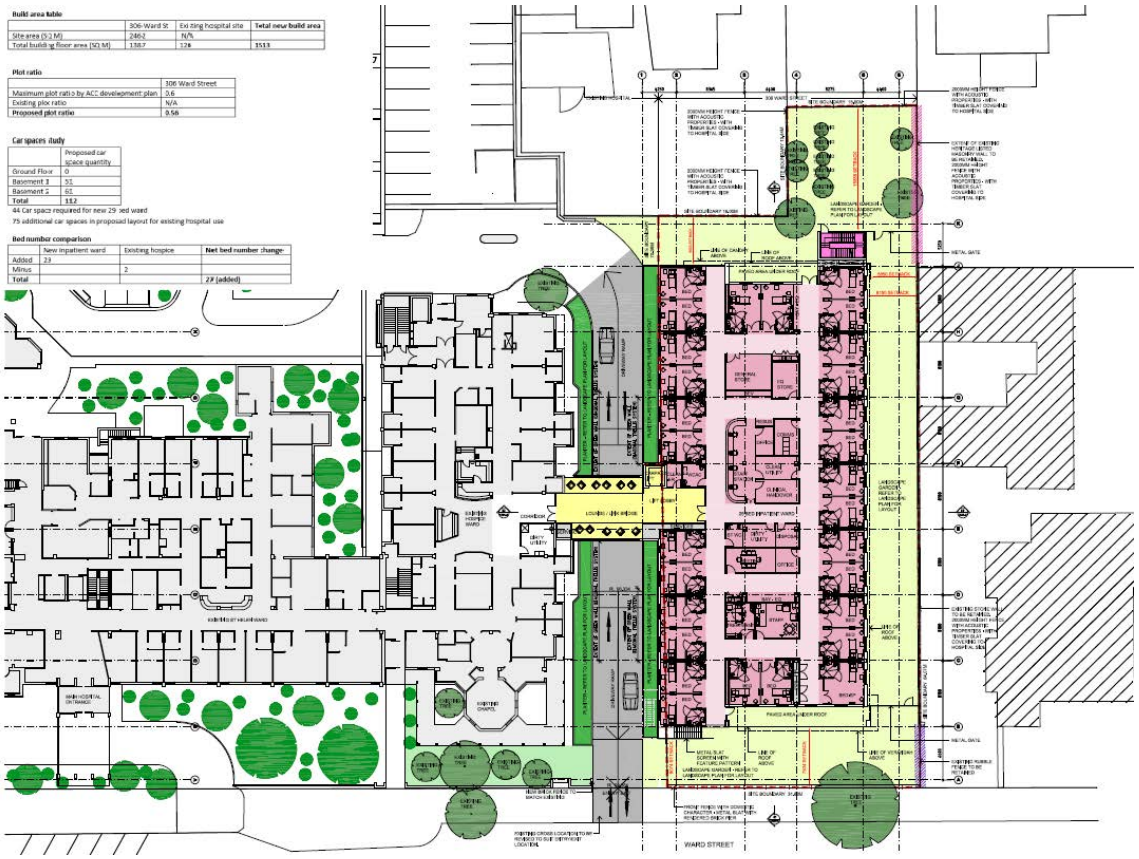
(Reproduced from CycleInstead website)

3. Development Proposal

3.1 Land Uses

The proposal includes the construction of new hospital ward providing 27 additional beds, and car parking spaces which are ancillary to those additional beds and to the balance of the hospital site. The proposed ground floor layout is outlined in Figure 3.1.

Figure 3.1: Proposed Ground Floor Layout



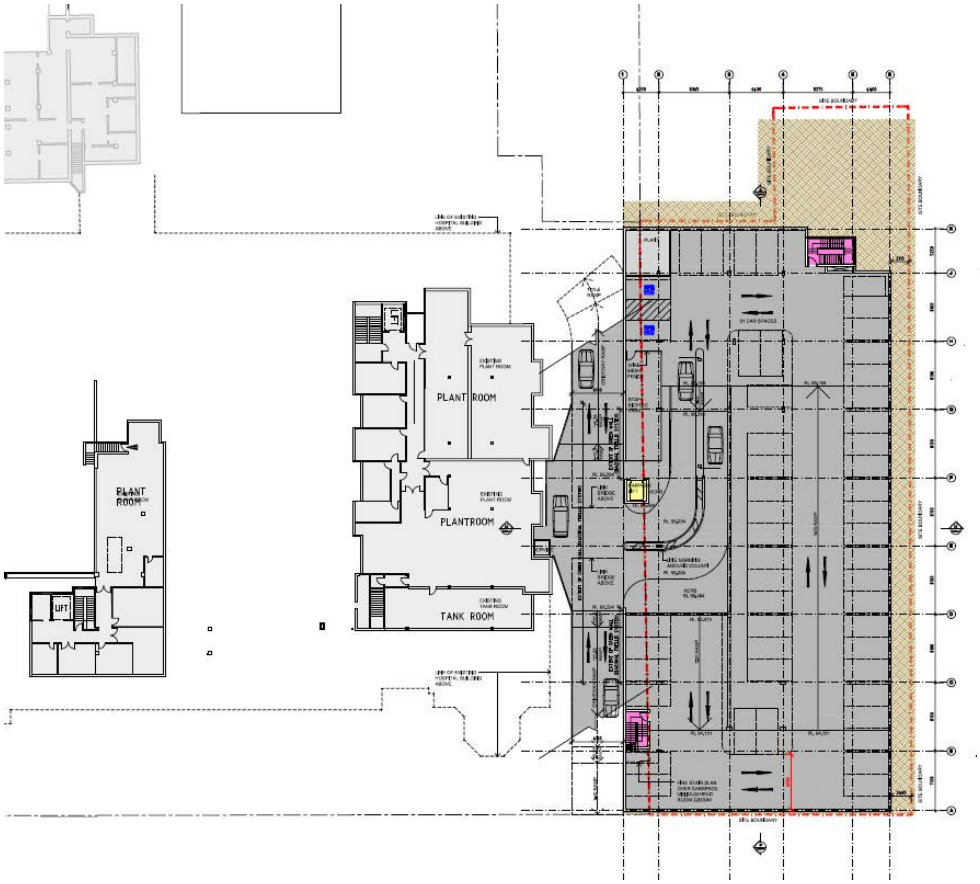
3.2 Car Parking

Car parking proposed as part of the development is a two-level basement car park providing 112 car parking spaces.

3.3 Vehicle Access

Vehicle access to the basement car park is to be provided via the existing access on Strangways Terrace. Boom gates are proposed to be provided within the basement parking area, with a queueing capacity of 4 vehicles. The proposed basement access is outlined in Figure 3.2.

Figure 3.2: Proposed Level 1 Basement Layout



3.4 Pedestrian Facilities

The proposal provides a link bridge between the new ward and the existing Calvary Hospital, providing pedestrian connection to the existing hospital main entrance.

3.5 Loading Areas

Loading to the proposed hospital ward is to be completed via existing loading as part of the Calvary Hospital site.

4. Car Parking

4.1 Development Plan Car Parking Requirements

The parking requirements applicable for new developments located within the Adelaide City Council are listed in Adel/7 of the Development Plan. The relevant parking rates are outlined below:

Hospital	*1.5 spaces per bed*

Based on 27 additional beds, the proposed development generates a Development Plan parking requirement of 41 car parking spaces.

