St George Hospital Emergency Department Redevelopment

State Significant Development Application

August 2012

NSW GOVERNMENT | Health Infrastructure

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Executive Summary

The objective of this project is for the Emergency Department (ED) is to increase its capacity to meet current and future demand projections and enable the adoption of a more efficient model of care.
The ED at St George Hospital currently faces five major challenges:

- current levels of demand are approaching capacity and are forecast to exceed it,
- population growth will further increase demand,
- the Federal Government has set new benchmarks for performance of EDs (4 hour waiting targets) which St George ED will not be able to meet in its current state,
- the current configuration of the ED is not conducive to implementing the enhanced models of care required of the department, and
- the current building and associated infrastructure is at the end of its life cycle.

The proposed new Emergency Department (ED) facility is a primarily single-storey structure with a partial second storey housing ED office accommodation and plantroom space and located along Gray Street.
The design addresses both the hospital master planning initiatives and the preference of the clinical and management staff. The ED is located in close proximity to the hospital main entrance, intensive care unit, operating theatres, ward blocks and helipad. It also has improved links to radiology and close adjacency to the Hospital Main Entrance and public multi-storey carpark.

The Emergency Department main pedestrian entrance is accessed from the entry driveway serving the existing Main Hospital Entrance, with new drop-off parking positioned at this point and also nearby in Gray Street itself. Undercover access is available between the ED entrance and the Main Hospital Entrance. The new ED will link with the existing hospital through two main links:

- The southern link connects ED to the Main Ward Block lifts and provides covered public access to the main entry to the hospital, which then links to cancer centre and other related facilities. From the Main Ward Block lifts access is afforded and then to the helipad, ICU and Maternity as well as other inpatient units in this block.

- The northern link provides direct access into the Clinical Services Block and via lift to Operating Theatres. This link provides improved access to Radiology as well as direct access to Pathology, and also offers a possible discreet path of travel from PECC to Mental Health Unit. The ED design incorporates a satellite imaging unit in the department including a CT area, to address higher utilisation volumes in the future.

Ambulance access to the department is via a dedicated entrance and ramp off Gray Street.

An analysis of the environmental impacts of the proposal concludes that there is no environmental impacts that cannot be mitigated by the measures identified in Section 7. The proposal is critical to the delivery of effective and contemporary models of health care and to the efficiency of hospital operations. It is consistent with the principles of Ecologically Sustainable Development as defined by Schedule 2(7)(4) of the EP&A Regulation and will not have significant impact traffic and pedestrian movements in and around the site. Environmental investigations have identified that subject to an additional soil and groundwater study the site can be made suitable for the proposed use and there is no hazardous waste or materials to be used or stored on site.

Given the merits of the proposal as described in this EIS and the significant benefits to the public as a result of this facility, it is recommended that the Minister give the application favourable consideration.

1. The Proposal

1.1 Objectives

The objective of this project is for the Emergency Department (ED) is to increase its capacity to meet current and future demand projections and enable the adoption of a more efficient model of care.
The ED at St George Hospital currently faces five major challenges:

- current levels of demand are approaching capacity and are forecast to exceed it,
- population growth will further increase demand,
- the Federal Government has set new benchmarks for performance of EDs (4 hour waiting targets) which St George ED will not be able to meet in its current state,
- the current configuration of the ED is not conducive to implementing the enhanced models of care required of the department, and
- the current building and associated infrastructure is at the end of its life cycle.

1.2 The Proposal

The key guiding principles for the design of the new ED can be summarised as follows:

- Easy flow of patients through the department without unnecessary exposure to unrelated activities and pedestrian traffic
- Correct functional relationships between the subcomponents of the ED so that staff can carry out their duties with maximum efficiency and patients can be managed safely in the appropriate environment.
- The plan to facilitate and enhance the models of care preferred today, whilst remaining flexible enough to allow for other management styles which may be developed into the future.
- Correct connectivity to other related departments and activities.
- Close compliance with the Schedule of Accommodation and the Australasian Health Facility Guidelines.

