

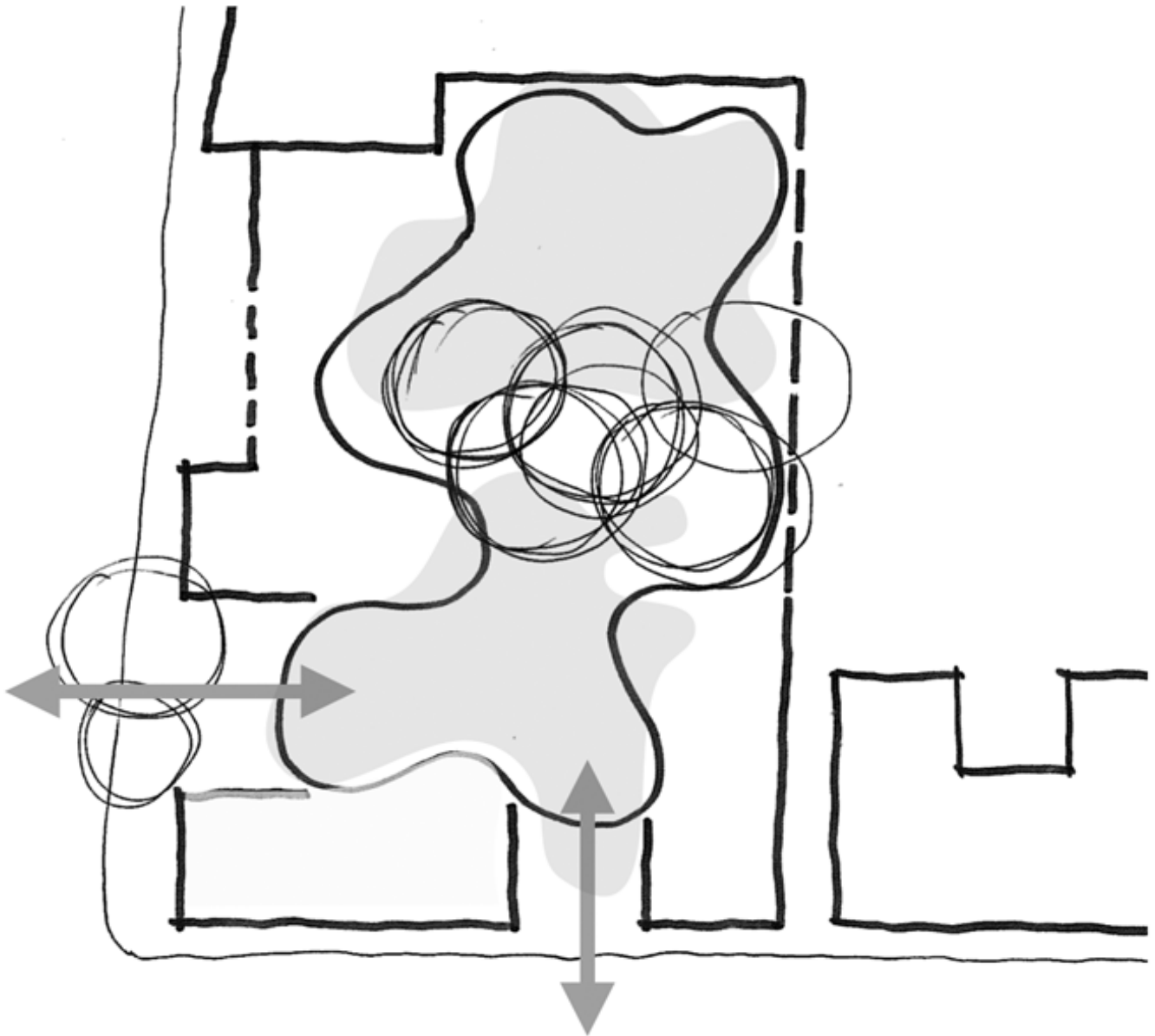
# DARLINGTON PUBLIC SCHOOL REDEVELOPMENT

## Appendix FF — Hydraulic Infrastructure Management Plan

SSD-9914

Prepared by WS+P

For NSW Department of Education



Warren  
Smith &  
Partners

— SINCE 1981 —

14<sup>th</sup> April 2020

# INFRASTRUCTURE MANAGEMENT PLAN

Darlington Public School



# HYDRAULIC SERVICES

## INFRASTRUCTURE MANAGEMENT PLAN

### Darlington Public School

01	12 <sup>th</sup> February 2020	Draft SSDA Infrastructure Management Plan Issued for Review
02	27 <sup>th</sup> February 2020	SSDA Infrastructure Management Plan
03	6 <sup>th</sup> April 2020	Updated with ETHOS Comments from meeting 12/03/2020
04	14 <sup>th</sup> April 2020	Updated as per ETHOS & MACE Comments 14/04/2020
<b>Rev #</b>	<b>Date</b>	<b>Description of Change</b>

