Warren Smith & Partners

1 December 2017

SEARs UTILITY & WATER MANAGEMENT PLAN

Tower B, St Leonards: Stage 2 Design and Construction – Medical Specialist Suites and Associated Allied Health Uses

Hydraulic Services Fire Protection Civil Engineering Sydney Water Accredited Water Servicing Co-ordinator - Design Project Management - Building Plan Approvals

SEARs UTILITY & WATER MANAGEMENT PLAN

Tower B: Hospital, Accommodation and Ancillary Uses

DOCUMENT CONTROL

01	1st December 2017	Issue for Information
Rev #	**Date**	**Description of Change**

APPROVALS

01	T. Wise	Current	T. Wise
Rev #	**Author**	**Status**	**Reviewer**

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UTILITY SERVICES

1. INTRODUCTION

Warren Smith & Partners (WS+P) has been engaged by Savills to prepare a SEARs Utilities and Water Management Plan for the Tower B development in St Leonards. This SEARs Utilities and Water Management Plan aims to provide detailed information regarding the utilities capacity and consultation and the use of water on site. It also aims to address, when read in conjunction with the civil engineer's report, the following SEARs condition 9. Utilities; Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure. Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water.

Please refer to Figure 1 for an aerial view of the existing site where Tower B is to be constructed (identified in red).

Figure 1: Aerial View of Development Site

All existing buildings within the identified site zone will be demolished to make way for the new tower.

2. FLOOD RISK ASSESSMENT

In accordance with Section 1.13 of the SEARs, WS+P were required to assess the proposed development site in relation to flood risk. Please refer to the WS+P Stormwater DA Report for the flood risk assessment.

3. UTILITY CONNECTIONS

3.1 SYDNEY WATER – WATER MAIN CONNECTION

Water – It is proposed that the new development will connect to the existing DN200mm Sydney Water watermain in Westbourne Street.

Refer to Figure 2 for details on the proposed water connection point in Westbourne Street.