The proposed new Emergency Department will be located on Gray Street and will consist of a new part single and part two level building with a GFA of approximately 4900m^2. It will have a maximum height at top of parapet of around RL41.5m. It is located in close proximity to the hospital main entrance, multi storey car park, intensive care unit, operating theatres, ward blocks and helipad. The department also has improved links to radiology. A new loading dock entryway is also being provided, again with access to Gray Street, but fully independent of both the ambulance access and the main hospital entry driveway.

The Emergency Department main pedestrian entrance is accessed from the entry driveway serving the existing Main Hospital Entrance, with new drop-off parking positioned at this point and also nearby in Gray Street itself. Undercover access is available between the ED entrance and the Main Hospital Entrance. An adult "fast track", waiting area and triage as well as paediatric precinct, outpatient and distribution pharmacy are also located close to the ED entry. Other services and departments to be located within the new ED are imaging, resuscitation, acute halls, mental health assessment, psychiatric emergency care and Emergency Medical Unit (EMU). A new lift core and linkages to the existing hospital are also included. Access from the existing helipad to ED is achieved via the existing overhead bridge from the helipad (atop the multi-storey carpark), then via the main ward block lifts direct into ED.

Ambulance access to the department is via a dedicated entrance and ramp off Gray Street. NSW Ambulance require eight bays as well as adequate turning capacity and safe movement to support the

projected increase in ambulance presentations.

The St George Hospital is a very constrained campus with little space for future expansion and development. This project not only releases space from the old ED – around 2000m^2, but will be constructed in a manner which provides opportunity to redevelop the campus in line with the Health Services Master Plan for the hospital which is currently being finalised. The building has been designed to accommodate vertical expansion in the future but that is not part of this application.

The size of the available land is insufficient for all the functional requirements of the ED and a on that basis, the ED has been designed on two levels. All patient care services will be housed on the ground level with administration and staff areas on the upper level.

Level 1 provides offices for clinical staff as well as meeting rooms and library/staff room. Additional space on level 1 is provided for plant and equipment. Stairs to access the plant are provided at the northern end of ED and off the central courtyard.

The proposed ED will be constructed with suitable structural engineering to allow a future vertical expansion up to eight (8) storeys subject to a separate approval. The roof of the ground floor will be constructed of a waterproof membrane which can be removed to accommodate further vertical expansion when required.

Demolition of the locally heritage listed 'Griffith House' is required to accommodate the new ED and its servicing.

The site for the new Emergency Department was previously occupied by the Maintenance and Engineering workshop and a waste management area, which have been relocated in accordance with the Health Services Master Plan referred to above. The approval for the demolition and replacement of these facilities was undertaken in accordance with Clause 58 of the State Environmental Planning Policy (Infrastructure) 2007. A copy of this approval and the Review of Environmental Factors can be provided if required.

1.3 Analysis of Alternatives

Up to 32 options were analysed to determine the best way to provide the services required for the Emergency Department. There included variations within specific options taking into consideration how well the variant met the aims of the service delivery and model of care objectives. Concurrently as part of this process an analysis of the St George Hospital site was undertaken to determine the opportunities for expansion, reconfiguration or relocation of the department and opportunities to further growth of the hospital into the future. This Health Services Master Plan was undertaken in conjunction with a site master planning exercise by Billard Leese.

The broad options analysed were:

Option 1	Keep Safe and Operating
Option 2	Reconfiguration of the existing Emergency Department
Option 2A	Take over Radiology 2 – Temporary EMU
Option 2B	Move into Radiology 2 – Permanent EMU
Option 3	Take over one level of Prince William Wing
Option 4	Take over Prince William Wing
Option 5	Take over Prince William Wing and hydrotherapy
Option 6	Rebuild 2 storey ED in existing location
Option 7	Build new 2 storey ED in staff car park

Option 8 Take over/expand into radiology and rebuild in west car park

These were further analysed into a series of sub options over a period of several months which included staging to allow for decanting and operation of the ED. A final preferred option emerged which met the clinical service requirements and budget. The Preferred Option is presented here for planning approval.

