

St Vincent's Private Hospital Sydney Redevelopment

Hydraulic and Fire Services Infrastructure Report

For:

St Vincent's Private Hospital Sydney

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Attachments:

Sydney Water network diagram

Jemena network diagram

Sydney Water letter



1. EXECUTIVE SUMMARY

1.1. Introduction

The purpose of this report is to describe the hydraulic and fire services infrastructure to service the St Vincent's Private Hospital Sydney Redevelopment Project, which includes the following works:

- New East Wing building.
- New CSSD department over the existing Private Hospital plant room.
- Refurbished areas of the existing Private Hospital.

Initial surveys of the existing hydraulic and fire services and discussions with hospital personnel have been undertaken to confirm the proposed services designs.

Final approval from the supply authorities of the water, sewer and gas connections will be obtained at the detailed design stage.

1.2. Fire Services

The proposed fire services to the proposed East Wing and CSSD will generally be integrated with the existing installations serving the various Private and Public hospital buildings.

1.3. Hydraulic Services

The proposed hydraulic services to the new building will generally be stand-alone systems utilising either new or existing connections to the authorities' supplies, as appropriate.

The sewer and sanitary drainage systems will connect to an existing system draining to Barcom Avenue.

The potable cold water supply to the new east wing will be supplied from a new connection to the water main in Victoria Avenue.

The gas service will be supplied from the gas main in Barcom Avenue.



2. SITE DESCRIPTION

The site is located at Victoria Street, Darlinghurst.



3. INFORMATION SOURCES

Information on the existing infrastructure and connections to the authority mains has been developed based on a number of information sources including:

- As-Installed documentation provided from previous projects on the site.
- Site inspections completed at St Vincent's Private Hospital, in consultation with the engineering staff.
- In-ground survey plans and 'Dial before you dig' information from Sydney Water and Jemena.



4. HYDRAULIC SERVICES

4.1. Sydney Water Section 73 Requirements

A Section 73 Notice of Requirements will need to be obtained from Sydney Water which will detail their general requirements for the servicing of the development with sewer and water, and confirm any Head Works charges that may be applicable to the development.

As agreed at meetings with SVPH, the application will be made during the detailed design phase.

A Sydney Water letter dated 3 August 2012 (attached) details their requirements for environment assessment and the servicing of the site.

We note the comments made in the letter refer to their general requirements which will be applicable to the revised scope of works.

4.2. Sewer and Water connections

Domestic water to the new East Wing, excluding the level 2 laundry, will be fed from a new connection to the Sydney Water main in Victoria Avenue.

The laundry will be fed from the existing laundry Barcom Avenue water supply.

Sewer will drain to the sewer in Barcom Avenue via an existing 225mm dia sewer connection, subject to further investigation at the detailed design phase.

Refer to the attached Sydney Water network diagram.

4.3. Natural Gas connections

Gas to the new East Wing will be fed from the Barcom Avenue gas main, either from the existing supply to the Private Hospital, or from a new connection to the main, subject to Jemena approval and the capacity of the existing supply pipe.

A formal application to Jemena is required and will be made at the detailed design stage once the gas loads have been confirmed and the necessary drawings prepared. Informal discussions with Jemena have confirmed there is adequate supply for the new systems.

Refer to the attached Jemena network diagram.

5. FIRE SERVICES

5.1. Fire Sprinkler and Hydrant Supply

The existing combined fire sprinkler and hydrant water supply feeding the Xavier Building is proposed to be extended to supply the new East Wing Building, CSSD and refurbished Private Hospital.

This system allows for the use of the combined reticulation system from the main to a separate booster assembly and pump set for each service, and a secondary combined fire storage tank.