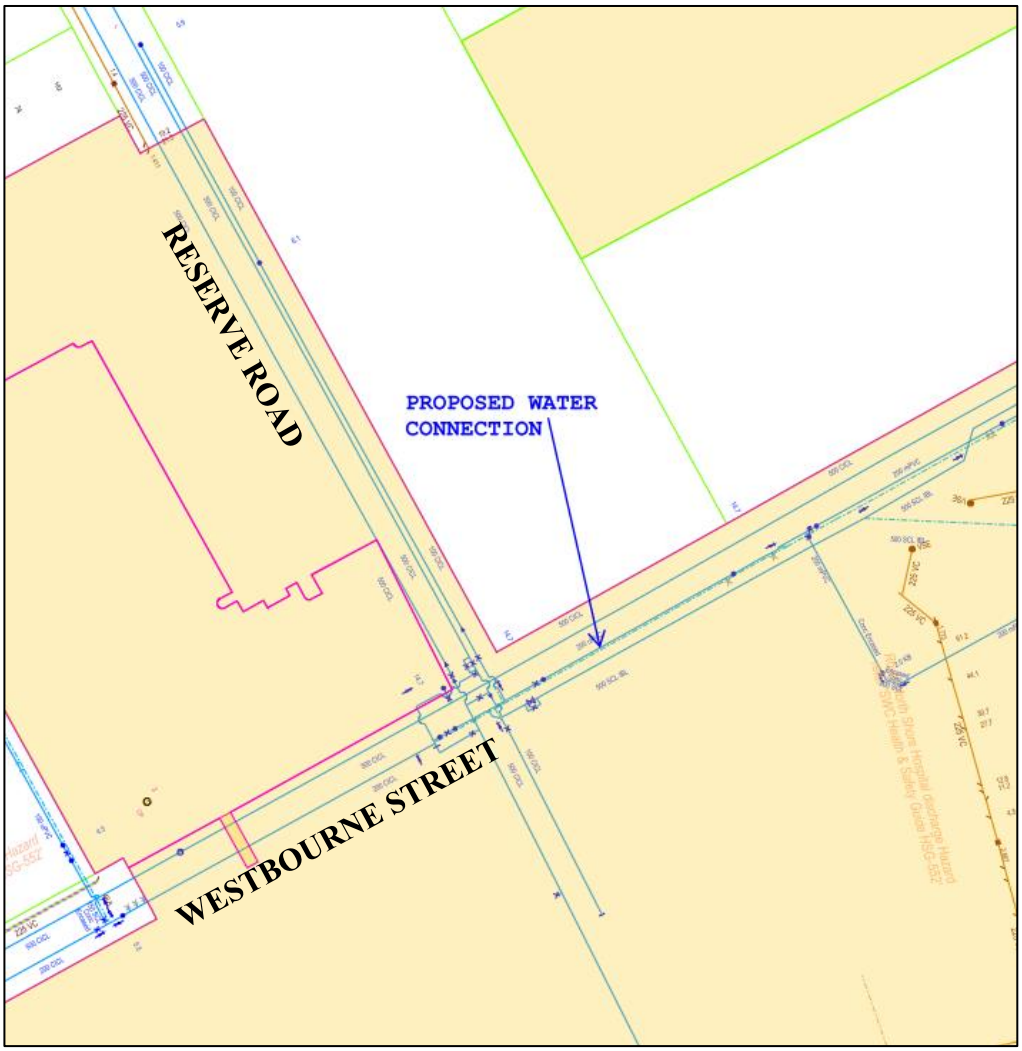

Figure 2: Proposed Water Connection Point

3.2 SEWER CONNECTION

Sewer – The existing development site has no connections to the Sydney Water sewer main.

It is proposed that the Sydney Water sewer main is extended approximately 270m from Frederick Street (IL 72.19m) to the proposed site. The extension of the sewer would extend along the existing property's eastern boundary and no easement would be required

Refer to Figure 3 for details on the proposed sewer main extension and connection point.