The Preferred option most importantly meets the model of care that has been developed from the *Emergency Models of Care for the Future – The NSW Perspective*, issued by NSW Health and set out in the functional brief. Patients may present to St George Emergency Department by a number of methods. These include:

- Ambulance (CDA) either as direct response from calls to the ambulance service or as transfers from other hospitals
- Self presentations to the triage station;
- Helicopter for patients in need of critical response.

Consistent with emerging NSW Health models of care for emergency departments, the St George Hospital Emergency Department will provide a quick triage, response and disposition model that incorporates:

- Quick triage so that all patients are assessed and provided a triage disposition within 10 minutes of presentation
- Availability of clinical initiative nurse and a front of house team to perform immediate in depth triage assessment and treatment when required
- Streaming of patients , within a maximum of two hours, into appropriate care zones based on triage assessment
- Allocation of appropriately resourced and dedicated care zones for the rapid assessment, stabilisation and disposition of patients within four hours:
    - Easily Identifiable Entrance for walk-in attendance with line of sight vision of reception and triage. It is supported by patient immediate treatment capacity and has immediate travel correspondence to Resuscitation, Acute Care, Paediatrics and Fast Track Care.
    - Ambulance and Patient Transport for stretcher patients with a reception and triage area and immediate adjacency to resuscitation and acute care.
    - Triage with line of sight vision of Ambulance and Patient Transport, Entrance and Patient Waiting.
    - Early Treatment (Patient Immediate Treatment) for undifferentiated and unstable patients needing immediate intervention.
    - Resuscitation for critically ill or injured patients needing immediate multidisciplinary intervention to avoid death or significant body system failure.
    - Fast Track Care for the timely and dedicated management of lower acuity "walk in – walk out" patients.
    - Paediatrics for the safe and effective accommodation of children who need emergency care.
    - Main Track/Acute Care for higher acuity patients needing significant investigation and stabilisation to prevent body system failure or death. In a larger department such a St George this zone may be divided into sub-zones to support the graded management of patients with different levels of acuity.
    - Psychiatric Emergency Care for patients with mental health illness requiring assessment and stabilisation. Two functions are provided: an assessment, stabilization and management function within, or adjacent to, acute care for undifferentiated behavioural conditions; and a Psychiatric Emergency Care Centre for patients with

definitive mental illness who require a short stay period (up to 48 hours) prior to disposition
    - Emergency Short Stay in the form of a Emergency Medical Unit for patients who need a short period of care (usually up to 24 hours) that can cost effectively be managed by emergency staff

- Timely capacity for the emergency department to provide pathology, radiological, pharmacological and minor surgical interventions.
- Capacity within the hospital for emergency department specialists to consult with subspecialists and initiate more definitive treatment and transfer from the department within four hours.
- Provision of aged care services emergency teams (ASETs) and paediatric management teams for the special needs of older people and children.
- Support in the form of Medical Assessment Units and Rapid Assessment Unit within the hospital for the crisis management of unplanned patients presenting from home or other facilities with chronic and complex conditions. These units are provided elsewhere in the hospital.
- Access to bed management, portering and patient transport functions to facilitate timely patient disposition when further inpatient care is required.
- Access to generalists or specialists referrals for emergency department only patients who need further follow up.
- Access to community care options including (Compacs, HiTH, CAPAC) for emergency department patients who need ongoing support.

The Emergency Department's systems, processes and practices shall be directed towards timely and efficient patient management facilitating achievement of the National Emergency Access Target delivery of the highest quality care.