## APPROVALS

01	J. Skubevski	Superseded	D. Power	
02	J. Skubevski	Superseded	D. Power	
03	J. Skubevski	Superseded	D. Power	
04	J. Skubevski	Current	D. Power	
<b>Rev #</b>	<b>Author</b>	<b>Status</b>	<b>Reviewer</b>	<b>Approver</b>

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# Executive Summary

This Darlington Public School is located on the corner of Golden Grove Street and Abercrombie Street, Darlington, within the City of Sydney local Government Area. The school is adjacent to the University of Sydney Darlington Campus and within walking distance to Redfern and Macdonaldtown train stations. The site is legally described as Lot 100 in DP 623500 and Lot 592 in DP 7523049.

The SSD application seeks consent for demolition of existing school buildings and construction of a new part 2, part 3-storey building, increasing the school capacity from 230 to 437 students. The works also include replacement of the existing childcare facility (to the same capacity of 60 students), earthworks and landscaping. For a detailed project description refer to the EIS prepared by Ethos Urban.

Sears Requirement / Description	Relevant Section of Report
<b>Utilities &amp; Infrastructure</b>	
Detail any information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure	See Section 3, 4 and 6
<b>Water related Infrastructure Requirements</b>	
Determine service demands following servicing investigations	See Section 3
Determine satisfactory arrangements for drinking water and wastewater services have been made	See Section 5.1 and 5.2
Obtain endorsement and/or approval from Sydney Water to ensure that the proposed development does not adversely impact on any existing water, wastewater, or other Sydney Water asset, including any easement or property	See Section 6

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# HYDRAULIC SERVICES

## 1. GENERAL

Warren Smith & Partners (WS+P) has been engaged by Schools Infrastructure NSW to prepare a town planning Utility Services Report for the proposed redevelopment works at the Darlington Public School.

The Darlington Public School campus (“the site”) is located at Golden Grove Street, Chippendale NSW 2008 and is shown in **Figure 1** (approximate site location identified in red). The site is encompassed by Golden Grove Street to the west, Abercrombie Street to the South, Darlington Lane to the north and the University of Sydney Business School to the east.



**Figure 1:** Aerial View of Property Boundary (Source: Google Maps)

This report aims to address the following general SEARS condition; “Utilities; Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure.”

This report will not address the following general condition; “Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design”. This has been addressed as a separate report completed by WS+P included as part of the State Significance Development Application (SSDA) documentation.

## 2. DEMOLITION

Demolition of the existing buildings will take place in accordance with the project staging to enable space for the proposed developments.

## 3. DEMAND CALCULATIONS

### 3.1 WATER SUPPLY DEMAND CALCULATIONS

The school currently has 230 students and 16 staff. It is proposed to increase the number of students to 437 and staff to 29. The student numbers were sourced from the ETHOS Urban report and the staff numbers were sourced from information provided by the design team. The assumption used in determining the average daily potable water demands for the proposed additional population of 207 students and 13 staff was sourced from the Sydney Water table, “Average Daily Water Use by Property Type” and is presented in **Table 1** below. For this infrastructure management plan, the staff water usages were assumed to be the same as that of the students with values sourced from SCHEDULE 1 – SYDNEY WATER TABLE.

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

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

We expect Sydney Water to have historical data of the existing site (230 students and 16 staff) of which they can use to assess the effect of the additional 207 students and 13 staff load on the existing infrastructure and ultimately provide advice on the proposed connection location and if any required amplifications or upgrades are required. The preliminary advice included in APPENDIX A – SYDNEY WATER FEASIBILITY ADVICE LETTER confirms the proposed increase will not impact the network.

**Table 1: Average Daily Water Demand**

Classification	Metric Unit	Average Demand (L/Metric Unit/Day)
Special Use - School	Student	20
Special Use – School	Staff (Same as Student)	20

Please refer to **Table 2** below for the average daily water demand increase calculation.