4.2 Adequacy of Parking Supply

The proposed development provides a total of 112 car parking spaces within the two-level basement car parking below the new hospital ward. It is understood that the basement car parking is to be provided for staff and visitors associated with the existing Calvary Hospital site and the new hospital ward. Based on the shared parking arrangement, the parking spaces that are additional to the Development Plan requirements are to be utilised by existing staff of the hospital and visitors, particularly visitors of long stay patients. Therefore, the inclusion of the basement parking will help reduce the existing theoretical on-street parking reliance within the vicinity of the site as a whole.

4.3 Car Parking Layout

The parking layout has been designed in accordance with Australian Standard/New Zealand Standard for Off Street Car parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009). Some key design features are as follows:

- Parking spaces will be a minimum 2.6m wide and 5.4m in length set within a minimum 6.0m wide parking aisle, meeting the requirements for a User Class 3 facility. A minimum aisle width of 6.1m (5.8m aisle plus 300mm clearance) is provided to vertical obstructions such as walls.
- Disability parking space and associated shared space will be a minimum 2.4m wide and 5.4m in length set within a minimum 6.0m wide parking aisle.
- Small car parking spaces will be a minimum 2.3m wide and 5.0m in length, set within a minimum 6.0m wide aisle
- Columns and walls located adjacent the parking spaces will be located outside of the vehicle design envelope.
- A minimum clearance of 2.5m will be provided under the link bridge and car parking area (basement located 3.25m from Level 1 FFL. 750mm allowance for services/structural elements). Therefore, proposed basement car parking will meet the requirement for head height clearance for access and above disability parking spaces.
- Car park access ramps will be designed to accommodate light vehicles. Commercial vehicles will not utilise the proposed ramp and will access and utilise the loading provisions associated with the existing hospital site.
- A 1 in 40 (2.5%) grade has been provided for the first 6.0m from the property boundary, meeting the maximum 1 in 20 (5%) requirement.

- The ramps will be designed in accordance with the Australian Standards. The ramps have been tested on accordance with Appendix C of AS2890.1:2004 utilising a B99 vehicle from Autoturn software. As a conservative assessment, the Autoturn ground clearance assessment has been undertaken with a vehicle ground clearance of 100mm. The results of the assessment are outlined in Figure 4.1 and Figure 4.2.

Figure 4.1: Ramp Gradient Assessment – Travelling Down the Ramps

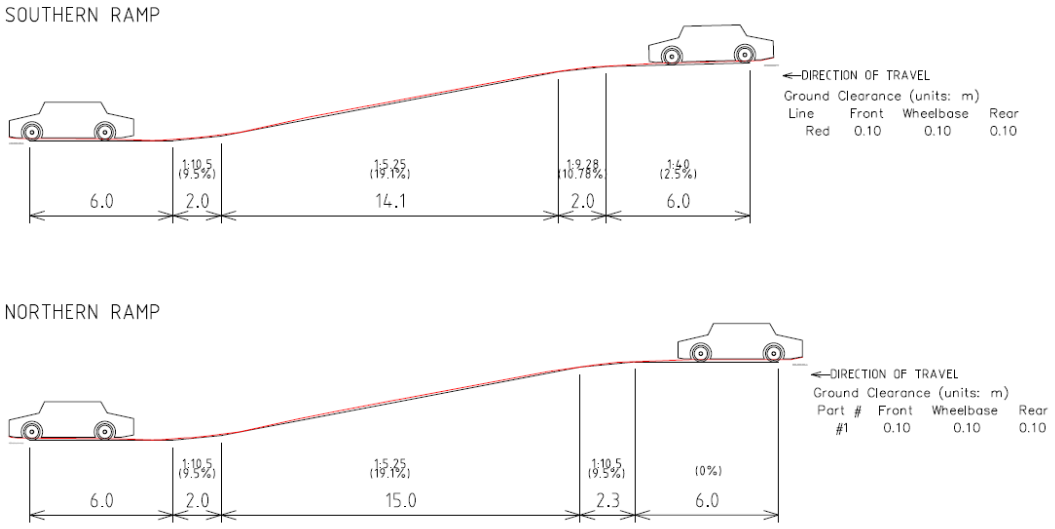
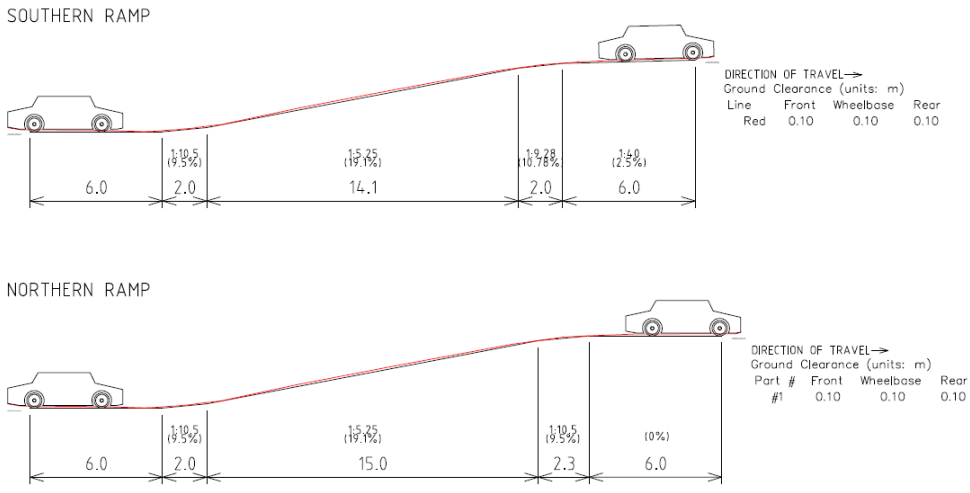


Figure 4.2: Ramp Gradient Assessment – Travelling Up the Ramps



- Gradients park adjacent the car parking spaces will be a maximum of 1:20.
- Gradients adjacent the lift core will be a maximum of 1:40.

4.4 Vehicle Queuing Analysis

Queuing analysis has been conducted in accordance with AS2890.1 Section 3.4. The proposed basement car park provides a total of 112 parking spaces. It is anticipated that the site peak arrival period for the car park will result in a 75% occupancy of the overall parking capacity. Notwithstanding the above, the assessment has been undertaken based on 100% capacity.

The relevant queuing rates are outlined below:

More than 100 cars	*First 100 cars*	*3% of Capacity*
(up to 75% capacity)	*Second 100 cars*	*2% of Capacity*