2. Introduction

2.1 Background

In 2010, the then Area Health Service completed a service statement which reflects St George Hospital's (SGH) role as a Major Trauma Service and which has been used as the basis for developing the concept options. The main priorities of the SGH are:

- Provide a fast track service
- Expand paediatrics
- Increase resuscitation capacity from 3 to 5 bays
- Expand waiting and triage
- Expand adult acute
- Expand mental health and isolation facilities
- Off street ambulance drop off and parking
- Expand education and offices
- Expand Emergency Medical Unit

St George Emergency Department (ED) faces considerable and challenging site constraints including:

- the Emergency Department is landlocked which prevents easy expansion in any direction,
- the Hospital campus has very limited available space which prevents easy replacement of ED in an alternative position within the site,
- St George ED functions as a major trauma centre requiring immediate proximity to associated clinical functions such as theatres, ICU and helipad. This prevents the ED being located off the hospital campus, and
- the existing building is reaching the end of its life cycle, with significant investment required to continue.

The Emergency Department is and will continue to be a level six emergency service supporting St George Hospital as a principal referral hospital and major trauma service for Southern Sydney and Southern NSW. The secondary catchment of the St George Emergency Department is composed of Kogarah, Rockdale and Hurstville, with the tertiary catchment being Southern Sydney and Southern NSW. It also provides a default overflow role to Southern Eastern Local Health District for Neurosurgery, ENT, Plastics, Cardiothoracic Surgery and Facio-maxillary Surgery.

Presentations to SGH for emergency care have increased by 5% per year over the past five years, which is higher than population growth. The presence of a revitalised St George Hospital Emergency Department in the heart of the major centre will create value by reducing the distress and disability associated with unattended emergent illness. The growth of the capacity and functionality of the Emergency Department at the St George Hospital will provide vitally needed social infrastructure to support the State Government's objectives.

Emergency Department access and performance is of growing concern to the community and governments. Ongoing media criticism of overcrowded, inadequately resourced and equipped departments is contributing to an increasing perception that public healthcare, in metropolitan Sydney particularly, is in a continuous state of crisis and not effectively serving the community.

Commonwealth, State-wide and Local Health District strategic planning acknowledges the vital importance of well-resourced emergency departments with sufficient capacity at the front line of hospital based health care.

2.2 Strategic Context

2.2.1 Commonwealth Government Strategic Directions

Several reforms are identified by Commonwealth Government to achieve better access to emergency departments. The introduction of National Access Targets, together with new funding arrangements to improve access to emergency care through supporting 'emergency access' bed capacity in hospitals are two significant components of the National Health and Hospitals Reform Program.

The Commonwealth's fifth priority in this reform is to take action to improve timely access to quality care in public hospitals, particularly care in emergency departments. It recommends that public hospitals with major emergency departments be funded to ensure beds are available at all times for people needing to be admitted from the emergency department. The National access performance target requires all patients requiring public hospital emergency departments to have access to care within four hours.

2.2.2 NSW Health Strategic Directions

In 2008 Commissioner Peter Garling undertook the most significant inquiry ever of the NSW acute care system. The Health Action Plan for NSW is the Government's response to the Garling Report. Stage One of Health Action Plan requires better patient experiences, increased safety, education and new ways of caring. Impacts of the St George Emergency Department redevelopment on these key strategic areas are:

Creating better experience for patients: An enhanced emergency department will provide an appealing and clinically appropriate environment with state of the art equipment. Staff morale will be improved leading to improved responsiveness and patient interactions. Improved functional design will lead to better streaming and screening with improved patient impressions and functional features to promote safety of patients, staff and visitors.