**Table 2: Average Daily Water Demand Increase Calculation**

Total	Average Demand (L/Metric Unit/Day)	Total Average Daily Water Demand (kL)
207 (Students)	20	4.14
13 (Staff)	20	0.26



The following flows for the entire site have also been calculated:

- Probable simultaneous demand – 1.89 L/sec (subject to change with architectural layouts),
- Fire flow for hydrants – 20 L/sec,
- Fire flow for sprinklers and drenchers – N / A.

## 3.2 SEWER DISCHARGE CALCULATIONS

To determine the average daily sewer discharge for the proposed development, an estimate of the daily sewer discharge in terms of Litres/Day has been made by adopting information derived by the NSW Water Directorate. Where the standard equivalent tenement figures suggest that a 60% water to sewer discharge factor is appropriate. Refer to **Table 3** below for this calculation.

We expect Sydney Water to have any existing sewer load information of their assets which they can utilise to determine any required amplifications and upgrades to existing infrastructure because of the load induced by the additional 194 students and 13 staff. The preliminary advice included in APPENDIX A – SYDNEY WATER FEASIBILITY ADVICE LETTER confirms the proposed increase will not significantly impact the network.

**Table 3: Sewer Discharge Calculation**

Classification	Unit	Average Demand (60% of Water Average Demand) L/Metric Unit/Day)
Special Use – School	Student	12
Special Use – School	Staff	12

Please refer to **Table 4** below for the Average Daily Sewer Discharge calculation.

**Table 4: Average Daily Sewer Discharge**

Total Students	Average Demand (60% of Water Average Demand) (L/Metric Unit/Day)	Total Average Daily Sewer Discharge (kL)
207 (Students)	12	2.48
13 (Staff)	12	0.16

## 3.3 GAS DEMAND CALCULATIONS

WS+P's current design proposes that natural gas services are not utilised for the heating of hot water, rather, that electrical options are implemented across the site. Additionally, it was recently confirmed within the Technical Stakeholders Group meeting that the mechanical services design and the kitchen/canteen facilities will not require any natural gas services.

WS+P has confirmed with the electrical engineer in Design Team Meeting 7 (16/01/2020) that the proposed loads can be accommodated by their system.



## 4. STAGING

It is proposed that hydraulic services including potable cold water and sanitary drainage will be extended to the new buildings and re-purposed areas as required for the Stage 1 works prior to connection to any authority mains

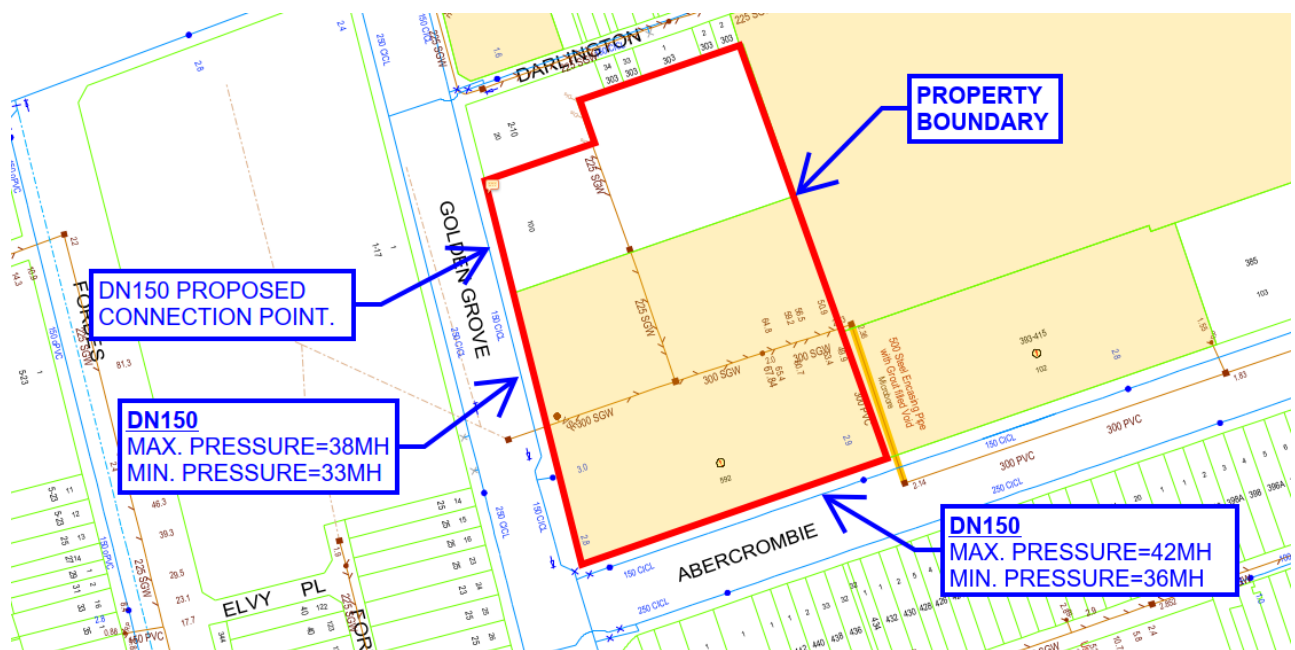
During Stage 1, capped provisions for future extension of both water and sanitary drainage services are to be made to supply Stage 2 as required. This will include both a capped provision for potable cold water services on level 1 and an inground capped sanitary drainage provision for future connection during Stage 2.