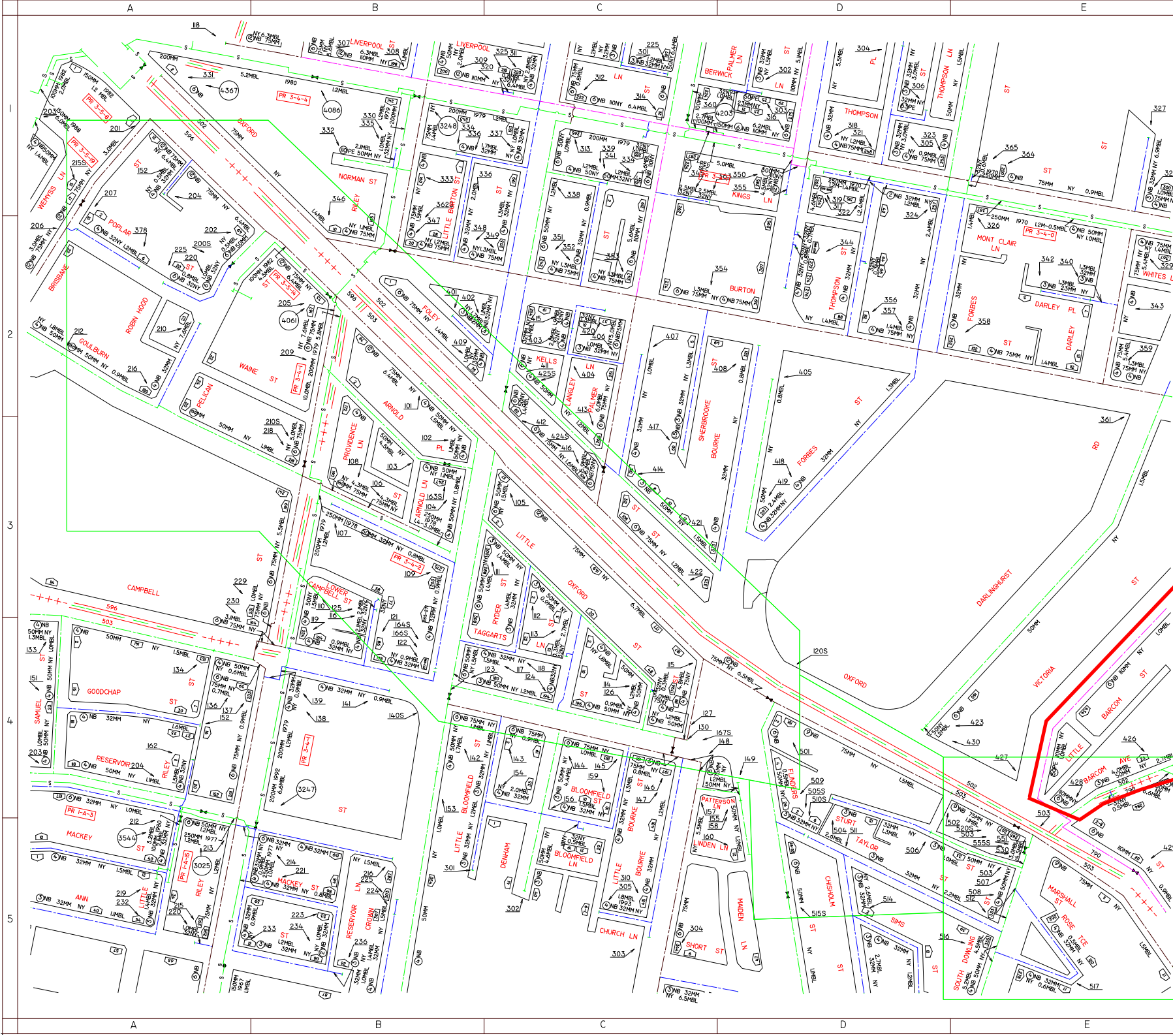


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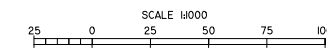
The existing suction tank located on the Xavier Building roof level plant room is sized to provide a minimum of 50,000 litres, which adequately caters for the hydrant and sprinkler system requirements (25,000 litres for each system).

Attachments:

- Sydney Water network diagram
- Jemena network diagram
- Sydney Water letter



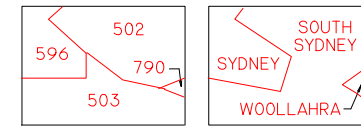
SYDNEY 4BA



THIS MAP UPDATED ON 28/05/2012
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