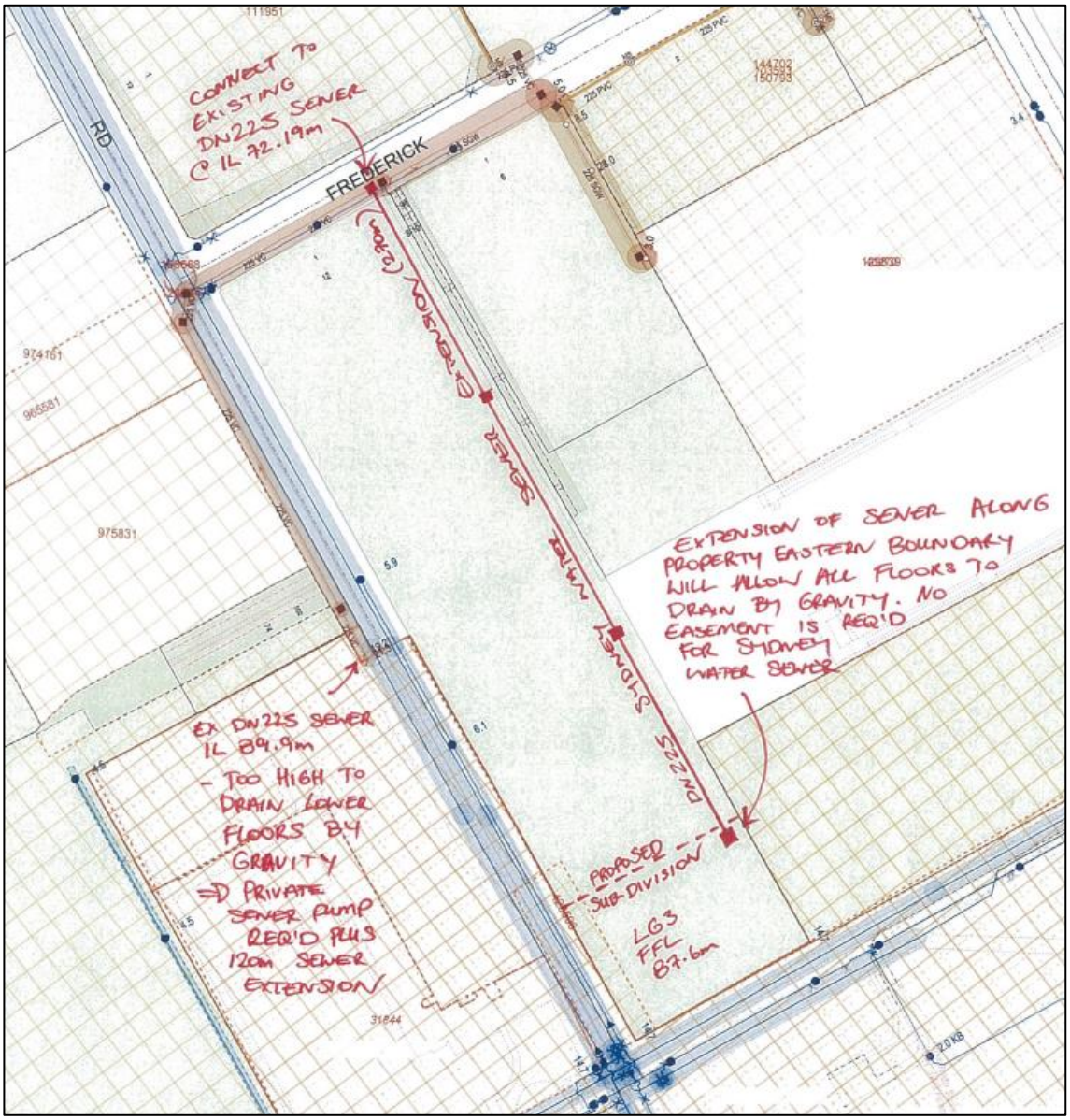

Figure 3: Proposed Sewer Connection Point

3.3 JEMENA – GAS MAIN CONNECTION

Gas – It is proposed that the new development will connect to the existing 1050kPa Jemena gas

main in Reserve Road.

Refer to Figure 4 for details on the proposed gas connection point in Reserve Road.