## 5. CONNECTIONS

The Sydney Water survey drawings in Sections 5.1, 5.2 and **Error! Reference source not found.** below indicate that the property is comprised of two separate land lots, which would normally require separate servicing (for both water and sewer) in order to comply with the Sydney Water guidelines. However, it has been recently confirmed by Schools Infrastructure that the land lots will be consolidated, which is the advice that the proposed utility connections below have been based on.

### 5.1 WATER

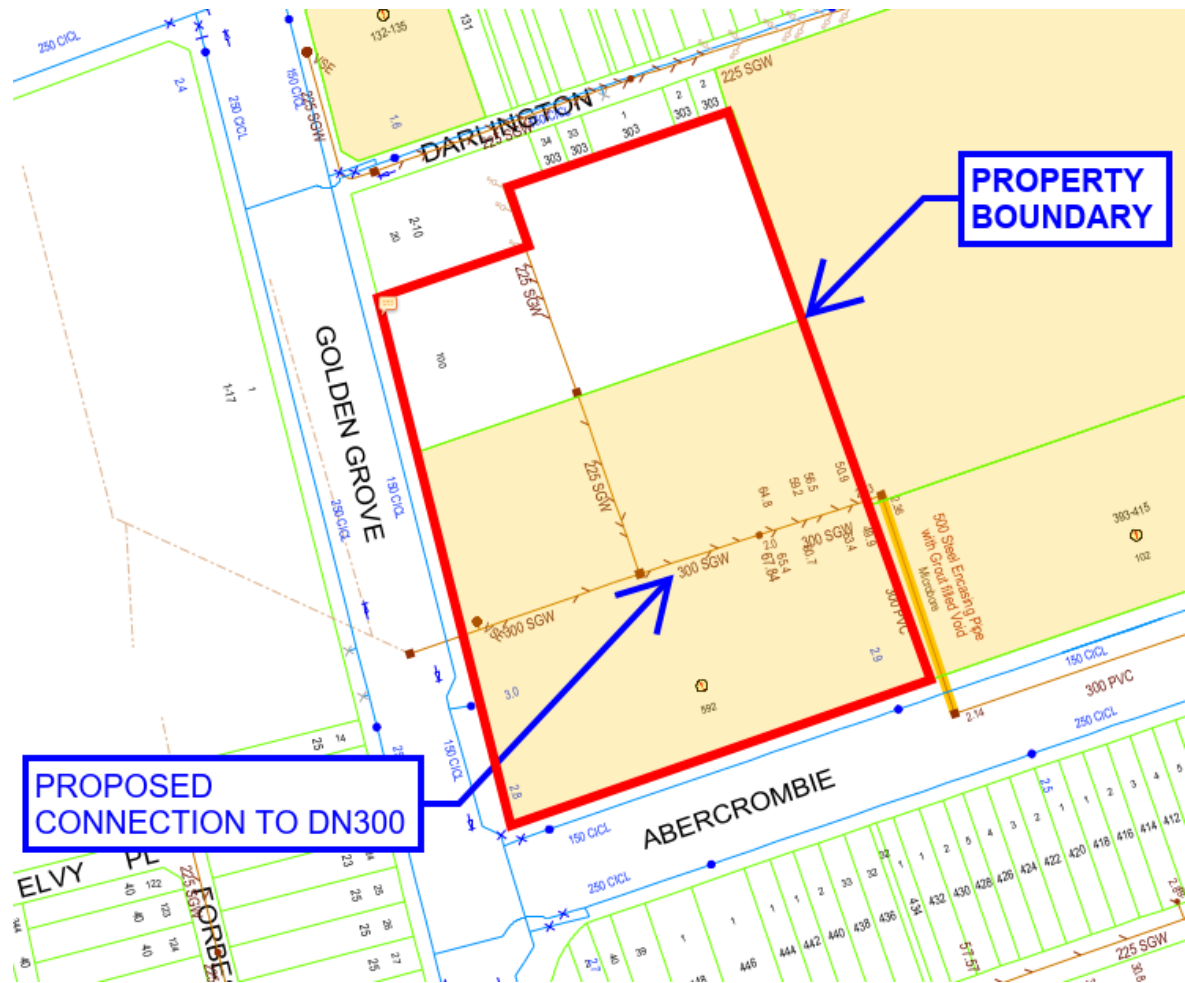
It is proposed that connection is made to the Sydney Water DN150 CICL water main in Golden Grove Street as shown in **Figure 2**. The connection point should be adjacent to the location of the proposed water meter on site.