SICD	SIDC	SIDD
S4AB	S4BA	S4BB
S4AD	S4BC	S4BD

ADJOINING MAPS



NETWORK AREA MUNICIPALITY AREA

Jemena

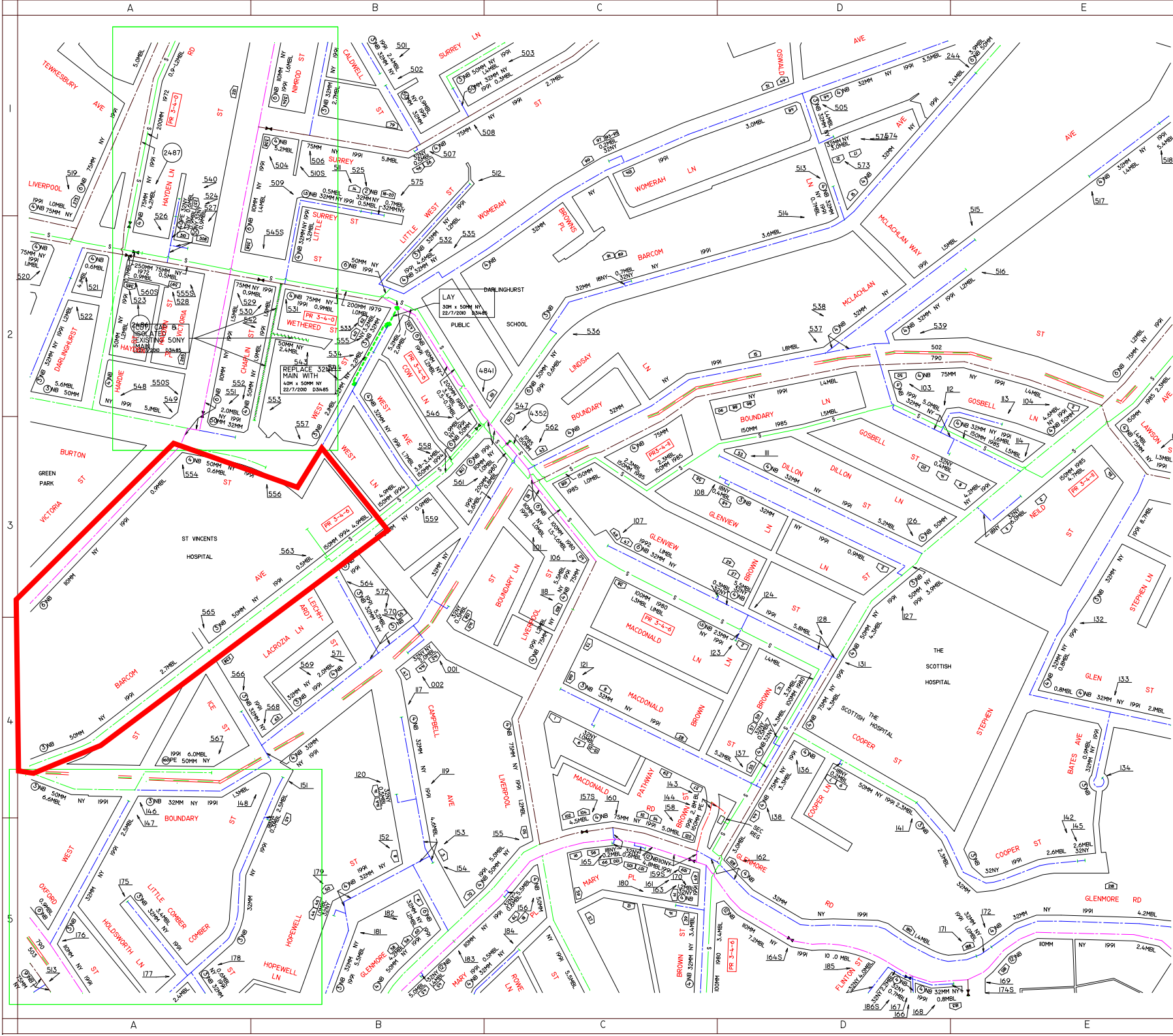
KEY

MAX ALLOWABLE OPERATING PRESSURE

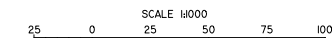
T	TRUNK MAIN	7000 kPa
P	PRIMARY MAIN	3500 kPa
S	SECONDARY MAIN	1050 kPa
		300 kPa
		210 kPa
		7 kPa
		400 kPa
		100 kPa
		2 kPa

- PROPOSED MAINS
- PR 3-4-1 STEEL MAIN PROJECT NUMBER
- PR 3-4-2 PRESSURE MONITORING STATION
- PR 3-4-3 VALVE
- PR 3-4-4 SYSTEM PRESSURE REGULATOR
- PR 3-4-5 SIPHON
- PR 3-4-6 NETWORK NODES
- PR 3-4-7 ITEM DETAIL SKETCH AVAILABLE
- PR 3-4-8 VALVE NUMBER (OLD NUMBERING)
- PR 3-4-9 6NB 6 INCH CAST IRON MAIN
- PR 3-4-10 150MM STEEL MAIN
- PR 3-4-11 100MM PE/NY 100MM POLYETHYLENE/NYLON MAIN
- PR 3-4-12 50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN
- PR 3-4-13 DISTANCE IN METRES OF MAIN FROM BUILDING LINE (TOLERANCE OF 0.4M)
- PR 3-4-14 1957 YEAR LAID
- PR 3-4-15 ++++ MUNICIPALITY BOUNDARY
- PR 3-4-16 --- NETWORK BOUNDARY
- PR 3-4-17 [] HOUSE NUMBER

SYDNEY 4BA



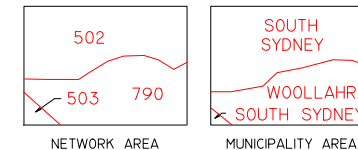
SYDNEY 4BB



THIS MAP UPDATED ON 23/1/11
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