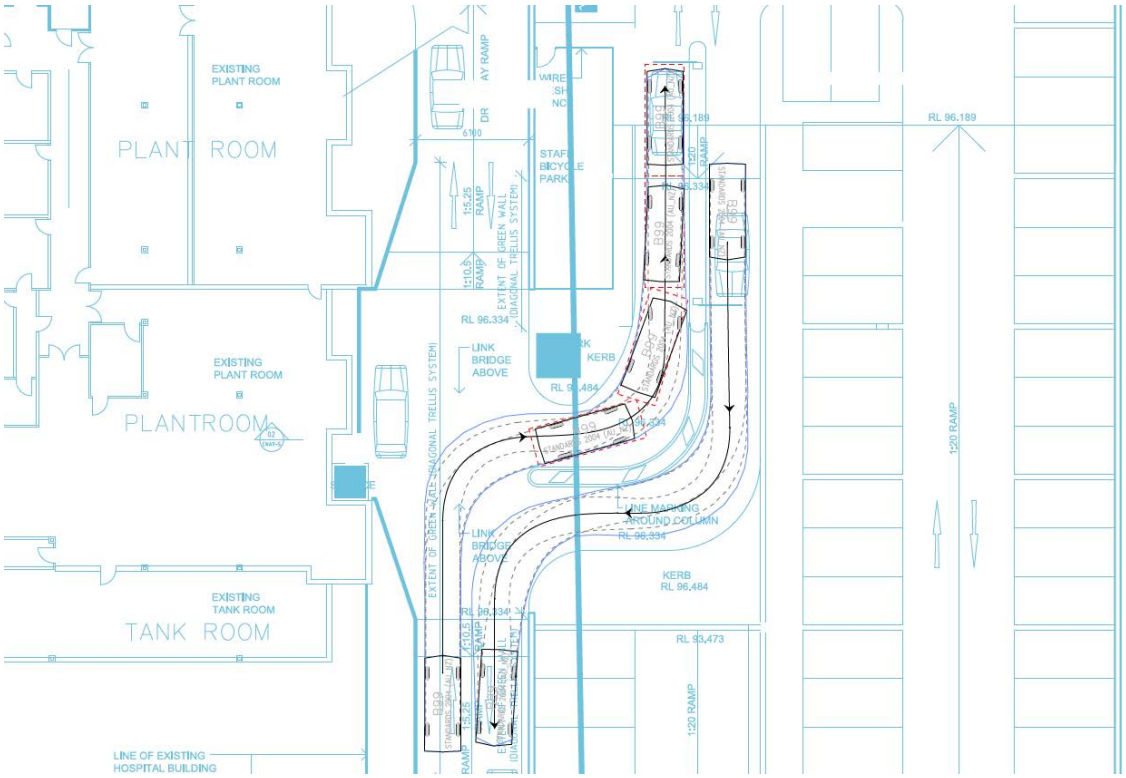
Based on the above, the queuing analysis is outlined in Table 4.1.

Table 4.1: Queuing Analysis

Queuing Assessment	Number of Applicable Parking Spaces	Queuing Rate	Queuing Requirement
First 100 Cars	100	3% Capacity	3
Second 100 Cars	12	2% Capacity	1
		Total	4

Based on the above, the proposed basement car parking would require an overall queuing capacity of 4 vehicles. The entry position allows for 4 vehicles to be queued within the entry providing a 6.0m queuing length for each vehicle as shown in Figure 4.3.

Figure 4.3: Vehicle Queuing Provision



5. Sustainable Transport Infrastructure

5.1 Bicycle End of Trip Facilities

The bicycle parking rates for new developments located within the Adelaide City Council are outlined in Adel/6 of the Development Plan. The relevant parking rates are outlined below:

	Employee Parking	*Visitor Parking*
Hospital	*1 spaces per 15 beds*	*1 space per 30 beds*

Based on 27 additional beds, the development generates a bicycle parking demand of 3 spaces, incorporating 2 employee spaces and 1 visitor space. A dedicated bicycle parking area is indicated within the basement car parking area. At-grade bicycle parking can be accommodated within the existing bicycle parking rails located within the Calvary North Adelaide site.

5.2 Walking and Cycling Network

The proposed development provides connection to the existing pedestrian and cycling network via the existing hospital site.

5.3 Public Transport

The site is accessible by public transport as outlined in Section 2.3.1.

6. Traffic Impact Assessment

6.1 Traffic Generation

6.1.1 Design Rates

Traffic generation rates have been sourced from the Roads and Maritime Services of New South Wales (formerly RTA) in the "Guide to Traffic Generating Developments" published in 2002 (henceforth referred to as the RTA Guide). The number of staff associated with the proposed development is unknown, therefore, the applicable rates for a hospital development based on bed numbers are as follows;

Site Peak Hour *-22.07+1.04*(Number of Beds)*

AM Peak Hour *-12.41+0.57*(Number of Beds)*

PM Peak Hour *-11.96+0.69*(Number of Beds)*

Based on the above rates, the site generated volumes are outlined in Table 6.1.

Table 6.1: Site Traffic Generation

Size	Relevant Peak Period	Traffic Generation Rate	Estimated Traffic Generation
27 Beds	Site Peak Hour	-22.07+1.04*(Number of Beds)	6
	AM Peak Hour	-12.41+0.57*(Number of Beds)	3
	PM Peak Hour	-11.96+0.69*(Number of Beds)	7

Based on the above, a net increase of 27 hospital beds as a result of the proposed development, the proposed development is anticipated to generate 7 new vehicle trips to the overall subject site during the PM peak period.

6.2 Access Traffic Modelling

6.2.1 Anticipated Access Volumes

As the basement car park is anticipated to be used by existing staff of the overall Calvary hospital site and visitors, particularly visitors of long stay patients, the number of movements at the Strangways Terrace access is anticipated to increase, when compared to that of the existing situation.

It is anticipated that as a result of the basement car parking, an additional 60 vehicle trips will utilise the Strangways Terrace access. This includes the 7 new trips to the subject site as a part of the proposed hospital ward.

6.2.2 SIDRA Modelling

For the purposes of a conservative assessment the existing median opening on Strangways Terrace, has assumed that all traffic utilising this access will undertake right turn movements to/from the access. It should be noted that due to the surrounding road network, it is anticipated that traffic would be distributed between all turning movements.

SIDRA Intersection analysis has been undertaken for both the AM and PM peak hour based on the following three scenarios:

- Scenario 1 – All Basement Traffic Entering Site (staff entering basement at beginning of the shift)

  All additional 60 vehicle trips will enter the access via a right turn from Ward Street

- Scenario 2 – All Basement Traffic Exiting Site from End Shift (staff exiting basement at the end of shift)

  All additional 60 vehicle trips will exit the access via a right turn to Strangways Terrace.

- Scenario 3 – Sensitivity Analysis (overlap of shift staff entering and exiting the basement at shift change)

  As sensitivity analysis, 60 vehicle trips will enter the access via a right turn from Ward Street and 60 vehicle trips will exit the access via a right turn to Strangways Terrace.

The results of the AM and PM peak hour SIDRA analysis of the three scenarios are outlined in Figure 6.1 to Figure 6.6.

Figure 6.1: Scenario 1 – AM Peak Hour Movement Summary

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Ward Street											
5	T1	163	11.0	0.088	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
6	R2	68	0.0	0.046	5.2	LOS A	0.2	1.4	0.31	0.55	41.9
Approach		232	7.7	0.088	1.5	NA	0.2	1.4	0.09	0.16	48.2
North: Car Park Access											
7	L2	1	0.0	0.002	4.4	LOS A	0.0	0.1	0.36	0.52	43.4
9	R2	1	0.0	0.002	6.5	LOS A	0.0	0.1	0.36	0.52	42.7
Approach		2	0.0	0.002	5.4	LOS A	0.0	0.1	0.36	0.52	43.1
West: Strangways Terrace											
10	L2	3	0.0	0.107	4.6	LOS A	0.0	0.0	0.00	0.01	25.8
11	T1	202	5.7	0.107	0.0	LOS A	0.0	0.0	0.00	0.01	49.9
Approach		205	5.6	0.107	0.1	NA	0.0	0.0	0.00	0.01	49.5
All Vehicles		439	6.7	0.107	0.9	NA	0.2	1.4	0.05	0.09	48.9