**Figure 2: Proposed Connection Point to Sydney Water Utility (Water) Main**

# 5.2 SEWER

It is proposed that connection is made to the Sydney Water DN300 sewer main which reticulates through the site from west to east as shown in **Figure 3**.



**Figure 3:** Proposed Connection Point to Sydney Water Utility (Sewer) Main

## 6. APPENDIX A – SYDNEY WATER FEASIBILITY ADVICE LETTER

Case Number: 181476

11 February 2020

SCHOOL INFRASTRUCTURE NSW  
c/- WARREN SMITH & PARTNERS PTY LTD

### FEASIBILITY LETTER

<b>Developer:</b>	<b>SCHOOL INFRASTRUCTURE NSW</b>
<b>Your reference:</b>	<b>6606000</b>
<b>Development:</b>	<b>Lot 100 DP623500 GOLDEN GROVE ST, Darlington</b>
<b>Development Description:</b>	<b>Proposed Redevelopment of Darlington Public School</b>
<b>Your application date:</b>	<b>16 October 2019</b>

**Note: Level 2 water restrictions are in place from December 10**, which limits how and when water can be used outdoors. This can impact you and your contractors in the activities they need to undertake for this proposal.

**Using water to suppress dust is only permitted via a permit when no other water source is available.**

You/your contractors will need to apply for an exemption permit to use water for most outdoor uses including:

- Cleaning equipment and the exterior of **new** buildings
- Drilling and boring, and
- Batching concrete on-site

Fines for deliberate breaches of restriction rules are in place.

For more information on the restrictions and for applying for an exemption, visit our web site at <https://www.sydneywater.com.au/SW/water-the-environment/what-we-re-doing/water-restrictions/level-2-water-restrictions/index.htm>

The more water everyone saves, the longer we can stave off the progression to stricter restrictions or emergency measures.

Please provide this information to your contractors and delivery partners to inform them of their obligations and check our web site for up to date restriction information.

Dear Applicant

This Feasibility Letter (Letter) is a guide only. It provides general information about what Sydney Water's requirements could be if you applied to us for a Section 73 Certificate (Certificate) for your proposed development. **The information is accurate at today's date only.**

If you obtain development consent for that development from your consent authority (this is usually your local Council) they will require you to apply to us for a Section 73 Certificate. You will need to submit a new application (and pay another application fee) to us for that Certificate by using your current or another Water Servicing Coordinator (Coordinator).

Sydney Water will then send you either a:

- Notice of Requirements (Notice) and Developer Works Deed (Deed) or
- Certificate.

These documents will be the definitive statement of Sydney Water's requirements.

There may be changes in Sydney Water's requirements between the issue dates of this Letter and the Notice or Certificate. The changes may be:

- if you change your proposed development eg the development description or the plan/site layout, after today, the requirements in this Letter could change when you submit your new application; and
- if you decide to do your development in stages then you must submit a new application (and pay another application fee) for each stage.

**You have made an application for specific information. Sydney Water's possible requirements are:**

*Are Shown under Water and Sewer Works.*

**No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from Sydney Water and to the extent that it is able, Sydney Water limits its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.**

## What You Must Do To Get A Section 73 Certificate In The Future.

To get a Section 73 Certificate you must do the following things. You can also find out about this process by visiting [www.sydneywater.com.au](http://www.sydneywater.com.au) > Plumbing, building & developing > Developing > Land development.