Education for Future Generations: Additional capacity for education and research in the department will promote a strong focus on a learning and innovative culture. This culture will promote strong relationships between experts and novices and the intergenerational transfer of knowledge and skills

New Ways of Caring: Incorporation of capacity to effectively deliver best practice models of care and the enhancement of a learning culture will assist the ED to adopt the best ways of caring. These new ways will be enhance by the practical and virtual incorporation of the following models of care:

- Streaming of children and adults, and low and high acuity patient;
- Fast track care for primary care and low acuity patients including cardiac assessment;
- Support for the rapid referral of admitted patients to appropriate short-stay units or specialised longer term beds, these include:
    - Medical assessment Unit (MAU)
    - Emergency Medical Unit (EMU)
    - Rapid Assessment Unit (RAU)
    - Psychiatric Emergency Care Centre (PECC)
- Use of Clinical Initiatives Nurse to monitor and provide immediate care for waiting patients;
- Use of Nurse Practitioners to promote efficient management of uncomplicated cases;
- Provision of specialized teams focused on older person care such as ASETT and Aged Care Assessment Team;
- Epidemic management systems;
- Disaster management systems;

- Safe assessment rooms for delirious and seriously intoxicated patients;
- Provision of surge capacity to accommodate seasonal or irregular demand peaks; and
- Access to CAPAC and other home care programs to support the early return to home of patients.

2.2.3 Local Health District Strategic Directions

Central Sydney and Illawarra Area Health Healthcare Strategic Service Plan 2010 has as one of its key sixteen healthcare priorities initiatives to enhance access, maximise patient flow, support the continuum of care, and ensure integration between emergency/critical care and other hospital and community based services. The initiatives will strengthen St George Hospital's role as a tertiary referral centre and its State-wide roles in major trauma and cancer care.

Planning for the St George Emergency Department commenced under the auspice of the former South Eastern Sydney and Illawarra Area Health Service. In response to the Commonwealth Hospital and Health Reform Agreement, Area Health Services were dissolved and new Local Health Districts (LHDs) were formed with a revised and strengthened role. St George Hospital is now part of the South Eastern Sydney Local Health District.

2.2 The Approval Process

This Environmental Impact Statement (EIS) is submitted pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EPA Act) in support of a State Significant Development (SSD) Application for St George Hospital. The EIS fulfills the requirements of the Director General Environmental Assessment Requirements (DGRs) issued for its preparation for the development of a new Emergency Department at St George Hospital including approximately 4,900m^2 of floor space as well as associated ancillary works.

The report has been prepared by UPO Pty Ltd, for the proponent, NSW Health Infrastructure and is based on design information provided by Health Projects International (HPI) and supporting technical documents provided by the project team noted below.

This document describes the site, its environs and the proposed development, and provides an assessment of the proposal in accordance with the DGRs under Part 4 of the EPA Act. It should be read in conjunction with the detailed architectural plans and the technical reports appended.

These reports address the DGRs for the environmental assessment. They provide a technical assessment of the environmental impact of the proposed development, and recommend proposed mitigation measures to manage any potential environmental impacts associated with the proposal.

2.3 The Project Team

The project team for this application is as follows:

Proponent	NSW Health Infrastructure
Project Manager	Sweett Group
Urban Planning	UPO Pty Ltd
Architecture	Health Projects International
Quantity Surveyors	Altus Page Kirkland
Landscape Architect	Health Projects International
Geotechnical and Contamination	Environmental Investigation Services (EIS)
Structural and Civil Engineering	Cardno
Electrical, Security and ICT Engineering	Umow Lai

Hydraulics and Fire Engineering	Acor Consultants
Stormwater	Cardno
Traffic and Transport	Cardno
Mechanical Engineer	Umow Lai Enginuity
European Heritage	Urbis
Waste	South East Sydney Local Health District
Access	iAccess
Environmental Sustainable Development	Health Projects International
Noise and Vibration	Acoustic Logic
Surveyor	Lockley Land Title Solutions
Building Code of Australia	BCA Logic