Figure 6.2: Scenario 1 – PM Peak Hour Movement Summary

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Ward Street											
5	T1	136	5.4	0.071	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
6	R2	65	0.0	0.044	5.2	LOS A	0.2	1.4	0.32	0.55	41.8
Approach		201	3.7	0.071	1.7	NA	0.2	1.4	0.10	0.18	48.0
North: Car Park Access											
7	L2	3	0.0	0.004	4.5	LOS A	0.0	0.1	0.32	0.51	43.8
9	R2	1	0.0	0.004	6.3	LOS A	0.0	0.1	0.32	0.51	43.1
Approach		4	0.0	0.004	4.9	LOS A	0.0	0.1	0.32	0.51	43.7
West: Strangways Terrace											
10	L2	2	0.0	0.110	4.6	LOS A	0.0	0.0	0.00	0.01	25.8
11	T1	209	5.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.01	50.0
Approach		212	5.0	0.110	0.1	NA	0.0	0.0	0.00	0.01	49.7
All Vehicles		417	4.3	0.110	0.9	NA	0.2	1.4	0.05	0.09	48.9

Figure 6.3: Scenario 2 – AM Peak Hour Movement Summary

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Ward Street											
5	T1	163	11.0	0.088	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
6	R2	5	0.0	0.004	5.2	LOS A	0.0	0.1	0.30	0.51	41.9
Approach		168	10.6	0.088	0.2	NA	0.0	0.1	0.01	0.02	49.8
North: Car Park Access											
7	L2	1	0.0	0.085	4.5	LOS A	0.3	2.3	0.46	0.66	42.6
9	R2	64	0.0	0.085	6.3	LOS A	0.3	2.3	0.46	0.66	41.9
Approach		65	0.0	0.085	6.3	LOS A	0.3	2.3	0.46	0.66	42.0
West: Strangways Terrace											
10	L2	3	0.0	0.107	4.6	LOS A	0.0	0.0	0.00	0.01	25.8
11	T1	202	5.7	0.107	0.0	LOS A	0.0	0.0	0.00	0.01	49.9
Approach		205	5.6	0.107	0.1	NA	0.0	0.0	0.00	0.01	49.5
All Vehicles		439	6.7	0.107	1.0	NA	0.3	2.3	0.07	0.11	48.9

Figure 6.4: Scenario 2 – PM Peak Hour Movement Summary

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Ward Street											
5	T1	136	5.4	0.071	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
6	R2	2	0.0	0.001	5.2	LOS A	0.0	0.0	0.31	0.50	41.9
Approach		138	5.3	0.071	0.1	NA	0.0	0.0	0.00	0.01	49.9
North: Car Park Access											
7	L2	3	0.0	0.083	4.5	LOS A	0.3	2.3	0.44	0.64	42.8
9	R2	64	0.0	0.083	6.1	LOS A	0.3	2.3	0.44	0.64	42.2
Approach		67	0.0	0.083	6.0	LOS A	0.3	2.3	0.44	0.64	42.2
West: Strangways Terrace											
10	L2	2	0.0	0.110	4.6	LOS A	0.0	0.0	0.00	0.01	25.8
11	T1	209	5.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.01	50.0
Approach		212	5.0	0.110	0.1	NA	0.0	0.0	0.00	0.01	49.7
All Vehicles		417	4.3	0.110	1.0	NA	0.3	2.3	0.07	0.11	48.9

Figure 6.5: Scenario 3 – AM Peak Hour Movement Summary

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Ward Street											
5	T1	163	11.0	0.088	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
6	R2	68	0.0	0.046	5.2	LOS A	0.2	1.4	0.31	0.55	41.9
Approach		232	7.7	0.088	1.5	NA	0.2	1.4	0.09	0.16	48.2
North: Car Park Access											
7	L2	1	0.0	0.091	4.5	LOS A	0.3	2.4	0.49	0.69	42.2
9	R2	64	0.0	0.091	6.8	LOS A	0.3	2.4	0.49	0.69	41.5
Approach		65	0.0	0.091	6.8	LOS A	0.3	2.4	0.49	0.69	41.5
West: Strangways Terrace											
10	L2	3	0.0	0.107	4.6	LOS A	0.0	0.0	0.00	0.01	25.8
11	T1	202	5.7	0.107	0.0	LOS A	0.0	0.0	0.00	0.01	49.9
Approach		205	5.6	0.107	0.1	NA	0.0	0.0	0.00	0.01	49.5
All Vehicles		502	5.9	0.107	1.6	NA	0.3	2.4	0.11	0.17	48.2

Figure 6.6: Scenario 3 – PM Peak Hour Movement Summary

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Ward Street											
5	T1	136	5.4	0.071	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
6	R2	65	0.0	0.044	5.2	LOS A	0.2	1.4	0.32	0.55	41.8
Approach		201	3.7	0.071	1.7	NA	0.2	1.4	0.10	0.18	48.0
North: Car Park Access											
7	L2	3	0.0	0.090	4.5	LOS A	0.3	2.4	0.47	0.67	42.4
9	R2	64	0.0	0.090	6.6	LOS A	0.3	2.4	0.47	0.67	41.8
Approach		67	0.0	0.090	6.5	LOS A	0.3	2.4	0.47	0.67	41.8
West: Strangways Terrace											
10	L2	2	0.0	0.110	4.6	LOS A	0.0	0.0	0.00	0.01	25.8
11	T1	209	5.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.01	50.0
Approach		212	5.0	0.110	0.1	NA	0.0	0.0	0.00	0.01	49.7
All Vehicles		480	3.7	0.110	1.6	NA	0.3	2.4	0.11	0.17	48.2

Based on the SIDRA analysis, the peak hours of all three scenarios operate with a Level of Service A with delays of less than 10 seconds. The modelling indicates that the 95th percentile queue for each scenario of the right turn in movements is less than one vehicle, indicating that the existing median opening will operate effectively and will not cause excessive vehicle delays.

6.3 Traffic Impact

Against existing traffic volumes in the vicinity of the site, the forecast vehicle trips generated by the proposed development could not be expected to compromise the safety or function of the surrounding road network.

Based on the SIDRA analysis above, the forecast trips associated with the proposed development and the redistribution of 60 trips to the Strangways Terrace access is anticipated to minimal impact on the surrounding road network. The operation of the right turning movements for the Strangways Terrace access is anticipated to continue to operate effectively.

7. Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

i The proposed development generates a Development Plan parking requirement of 41 spaces.

ii The proposed basement car parking is understood to be provided for staff and visitors of long stay patients to the existing Calvary Hospital and proposed development.

iii The proposed parking layout is consistent with the dimensional requirements as set out in the Australian/New Zealand Standards for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009).

iv The proposed development provides a dedicated bicycle parking area within the basement parking area.

v The site is expected to generate up to 7 new trips to the subject site during the PM Peak Period.

vi As a result of the basement car parking, it is anticipated that 60 vehicle trips will be redistributed to the Strangways Access.

vii Based on the SIDRA analysis of the access, adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development. The existing median opening on Strangways Terrace is anticipated to continue to operate effectively as a result of the proposed development.