1. **Obtain Development Consent from the consent authority for your development proposal.**
2. **Engage a Water Servicing Coordinator (Coordinator).**

**You must engage your current or another authorised Coordinator** to manage the design and construction of works that you must provide, at your cost, to service your development. If you wish to engage another Coordinator (at any point in this process) you must write and tell Sydney Water.

For a list of authorised Coordinators, either visit [www.sydneywater.com.au](http://www.sydneywater.com.au) > Plumbing, building & developing > Developing > Providers > Lists or call **13 20 92**.

The Coordinator will be your point of contact with Sydney Water. They can answer most questions that you might have about the process and developer charges and can give you a quote or information about costs for services/works (including Sydney Water costs).

3. **Developer Works Deed**

It would appear that your feasibility application is served from existing mains and does not require any works to be constructed at this time. Sydney Water will confirm this with you after you have received Development Approval from Council and your Coordinator has submitted a new Development application and Sydney Water has issued you with a formal Notice of Requirements.

4. **Water and Sewer Works**

### 4.1 **Water**

Your development must have a frontage to a water main that is the right size and can be used for connection.

Sydney Water has assessed your application and found that:

The existing 150mm water mains in Abercrombie and Golden Grove Streets servicing the school are primarily supplied from a 375mm trunk main located 85m south of the site in Wilson Street.

The proposed increase in demand will not have a significant impact on the existing network.



## 4.2 Sewer

Your development must have a sewer main that is the right size and can be used for connection. That sewer must also have a connection point within your development's boundaries.

Sydney Water has assessed your application and found that:

The school is proposed to be serviced by via two connections, one of the 225mm and the other to the 300mm sewer mains traversing the site.

The additional discharge (27 EP) from the proposed redevelopment will not have an significant impact on the either of the mains traversing the site.

## 5. Ancillary Matters

### 5.1 Asset adjustments

After Sydney Water issues this Notice (and more detailed designs are available), Sydney Water may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you will need to do this work as well as the extension we have detailed above at your cost. The work must meet the conditions of this Notice and you will need to complete it **before we can issue the Certificate**. Sydney Water will need to see the completed designs for the work and we will require you to lodge a security. The security will be refunded once the work is completed.

### 5.2 Entry onto neighbouring property

If you need to enter a neighbouring property, you must have the written permission of the relevant property owners and tenants. You must use Sydney Water's **Permission to Enter** form(s) for this. You can get copies of these forms from your Coordinator or the Sydney Water website. Your Coordinator can also negotiate on your behalf. Please make sure that you address all the items on the form(s) including payment of compensation and whether there are other ways of designing and constructing that could avoid or reduce their impacts. You will be responsible for all costs of mediation involved in resolving any disputes. Please allow enough time for entry issues to be resolved.

## 6. Approval of your Building Plans

You must have your building plans approved **before the Certificate can be issued. Building construction work MUST NOT commence until Sydney Water has granted approval.** Approval is needed because construction/building works may affect Sydney Water's assets (e.g. water and sewer mains).

Your Coordinator can tell you about the approval process including:

- Your provision, if required, of a "Services Protection Report" (also known as a "pegout"). This is needed to check whether the building and engineering plans show accurately where Sydney Water's assets are located in relation to your proposed building work. Your Coordinator will then either approve the plans or make requirements to protect those assets before approving the plans;
- Possible requirements;
- Costs; and
- Timeframes.

You can also find information about this process (including technical specifications) if you either:

- visit [www.sydneywater.com.au](http://www.sydneywater.com.au) > Plumbing, building & developing > Building > Building over or next to assets. Here you can find Sydney Water's *Technical guidelines - Building over and adjacent to pipe assets*; or
- call 13 20 92.

### Notes:

- **The Certificate will not be issued until the plans have been approved and, if required, Sydney Water's assets are altered or deviated;**
- **You can only remove, deviate or replace any of Sydney Water's pipes using temporary pipework if you have written approval from Sydney Water's Urban Growth Business. You must engage your Coordinator to arrange this approval; and**
- **You must obtain our written approval before you do any work on Sydney Water's systems. Sydney Water will take action to have work stopped on the site if you do not have that approval. We will apply Section 44 of the *Sydney Water Act 1994*.**

**OTHER THINGS YOU MAY NEED TO DO**

Shown below are other things you need to do that are NOT a requirement for the Certificate. They may well be a requirement of Sydney Water in the future because of the impact of your development on our assets. You must read them before you go any further.