2.4 Statement of Validity

Environmental Impact Statement Prepared by:	
Name	Leone McEntee
Qualifications	BA (Geography); G.Dip Urban Planning; G.Dip Natural Resources Law
Address	PO Box 6101, Malabar 2036
In respect of	State Significant Development Application for a new Emergency Department at St George Hospital
Application	
Applicant Name	Health Infrastructure
Applicant address	Level 8, 77 Pacific Highway North Sydney
Land to be developed	St George Hospital, Gray Street, Kogarah
Proposed development	New Emergency Department
Environmental Impact Statement	
Certificate	I certify that I have prepared the content of this EIS and to the best of my knowledge: • It is in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. • It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature	
Name	Leone McEntee
Date	3rd August 2012

3. Site Analysis

3.1 Site Context and Locality

St George Hospital campus is located in Kogarah, bounded by Gray Street to the south-west, Kensington Street to the north-west, as well as segments of Belgrave and South Streets, and Chapel Street and St George Private Hospital to the south and east. The hospital is sited close to main transportation links including rail (500m from Kogarah Station) and close by Princes Highway for private transport access as well as for ambulance and patient transport. The main entry to the hospital is from Gray Street, and access to the multi-storey car park is also available adjacent the main Gray St entrance. The existing St George Emergency Department is located on Kensington Street, with ambulance entry and exits both from that street.