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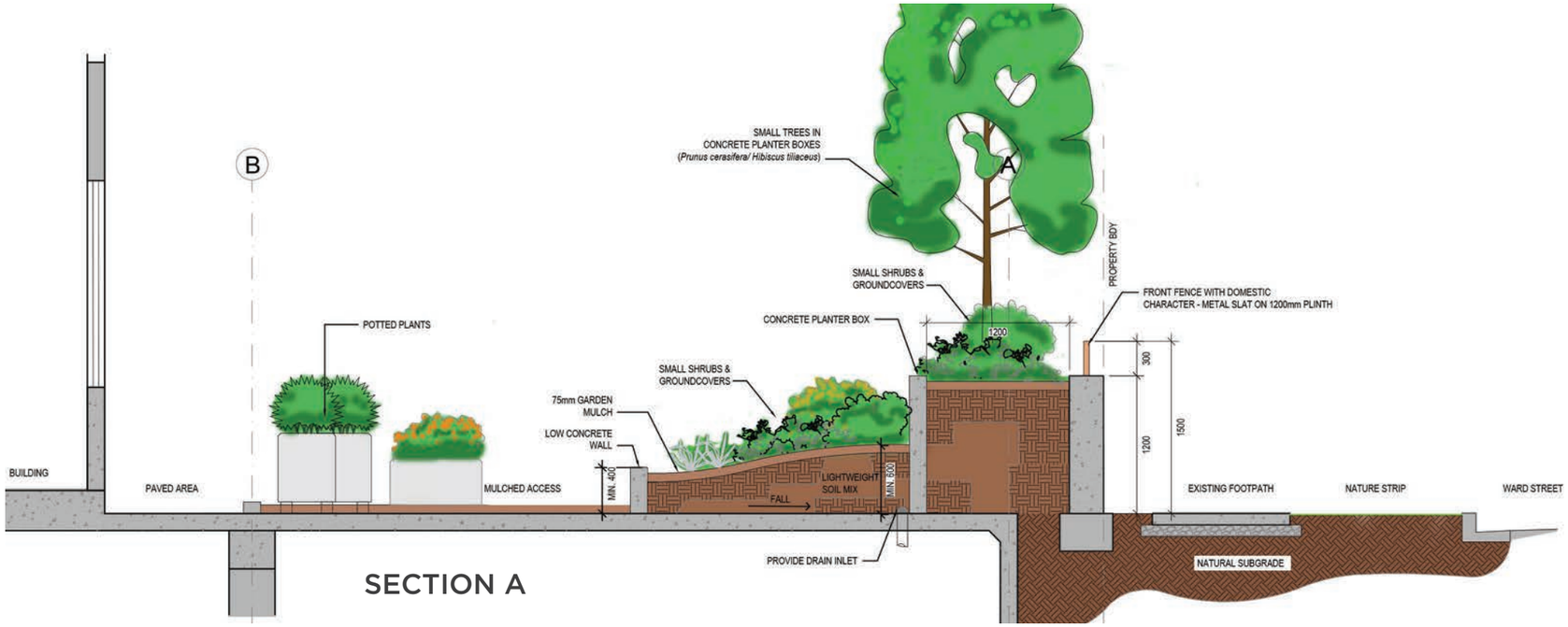
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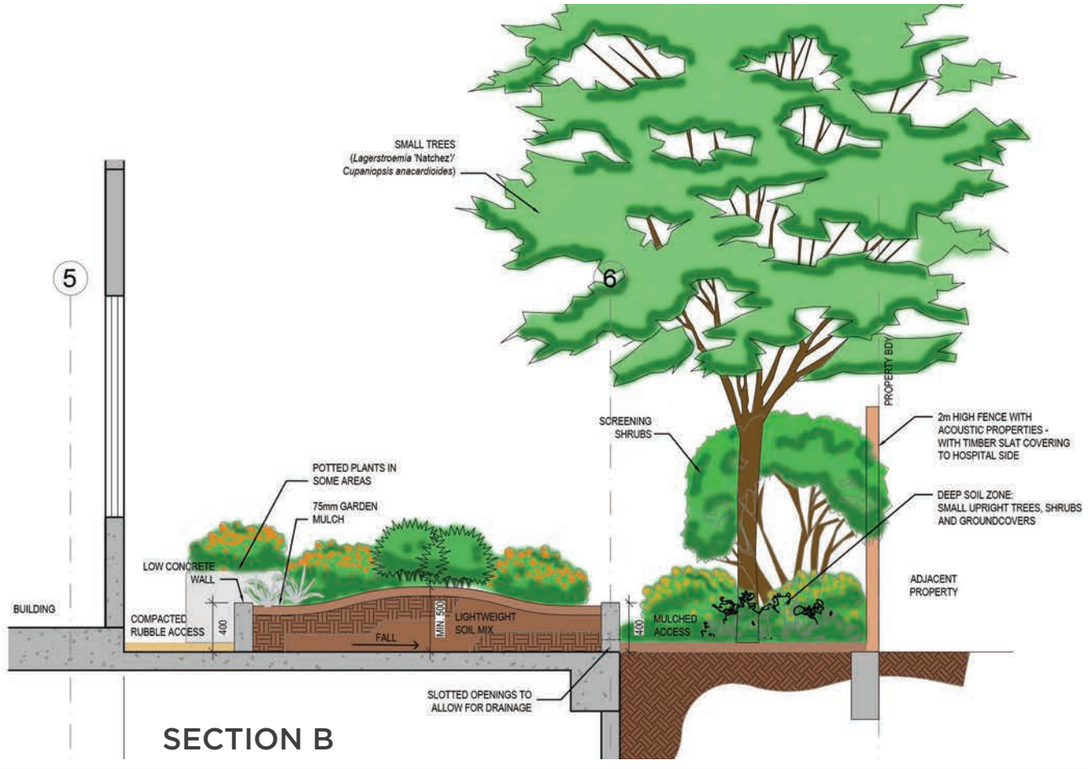
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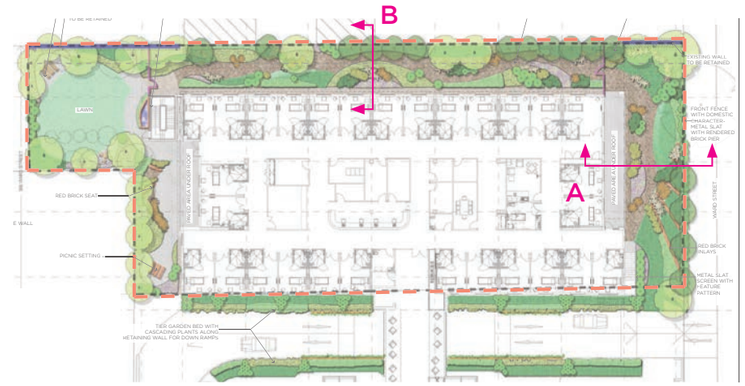
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SECTION A