**Disused Sewerage Service Sealing**

Please do not forget that you must pay to disconnect all disused private sewerage services and seal them at the point of connection to a Sydney Water sewer main. This work must meet Sydney Water's standards in the Plumbing Code of Australia (the Code) and be done by a licensed drainer. The licensed drainer must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

**Soffit Requirements**

Please be aware that floor levels must be able to meet Sydney Water's soffit requirements for property connection and drainage.

**Requirements for Business Customers for Commercial and Industrial Property Developments**

If this property is to be developed for Industrial or Commercial operations, it may need to meet the following requirements:

**Trade Wastewater Requirements**

If this development is going to generate trade wastewater, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. You must wait for approval of this permit before any business activities can commence.

The permit application should be emailed to Sydney Water's Business Customer Services at [businesscustomers@sydneywater.com.au](mailto:businesscustomers@sydneywater.com.au)

It is illegal to discharge Trade Wastewater into the Sydney Water sewerage system without permission.

A **Boundary Trap** is required for all developments that discharge trade wastewater where arrestors and special units are installed for trade wastewater pre-treatment.

If the property development is for Industrial operations, the wastewater may discharge into a sewerage area that is subject to wastewater reuse. Find out from Business Customer Services if this is applicable to your development.

## Backflow Prevention Requirements

Backflow is when there is unintentional flow of water in the wrong direction from a potentially polluted source into the drinking water supply.

All properties connected to Sydney Water's supply must install a testable **Backflow Prevention Containment Device** appropriate to the property's hazard rating. Property with a high or medium hazard rating must have the backflow prevention containment device tested annually. Properties identified as having a low hazard rating must install a non-testable device, as a minimum.

Separate hydrant and sprinkler fire services on non-residential properties, require the installation of a testable double check detector assembly. The device is to be located at the boundary of the property.

Before you install a backflow prevention device:

1. Get your hydraulic consultant or plumber to check the available water pressure versus the property's required pressure and flow requirements.
2. Conduct a site assessment to confirm the hazard rating of the property and its services. Contact PIAS at NSW Fair Trading on **1300 889 099**.

For installation you will need to engage a licensed plumber with backflow accreditation who can be found on the Sydney Water website:

<http://www.sydneywater.com.au/Plumbing/BackflowPrevention/>

## Water Efficiency Recommendations

Water is our most precious resource and every customer can play a role in its conservation. By working together with Sydney Water, business customers are able to reduce their water consumption. This will help your business save money, improve productivity and protect the environment.

Some water efficiency measures that can be easily implemented in your business are:

- Install water efficiency fixtures to help increase your water efficiency, refer to WELS (Water Efficiency Labelling and Standards (WELS) Scheme, <http://www.waterrating.gov.au/>
- Consider installing rainwater tanks to capture rainwater runoff, and reusing it, where cost effective. Refer to <http://www.sydneywater.com.au/Water4Life/InYourBusiness/RWTCalculator.cfm>
- Install water-monitoring devices on your meter to identify water usage patterns and leaks.
- Develop a water efficiency plan for your business.

It is cheaper to install water efficiency appliances while you are developing than retrofitting them later.

## Contingency Plan Recommendations

Under Sydney Water's [customer contract](#) Sydney Water aims to provide Business Customers with a continuous supply of clean water at a minimum pressure of 15meters head at the main tap. This is equivalent to 146.8kpa or 21.29psi to meet reasonable business usage needs.

Sometimes Sydney Water may need to interrupt, postpone or limit the supply of water services to your property for maintenance or other reasons. These interruptions can be planned or unplanned.

Water supply is critical to some businesses and Sydney Water will treat vulnerable customers, such as hospitals, as a high priority.

Have you thought about a **contingency plan** for your business? Your Business Customer Representative will help you to develop a plan that is tailored to your business and minimises productivity losses in the event of a water service disruption.

For further information please visit the Sydney Water website at: <http://www.sydneywater.com.au/OurSystemsandOperations/TradeWaste/> or contact Business Customer Services on **1300 985 227** or [businesscustomers@sydneywater.com.au](mailto:businesscustomers@sydneywater.com.au)

## Fire Fighting

Definition of fire fighting systems is the responsibility of the developer and is not part of the Section 73 process. It is recommended that a consultant should advise the developer regarding the fire fighting flow of the development and the ability of Sydney Water's system to provide that flow in an emergency. Sydney Water's Operating Licence directs that Sydney Water's mains are only required to provide domestic supply at a minimum pressure of 15 m head.