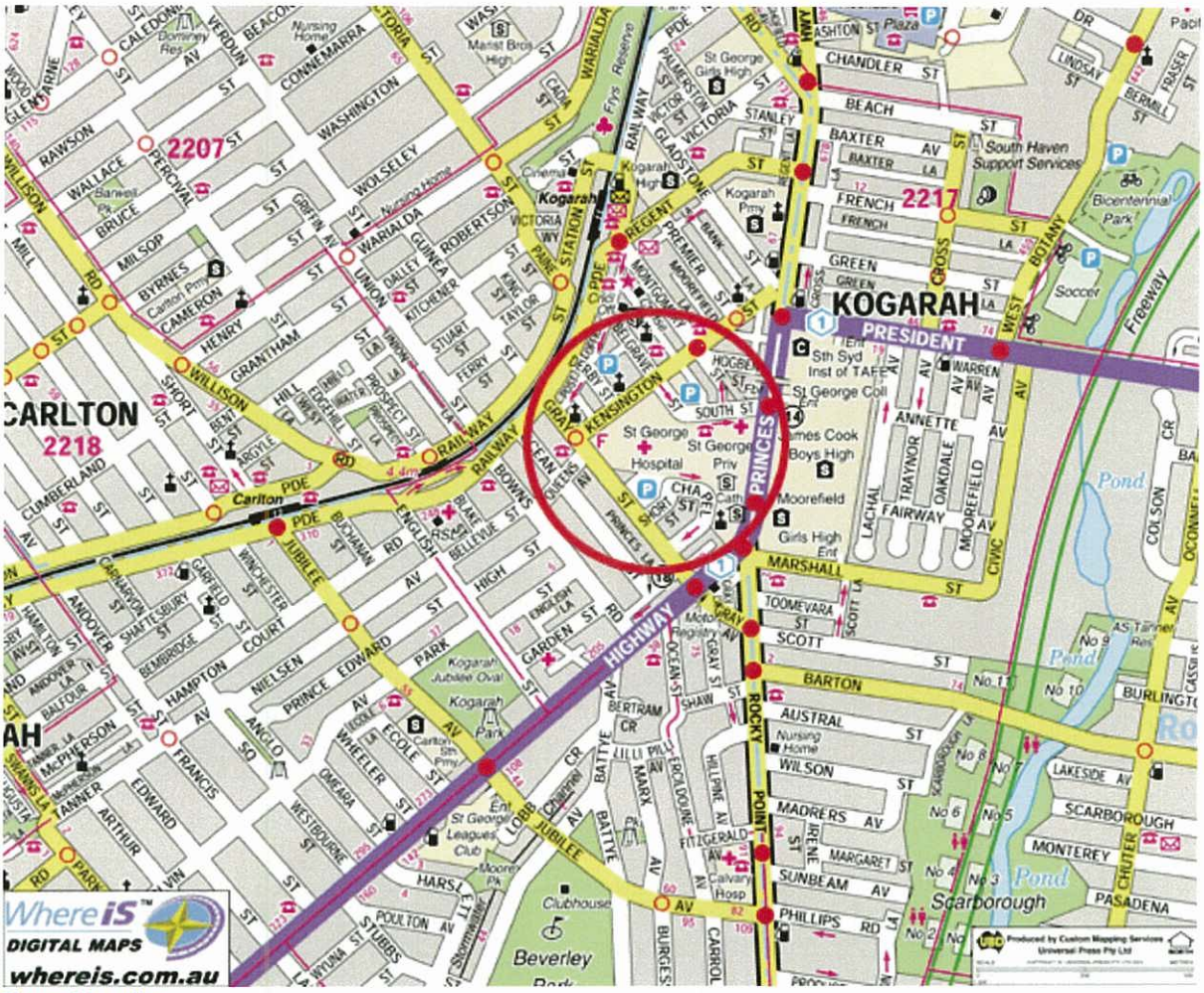

Figure 1 Locality

The locality in which the Hospital Campus is located characterised by a mix of residential, commercial and retail uses with a number of medical centres and doctors' offices located in the vicinity of the hospital. The St George Private Hospital is located adjacent and St Patricks Primary School and Bethany College are also nearby in Chapel Street and the Princes Highway respectively.

Figure 2 Approximate location of proposed ED within the hospital site

Figure 3 Intersection of Gray Street and Princes Highway

Figure 4 Hospital Car park Gray and Short Street

Figure 5 View looking north west along Gray Street

Figure 6 Existing entry to St George Hospital

Figure 7 Main Entrance

Figure 8 Main entrance on left looking toward Cancer Centre

Figure 9 Multistorey Car Park in Belgrave Street

3.2 Site Description

The St George Hospital is a large suburban hospital offering a full range of medical services to the southern suburbs of Sydney. It has been developed over a number of years with buildings largely around the perimeter of the site with the main acute hospital building in the centre of the site.

The hospital sits on an area of approximately 4.9 hectares with its main entry off Gray Street. Public parking is located in Short and Belgrave Streets in multi storey car parks. Other car parking in available in at-grade car parks around the site.

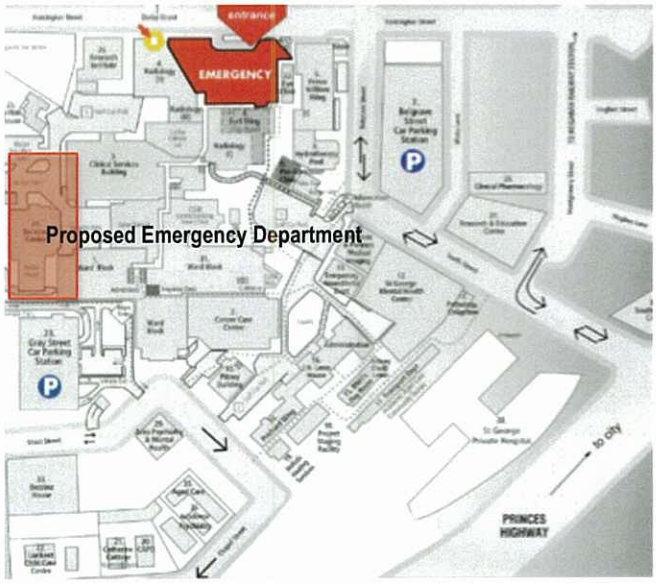

Figure10 Site Map (Source: St George Hospital)

The site is identified as Lot 12 in DP800476 and Lots 1 to 6 in DP1130879. A survey of the site is attached at **Appendix B**.

The site is heavily developed in a largely ad hoc manner and the redevelopment of the Emergency Department will act as a catalyst for the implementation of the health services masterplan having "freed up" additional space on site.