SECTION B



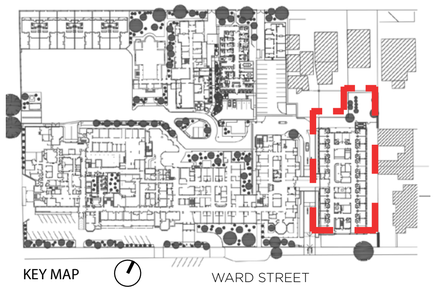
KEY PLAN

SUMMARY

- LANDSCAPING ON SLAB IS A COMMON PRACTICE AND THE PRINCIPLE IS APPLIED TO ROOF DECKS, BUILDING PODIUMS AND IN SITUATIONS WHERE GARDEN SPACE IS LIMITED TO WITHIN THE BUILT FORM.
- IT IS UNDERSTOOD THAT MAJORITY OF THE OUTDOOR AREA IN THE EXPANSION WORKS IS ON SLAB WITH MULTIPLE BASEMENT PARKING BELOW.
- THE AIM OF THE PROPOSED LANDSCAPE IS TO BRING IN AS MUCH VEGETATION THAT IS IN LINE WITH THE VISION AND STRATEGIES OF THE DEVELOPMENT. THE CHALLENGE IS HOW TO INTRODUCE AND MAINTAIN A LANDSCAPE WITH LIMITED SOIL DEPTH.
- THE LANDSCAPE STRATEGY FOR CALVARY NORTH ADELAIDE HOSPITAL EXPANSION IS TO CREATE RAISED GARDEN BEDS WITH LOW CONCRETE WALLS TO CONTAIN SOIL TO A MINIMUM DEPTH OF 300mm. THIS IS SUFFICIENT TO SUSTAIN SMALL SHRUBS UP TO 1M HIGH AND GROUNDCOVERS. MORE SOIL DEPTH CAN BE ACHIEVED THROUGH MOUNDING FOR A FURTHER 100 - 200mm DEPTH. IN THIS ZONE, LARGER SHRUBS UP TO 1.5M HIGH CAN BE PLANTED. INSTALLATION OF SMALL TREES IS ALSO POSSIBLE BY CREATING SPECIALISED RAISED CONCRETE PLANTER BOXES TO CONTAIN DEEPER SOIL ON SLAB. OVERALL, THIS CREATES A MULTI-LAYERED PLANTING EFFECT USING DIFFERENT PLANTS WHICH ADDS VARIETY AND INTEREST. IN DEEP SOIL ZONES (AREAS OUTSIDE THE CONCRETE SLAB), SMALL TREES AND LARGE SCREENING SHRUBS CAN BE PLANTED AS NORMAL.
- THERE IS OPPORTUNITY TO USE MODULAR PLANTERS (E.G GRC PLANTERS, ETC) IN AREAS WHERE A RAISED GARDEN BED IS NOT POSSIBLE.
- THE INTRODUCTION OF RAISED GARDEN BEDS INVOLVES COORDINATION BETWEEN THE LANDSCAPE ARCHITECT AND OTHER DISCIPLINES SUCH AS BUILDING SERVICES, ENGINEERS AND ARCHITECTS TO BE ABLE TO WORK OUT STRUCTURAL REQUIREMENTS, WATERPROOFING, DRAINAGE, IRRIGATION, ETC.

OUTER SPACE®

Project:	CALVARY NORTH ADELAIDE HOSPITAL EXPANSION	0 2 4 6 8 10 20m	Date: 24/04/19	Drawn By: AI/GH
Client:	CALVARY NORTH ADELAIDE HOSPITAL		Dwg No.: OS637_CP02B	Approved By: PW
Drawing:	SCHEMATIC SECTIONS	Scale: 1:100 @ A3		



LEGEND

PROPOSED TREES
EXISTING TREES
IRRIGATED LAWN
COMPACTED RUBBLE
MULCH ONLY
EXPOSED AGGREGATE CONCRETE PATH
LOW PLANTED MOUND
MULCHED GARDEN BEDS

PROPERTY BOUNDARY
SCREENING SHRUBS
RED BRICK SEAT
OUTDOOR FURNITURE
METAL GATE
EXISTING HERITAGE STONE WALL
GREEN WALL FEATURE



TREES


Prunus cerasifera
Cherry Plum
5m(H) x 4m(W)


Cupaniopsis anacardioides
Tuckeroo
8m(H) x 5m (W)


Lagerstroemia indica 'Natchez'
Crepe Myrtle
5m(H) x 4m(W)


Hibiscus tiliaceus
Cotton Tree
5m(H) x 3.5m(W)


Pistacia chinensis
Chinese Pistachio
8m(H) x 6m(W)


Cupressus sempervirens 'Stricta'
Italian Cypress Pine
10m(H) x 3m(W)

PRECEDENT IMAGES


PICNIC SETTING


RED BRICK SEAT


RUBBLE


FURNITURE SEAT


RETAINING WALLS


RAISED PLANTER BEDS


GREEN WALL FEATURE

GROUNDCOVER & SHRUBS


Strelitzia reginae
Bird of Paradise
1m(H) x 1m (W)


Westringia fruticosa
Coastal Rosemary
1m(H) x 1m (W)


Scaevola albida
'Pale Fan flower'
0.30m (H) x 0.60m (W)


Photinia x fraseri
Photinia 'Red Robin'
2.0m(H) x 1.2m(W)


Nandina domestica 'Nana'
Drawf nandina
0.5m(H) x 0.5m(W)


Dietes grandiflora
Wild Iris
0.9m(H) x 0.6m(W)


Lomandra longifolia
'Lime Light'
0.6m(H) x 0.6m(W)


Acacia calamifolia
Wallowa Wattle
2m(H) x 2m(W)


Pittosporum tenuifolium
Green Pillar
3m(H) x 1.2m(W)


Agapanthus praecox spp. orientalis
Agapanthus (African Lily)
1m(H) x 0.8m(W)


Cistus x purpureus 'Brilliancy'
Purple Rock Rose
0.8m(H) x 0.8m(W)

OUTER SPACE

PROJECT CALVARY NORTH ADELAIDE HOSPITAL EXPANSION
CLIENT CALVARY NORTH ADELAIDE HOSPITAL
DRAWING LANDSCAPE CONCEPT PLAN

0 5 10 15m
SCALE 1:150 @ A1

DATE: 09-04-19 BY: BV
DWG NO. OS637_CP01D APPROVED BY: GH

Calvary North Adelaide

Hospital Expansion



Perspective and Material Board

Date: 6 May 2019

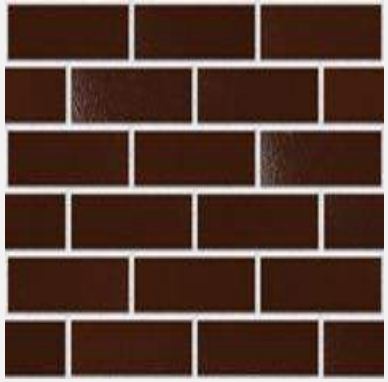
Perspective 1



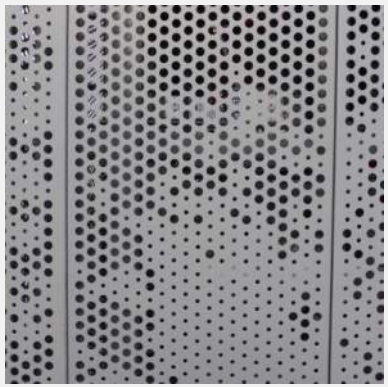
Perspective 2



Material Specification



Material: Bricks Cladding
Code: Corium 45005
Company: PGH Brick & Pavers
Area : Wall Cladding

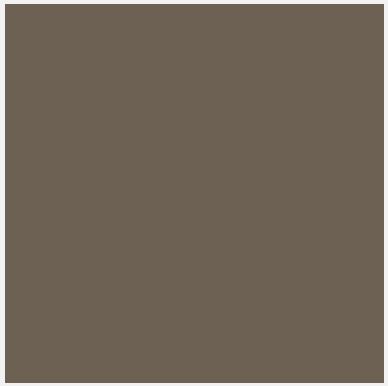


Material: Perforated Sheet
(anodised Powder Coated)
Code: Domino 358
Company: Locker Group
Area : Feature



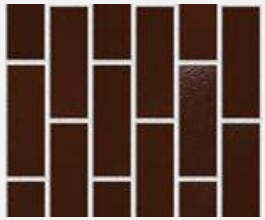
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Code: Oku
Company: Covet
Area : Niche Cladding

Material: Aluminium Cladding
Code: Surf mist (Light)
Company: Colorbond
Area : Facia Edge



Material: Aluminium Frames and Roofing
Code: Jasper (Dark)
Company: Colorbond
Area :Window Frames & Roofing

Material Application



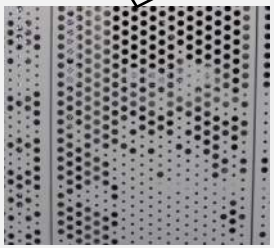
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Company: PGH Brick & Pavers
Area : Wall Cladding

Material: Aluminium Cladding
Code: Surfmist (Light)
Company: Colorbond
Area : Facia Edge



Material: Aluminium Cladding
Code: Jasper (Dark)
Company: Colorbond
Area :Window Frames and Roofing awning and feature gable





Material: Perforated Metal Sheet
(anodised Powder Coated)
Code: Domino 358
Company: Locker Group
Area : Feature



Material: Timber Look Aluminium Cladding
Code: Oku
Company: Covet
Area : Niche Cladding

Calvary Hospital Expansion

Environmental Noise Assessment

October 2018

S5734C2

sonus.