SIDC	SIDD	S2CC
S4BA	S4BB	S5AA
S4BC	S4BD	S5AC

ADJOINING MAPS



Jemena

KEY

MAX ALLOWABLE OPERATING PRESSURE

T	TRUNK MAIN	7000 kPa
P	PRIMARY MAIN	3500 kPa
S	SECONDARY MAIN	1050 kPa
		300 kPa
		210 kPa
		7 kPa
		400 kPa
		100 kPa
		2 kPa

- PROPOSED MAINS
- PR 1-2-3 STEEL MAIN PROJECT NUMBER
- Pressure monitoring station
- Valve
- System pressure regulator
- Siphon
- Network nodes
- Item detail sketch available
- Valve number (old numbering)
- 6NB 6 INCH CAST IRON MAIN
- 150MM 150MM STEEL MAIN
- 110MM PE/NY 110MM POLYETHYLENE/NYLON MAIN
- 6NB 50MM NY 50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN
- 1.2MBL DISTANCE IN METRES OF MAIN FROM BUILDING LINE (TOLERANCE OF 0.4M)
- 1957 YEAR LAID
- MUNICIPALITY BOUNDARY
- NETWORK BOUNDARY
- HOUSE NUMBER

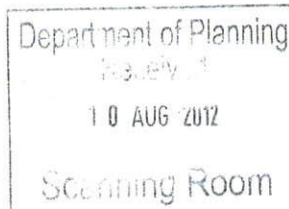
SYDNEY 4BB



Sydney
WATER

3 August 2012

Mr Alan Bright
A/Director Metropolitan & Regional Projects South
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001



Attention: Roy Wong

Director General Requirements – Staged Development of the Master Plan for the St Vincent's and Mater Health Sydney Darlinghurst Campus and the First Stage of Works [SSD 5384-2012]

Dear Mr Bright,

Thank you for your letter of 18 July 2012 requesting input on the Master Plan for St Vincent's and Mater Health and the First stage of Works, at the Sydney Darlinghurst Campus. Sydney Water has reviewed the preliminary environmental assessment and provides the following comments for the Department's consideration.

Sydney Water requirements for Environmental Assessment

To provide the developer with detailed servicing advice Sydney Water needs the environmental assessment to include the following:

1. *Integrated Water Management Plan* – the Integrated Water Management Plan should include any proposed alternative water supply, proposed end uses of potable and non-potable water, demonstration of water sensitive urban design and any water conservation measures.
2. *Infrastructure Management Plan* – the developer needs to provide Sydney Water with information on the required water and wastewater services, and any augmentation that may be required for the proposed development. This will allow Sydney Water to determine the impact of the proposed development on its existing services and identify any augmentation requirements. When determining landscaping options, the developer should take into account that certain tree species can cause cracking or blockage of Sydney Water pipes.

Sydney Water Servicing

Sydney Water will further assess the impact of individual developments when the proponent applies for a Section 73 Certificate. This assessment will enable Sydney Water to specify any works required as a result of the development and to assess if amplification and/or changes to the system are applicable. Sydney Water requests the Department of Planning to continue to instruct proponents to obtain a Section 73 Certificate from Sydney Water.

The proponent must fund any adjustments needed to Sydney Water infrastructure as a result of any development. The proponent should engage a Water Servicing Coordinator to get a Section 73 Certificate and manage the servicing aspects of the development. Details are available from any Sydney Water Customer Centre on 13 20 92 or Sydney Water's website at www.sydneywater.com.au.

Sydney Water e-planning

Sydney Water has created a new email address for planning authorities to use to submit statutory or strategic planning documents for review. This email address is urbangrowth@sydneywater.com.au. The use of this email will help Sydney Water provide advice on planning projects faster, in line with current planning reforms. It will also reduce the amount of printed material being produced. This email should be used for:

- Section 62 consultations under the Environmental Planning and Assessment Act 1979
- consultations where Sydney Water is an adjoining land owner to a proposed development
- Major Project applications under Part 3A of the *Environmental Planning and Assessment Act 1979*
- consultations and referrals required under any Environmental Planning Instrument
- draft LEPs, SEPPs or other planning controls, such as DCPs
- any proposed development or rezoning within a 400m radius of a Sydney Water Wastewater Treatment Plant
- any proposed planning reforms or other general planning or development inquiries

If you require any further information, please contact Corrine Manyweathers of the Urban Growth Branch on 02 8849 4014 or e-mail corrine.manyweathers@sydneywater.com.au

Yours Sincerely



Adrian Miller
Manager, Growth Strategy
Urban Growth