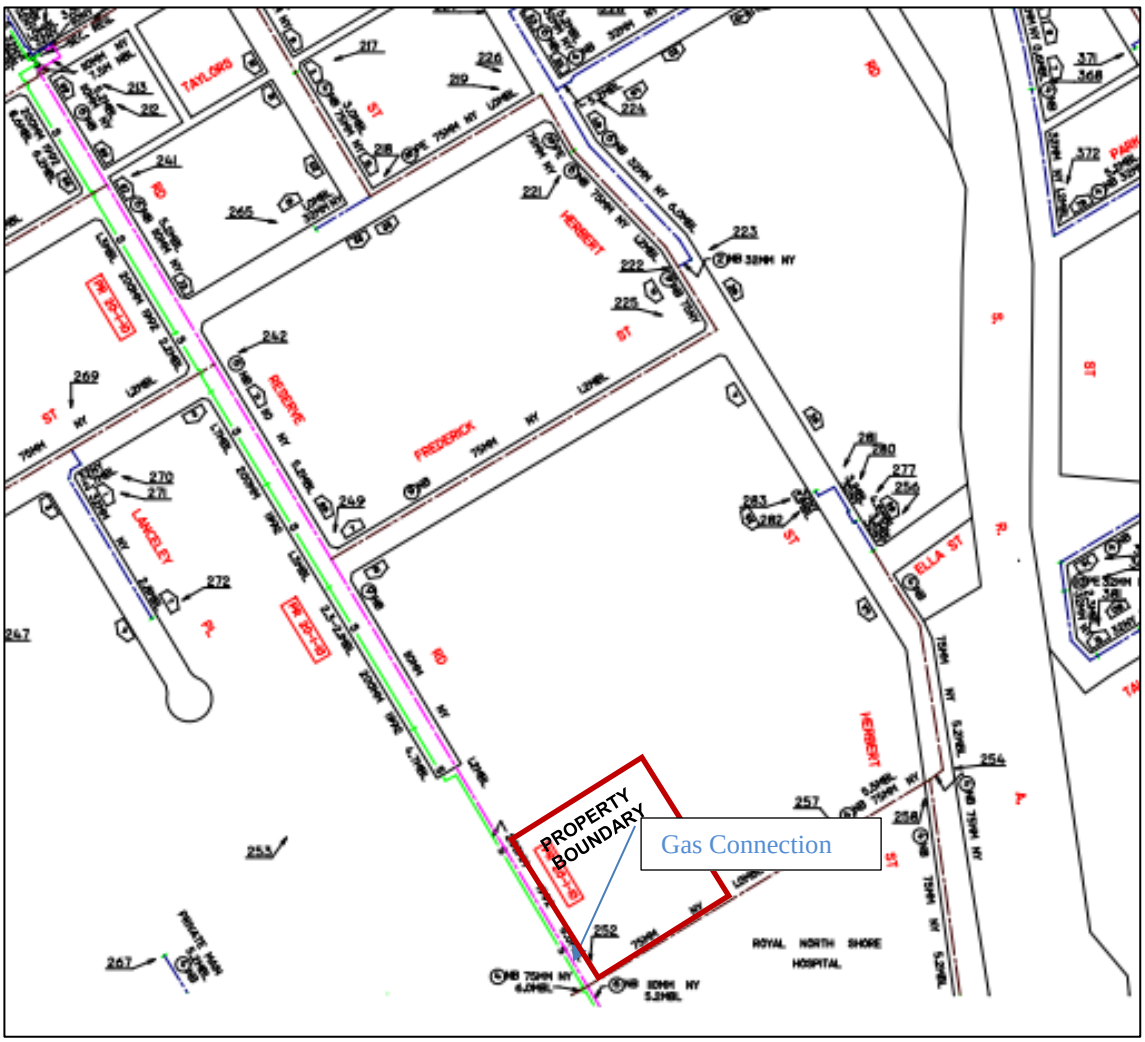

Figure 4: Existing Jemena Gas Main Connections

4. WATER USAGE REDUCTION

4.1 LOW FLOW TAPS

Where possible, potable water usage will be reduced by the use of low flow taps and sanitary fixtures, typically using the following flow rates: -

- Shower 9.0L/min
- Basin 7.7L/min
- Sink 7.7L/min

Low flow taps are only to be used if the fixtures chosen comply with the AusHFG.

4.2 WATER METERING

The development will be metered by both utility-owned water meters at the property boundary, and client-owned and read water meters.

These water meters will have the capability for connection to the BMCS via pulse read-out and will be monitored by the BMCS for water demand and leak monitoring.

Privately owned (and read) sub meters shall be provided to meter the usage of the following: -

- Domestic hot water supply
- Kitchen
- Fire services tank make-up water

4.3 RAINWATER REUSE

On previous projects, holistic life cycle reviews on rainwater reuse systems have been undertaken. These reviews have generally found that rainwater reuse systems have not been cost effective for the project with a payback of greater than 7 years.

Further to the cost considerations above, within a clinical environment the prevention of infection is a priority. The storage of collected rainwater may contain or breed legionella, dead animals, mosquitoes, chemicals, microbial hazards and escherichia coli.

The maintenance involved with the general upkeep of rainwater reuse tanks and ensuring the stored collected rainwater is not harbouring infections is laborious and often budget driven which may reduce the prudent level of maintenance to ensure the public and residents are comfortable with the level of public health.

5. CONSULTATION WITH THE UTILITY

Consultation with the utilities has been undertaken for building A & B with offer letters provided for building. Consultation for building B will continue as the design progresses.