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Prepared by
Chris Turnbull (MAAS)

Reviewed by
Jason Turner (MAAS)

INTRODUCTION

An environmental noise assessment has been made of the proposed expansion of the Calvary Hospital onto the property located at 306 Ward Street, North Adelaide.

The proposed expansion includes two levels of underground car-parking and a new single storey ward building, which will be linked to the existing facility via an access way. The new ward building will also incorporate an outdoor area which may be used by patients and visitors from time to time.

The assessment considers the noise impacts at the closest dwellings to the proposed expansion, as indicated in Appendix A, from the following new noise sources at the site:

- activity of patients and visitors in outdoor areas;
- car parking activity; and
- mechanical services.

The assessment has been based upon:

- *Health Projects International* drawing set with project number "CNA9" Issue 1 dated 15 October 2018;
- previous noise measurements of vehicle movements and patron noise at similar facilities; and
- the understanding that the proposed outdoor area will be used during the daytime only (7am to 10pm).

DEVELOPMENT PLAN

The subject site and surrounding residences are located in the North Adelaide Historic (Conservation) Zone and Hills Street Policy Area 1 of the Adelaide (City) Council Development Plan[1] (the Development Plan). The Development Plan has been reviewed and particular regard given to the following Council Wide provisions:

Environmental - Noise Emissions

OBJECTIVES

26. Development that does not unreasonably interfere with the desired character of the locality by generating unduly annoying or disturbing noise.

PRINCIPLES OF DEVELOPMENT CONTROL

93. Mechanical plant or equipment should be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site should not exceed

…

b) 50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) in or adjacent to a City Living Zone, the Adelaide Historic (Conservation) Zone, the North Adelaide Historic (Conservation) Zone or the Park Lands Zone when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.

94. To ensure minimal disturbance to residents:

…

b) typical activity within any car park area including vehicles being started, doors closing and vehicles moving away from the premises should not result in sleep disturbance when proposed for use after 10.00pm as defined by the limits recommended by the World Health Organisation.

[1] Consolidated 7 June 2018

CRITERIA

Noise from Patrons in Outdoor Area

Objective criteria for the noise from patrons are not provided by the Development Plan. As such, reference is made to the *Environment Protection (Noise) Policy 2007* (the Policy). The Policy provides objective criteria for environmental noise from a development to residences, and is based on the World Health Organisation Guidelines to prevent annoyance, sleep disturbance and unreasonable interference on acoustic amenity.

The Policy provides goal noise levels ($L_{Aeq,15min}$) to be achieved at noise sensitive receivers (dwellings), based on the principally promoted land use where the noise source (the development) and the noise receivers are located. A daytime (7am to 10pm) goal noise level ($L_{Aeq,15min}$) of 47 dB(A) applies for a development and residences in a residential area.

When measuring or predicting noise levels for comparison with the Policy, penalties may be applied to the average goal noise level for each characteristic of tone, impulse, low frequency and modulation of the noise source. In general, a 5 dB(A) penalty for modulation is applied to the noise from patrons, resulting in an effective goal noise level ($L_{Aeq,15min}$) of 42 dB(A) during the daytime (7am to 10pm).

Noise from Car Park Activity

Principle of Development Control (PDC) 94(b) of the Development Plan refers to the sleep disturbance recommendations of the World Health Organisation (WHO) to assess noise from car park activity at night (10pm to 7am). The WHO has developed the "Guidelines for Community Noise"[2] which provide acceptable noise levels in specific environments. To protect against sleep disturbance in bedrooms of nearby dwellings, the WHO recommends that noise levels outside of dwellings should not exceed an equivalent (L_{eq}) level of 45 dB(A), or a maximum (L_{max}) level of 60 dB(A).

Noise from Mechanical Plant

PDC 93(b) of the Development Plan provides the following goal noise levels for noise from mechanical plant in the North Adelaide Historic (Conservation) Zone:

- 50 dB(A) during daytime (7am to 10pm); and
- 40 dB(A) during night time (10pm to 7am).

[2] Berglund, Lindvall and Schwela, 1999, "Guidelines for Community Noise".

ASSESSMENT

Noise from Patrons in Outdoor Areas

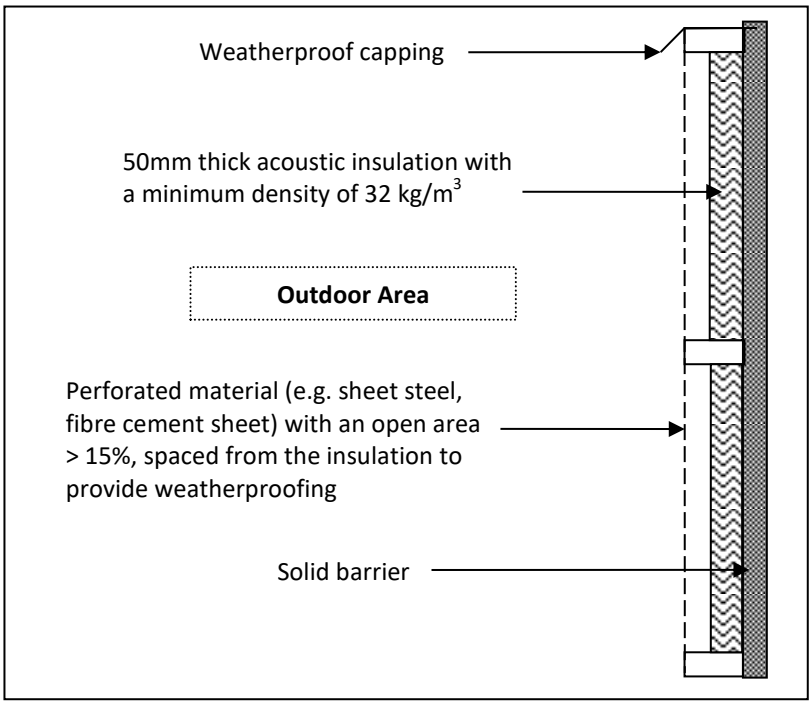
The noise at nearby residences from patrons in the proposed outdoor areas has been predicted based on the following:

- previous noise level measurements of residents at a similar facility;
- a group of people, comprising 1 patient and 5 visitors, being located in the proposed 'landscape garden';
- a second group of people, also comprising 1 patient and 5 visitors, being located on the proposed lawn area; and
- the understanding that the outdoor areas will be used during the daytime only (7am to 10pm).