A report supplying modelled pressures called the Statement of Available pressure can be purchased through Sydney Water Tap in<sup>TM</sup> and may be of some assistance when defining the fire fighting system. The Statement of Available pressure, may advise flow limits that relate to system capacity or diameter of the main and pressure limits according to pressure management initiatives. If mains are required for fire fighting purposes, the mains shall be arranged through the water main extension process and not the Section 73 process.

## Large Water Service Connection

A water main are available to provide your development with a domestic supply. The size of your development means that you will need a connection larger than the standard domestic 20 mm size.

To get approval for your connection, you will need to lodge an application with Sydney Water Tap in™. You, or your hydraulic consultant, may need to supply the following:

- A plan of the hydraulic layout;
- A list of all the fixtures/fittings within the property;
- A copy of the fireflow pressure inquiry issued by Sydney Water;
- A pump application form (if a pump is required);
- All pump details (if a pump is required).

You will have to pay an application fee.

Sydney Water does not consider whether a water main is adequate for fire fighting purposes for your development. We cannot guarantee that this water supply will meet your Council's fire fighting requirements. The Council and your hydraulic consultant can help.

## Disused Water Service Sealing

You must pay to disconnect all disused private water services and seal them at the point of connection to a Sydney Water water main. This work must meet Sydney Water's standards in the Plumbing Code of Australia (the Code) and be done by a licensed plumber. The licensed plumber must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

## Other fees and requirements

The requirements in this Notice relate to your Certificate application only. Sydney Water may be involved with other aspects of your development and there may be other fees or requirements. These include:

- plumbing and drainage inspection costs;
- the installation of backflow prevention devices;
- trade waste requirements;
- large water connections and
  - council fire fighting requirements. (It will help you to know what the fire fighting requirements are for your development as soon as possible. Your hydraulic consultant can help you here.)

**No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from Sydney Water and to the extent that it is able, Sydney Water limits its liability to the reissue of this Letter or the return of your application fee. You should rely on your own**

**independent professional advice.**

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**END**



## 7. SCHEDULE 1 – SYDNEY WATER TABLE

### “AVERAGE DAILY WATER USE BY PROPERTY TYPE”

Development Type	Development Sub-Type	Key Metric	Metric Unit	Average Demand (L/Metric Unit / Day)
Residential	Single Lot Torrens	Dwelling	Each dwelling	623.00
	Flats Torrens	Net Floor Area	Square Meter	2.36
	High Rise Units	Net Floor Area	Square Meter	3.34
	Single Lot Community	Dwelling	Each dwelling	623.00
Mixed	Residential / Commercial	Combined Floor Area	Each dwelling / Square Meter	Use separate rates for each component
	Commercial / Industrial	Combined Floor Area	Square Meter	Use separate rates for each component
Commercial	Aged Accom - Self Care	Net Floor Area	Square Meter	2.50
	Aged Accom - Hostel	Bed	Each bed	271.00
	Aged Accom - Full Care	Bed	Each bed	271.00
	Childcare	Net Floor Area	Square Meter	3.60
	Hotel / motel / serviced apartments	Room	Each room	359.94
	Office	Net Floor Area	Square Meter	2.27
	Shopping Centre	Net Floor Area	Square Meter	3.00
	Laundry / Dry Cleaner	Net Floor Area	Square Meter	10.50
	Café / Fast Food / Butcher / Deli	Net Floor Area	Square Meter	2.48
	Retail Units	Net Floor Area	Square Meter	2.48
	Medical / Veterinary	Net Floor Area	Square Meter	2.48
	Mechanical Repair	Net Floor Areas	Square Meter	2.48
	Car / Boat Sales	Net Floor Area	Square Meter	2.48
	Car Wash	Net Floor Area	Square Meter	9.40
	Club	Net Floor Area	Square Meter	3.77
Industrial	Heavy Process		As required	
	Chemical Manufacturing		As required	
	Printing Manufacturing		As required	
	Beverage Manufacturing		As required	
	Light Factory Unit	Developed floor area	Square Meter	2.82
	Warehousing	Developed floor area	Square Meter	2.82
	Transport / Bus Depot	Site area	Square Meter	0.91
Special Uses	University	Student	Each student	20.00
	School	Student	Each student	20.00
	Hospital	Bed	Each bed	271.00
	Religious assemblies	Developed floor area	Square Meter	1.30
	Government Depot	Site area	Square Meter	0.91
	Community Centre / Library	Floor area	Square Meter	1.84
	Sport Fields with Amenities		As required	
	Park & Reserves		As required	
	Services - Police / Ambulance etc.	Floor area	Square Meter	1.40