Based on the predictions, the following acoustic treatment measures are recommended:

- Construct a minimum 2m high barrier at the property boundary, for the extent shown in red in Appendix B;
- Construct the above barrier from either:
    - 'colorbond' sheet steel (or the acoustic equivalent); or
    - a proprietary acoustic product such as the *ModularWall* "AcoustiMax", "EnduroMax" or "AcoustiSorb".
- Ensure that the above barrier is sealed airtight at all joins and junctions, including with the ground and the adjacent existing fences (as shown in blue Appendix B);
- Where the internal facing material of the barrier is solid (such as colorbond sheet steel or *ModularWall* "AcoustiMax" or "EnduroMax") install acoustic absorption, in accordance with Detail 1 on the following page, on the hospital side of the barrier for the extent shown in green in Appendix B; and
- Retain the existing masonry fence on the eastern boundary of the landscape garden.

With the above treatment measures in place, noise from patients and visitors in the proposed outdoor areas will achieve relevant criteria provided by the *Environment Protection (Noise) Policy 2007*.



Detail 1: Acoustic absorption to inside of barrier

It is noted that the drawings show an additional acoustic fence to the east. Although this is not required to achieve the relevant criteria, it will further reduce noise to residences to the east.

Noise from Car Park Activity

The noise level at nearby residences from vehicles accessing the underground carpark (via the upgraded "driveway ramp") has been predicted based on previous measurements of the noise from vehicles entering car-parks. It is noted that although the driveway ramp is located on the existing hospital site, the assessment has considered it to be part of the new development.

GTA Consultants has indicated that an additional 60 vehicles/hour will travel on the driveway ramp during the peak period of 8:00am to 9:00am. It is noted that many of these movements are associated with staff, who currently park on the street. Based on the assumption that this peak load could occur at any time of the day or night, the predicted noise levels have been determined based on a maximum of 15 additional vehicles using the ramp during any 15 minute period between 10pm and 7am.

Based on the above, the noise from the driveway ramp and carpark will achieve the WHO Criteria during the night time period, therefore also satisfying PDC 94(b) of the Development Plan.

It is also noted that other noise sources generally associated with car park activity (such as the opening and closing of vehicle doors and people getting in and out of cars) will occur within the enclosed underground car-park, and as such these ancillary activities will have no acoustic impact on the surrounding residences.

Mechanical Services Plant

At the development application stage of a project, the mechanical plant is generally not designed or selected. Therefore, predictions of the noise from the final mechanical plant cannot be made. In this circumstance, an assumption has been made regarding the noise from the outdoor mechanical plant, proposed to be located on the western side of the roof of the proposed building. It has been assumed that 30 condensing units with a sound power level of 64 dB(A) per unit will be installed. It is noted that this represents a much higher air conditioning capacity than is likely to be required. With these units installed in the location designated for the mechanical plant, a noise level of less than 35 dB(A) is predicted at the closest residence, which easily achieves the criterion of 40 dB(A) provided by PDC 93(b).

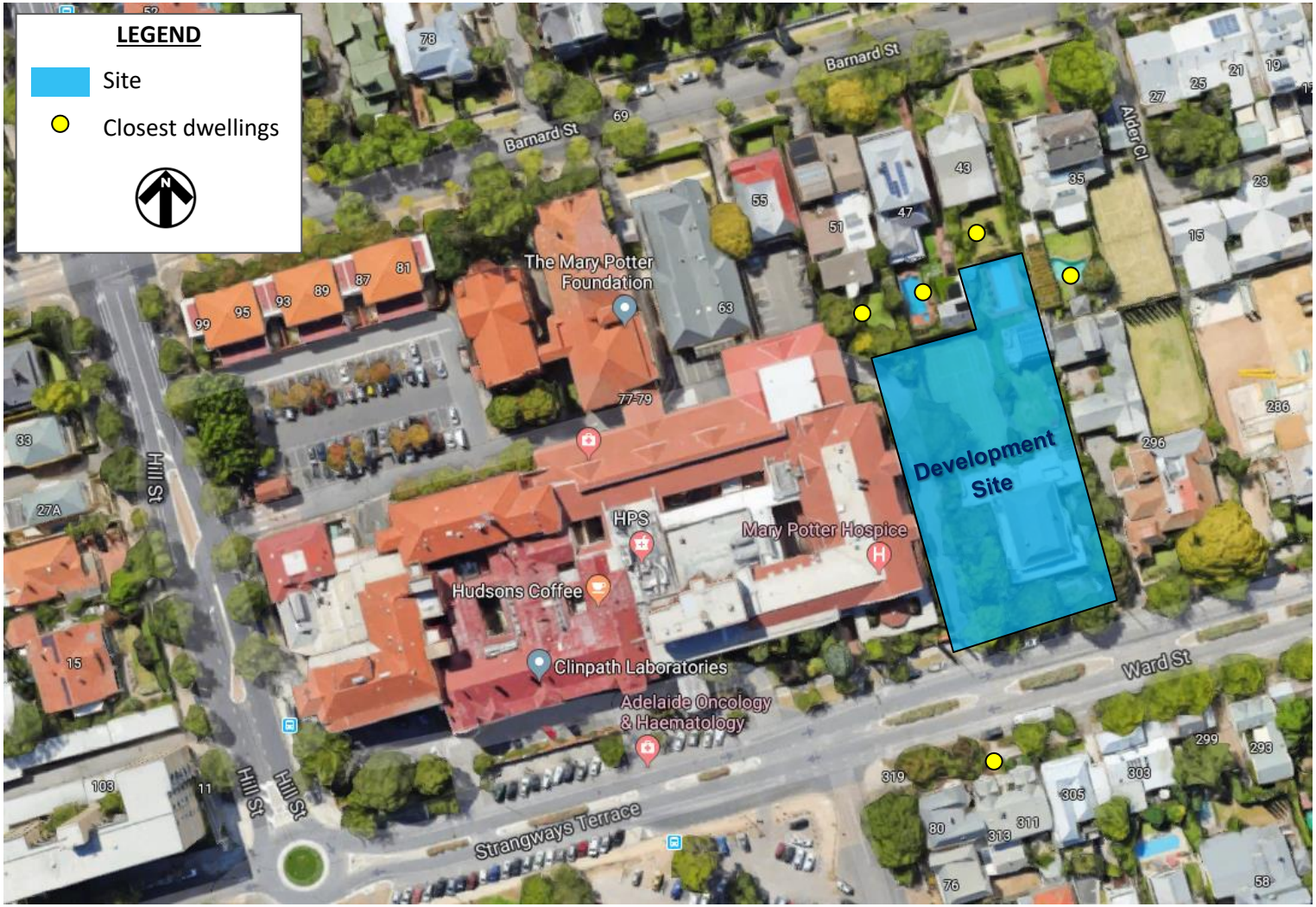
It is recommended that a detailed assessment of mechanical plant noise be carried out following the final selection of equipment (during the detailed design phase of the project) using the criterion provided by PDC 93(b).

CONCLUSION

An assessment has been made of the potential environmental noise associated with the extension to the Calvary Hospital in North Adelaide. The assessment has considered the potential noise from patients and visitors in outdoor areas, car parking activity and mechanical services.

With the inclusion of the recommendations detailed in this report, the environmental noise from the site will achieve the relevant criteria of the Development Plan and the *Environment Protection (Noise) Policy 2007* and will therefore avoid unreasonable interference with the desired character of the locality and will not generate unduly annoying or disturbing noise.

APPENDIX A: SITE LOCALITY AND SURROUNDING RESIDENCES



APPENDIX B: RECOMMENDED ACOUSTIC TREATMENT MEASURES

