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4th March 2019

Ref: S172490

Dear Christo,

Re: 3 Quarry Road & 4 Viney's Road, Dural - Sydney Water Infrastructure

Northrop Consulting Engineers have been engaged as the hydraulic consultant to comment on proposed Sydney Water sewer and water mains and availability to service the proposed development.

Further to the Statement of Facts Contentions reference 2.4 particulars (a) & (b), we have provided further comment below in relation to the Feasibility Letter from Sydney Water (see Appendix B) and the ability of the proposed development to connect to sewer and water infrastructure.

In reference to water supply, the Sydney Water feasibility letter states that the site can connect into the existing 200mm water main in Quarry Road. As part of the infrastructure design for the proposed development, we have assessed the water pressures required to service both domestic supply and fire fighting supply and have confirmed that the pressure available is adequate.

In reference to the sewer mains, Sydney Water have stated that the existing sewer mains within the area can be extended to service the proposed development. They have noted the existing 225mm sewer main behind 827 Old Northern Road, Dural as a potential connection point (see attached Appendix A). We have assessed this connection point, and from our investigations, this connection point can service the proposed development. The proposed development may require onsite sewer pump out pits to connect to this point. These can easily be located within the basement of the proposed development if needed and are commonplace for a development of this nature.

An alternate option would be to extend the sewer main through No. 6 Quarry Road. Both options will be subject to final Sydney Water section 73 application, once DA consent is issued.

Any new sewer main infrastructure or sewer pump out pits will be located to ensure no impact on any of the proposed landscaping regime.

If you have any questions, please don't hesitate to contact the undersigned.

Kind regards,

Goran Lukic

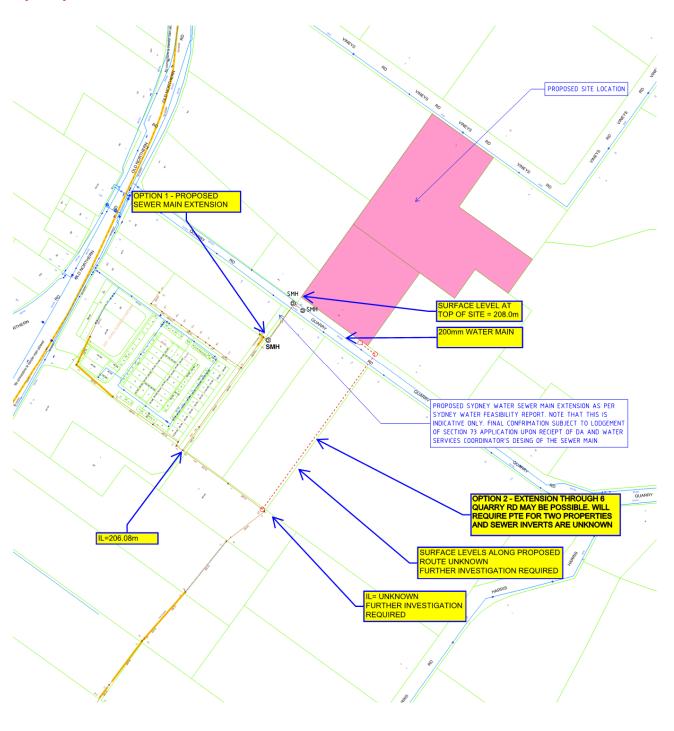
Associate- Senior Hydraulic Engineer Northrop Consulting Engineers Pty Ltd

T: 02 9241 4188



APPENDIX A

Sydney Water Sewer Main





APPENDIX B

Sydney Water Feasibility Letter



Case Number: 172528

10 July 2018

THELEM CONSULTING
C/- RMA Infrastructure Pty Ltd

FEASIBILITY LETTER

Developer: THELEM CONSULTING

Your reference: W-11143

Development: Lot 2A DP 158064 (No. 1 Quarry Rd) and Lot 1 DP 230172 (No.

4 Vineys Road), Dural

Development Description: 146 Independent Living Units and a 73 Bed Residential Aged

Care Facility

Your application date: 18 June 2018

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 set out on the following pages:

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 > 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 > 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

After the Coordinator has submitted your new application, they will receive the Sydney Water Notice and Developer Works Deed. You and your accredited Developer Infrastructure Providers (Providers) will need to sign and lodge both copies of the Deed with your nominated Coordinator. After Sydney Water has signed the documents, one copy will be returned to the Coordinator.

The Deed sets out for this project:

- · your responsibilities;
- Sydney Water's responsibilities; and
- the Provider's responsibilities.

You must do all the things that we ask you to do in that Deed. This is because your development does not have sewer services and you must construct and pay for the following works extensions under this Deed to provide these services.

Note: The Coordinator must be fully authorised by us for the whole time of the agreement.

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 site has frontage to a DN200 CICL water main on the north side of Quarry Road that could possibly provide for domestic needs of the development. Refer to advice on "Large Water Service Connections", "Fire Fighting", Private Water Services, Connection and Metering" and "Disused Water Service Sealing" located below.
- NO connection will be permitted to the DN100 main on the south side of Quarry Road, NOR, to a DN90 AC watermain in Vineys Road.

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 Developer will need to construct a suitable sewer extension that will provide the development with a point of connection within the property boundary to a Sydney Water sewer. The terms of the Deed define this extension as 'Major Works'. Refer also to the advice given in Section 5.2 below.
- For your information only, there is an existing DN225 PVC sewer (Case 72124WW) located south of Quarry Road, at the rear of 827 Old Northern Road. Your Water Servicing Coordinator will be able to provide the Developer with further advice on this matter.

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.

5.3 Costs

Construction of these **future** works will require you to pay project management, survey, design and construction costs **directly to your suppliers**. Additional costs payable to Sydney Water may include:

- water main shutdown and disinfection;
- connection of new water mains to Sydney Water system(s);
- · design and construction audit fees;
- contract administration, Operations Area Charge & Customer Redress prior to project finalisation;
- · creation or alteration of easements etc; and
- water usage charges where water has been supplied for building activity purposes prior to disinfection of a newly constructed water main.

Note: Payment for any Goods and Services (including Customer Redress) provided by Sydney Water will be required prior to the issue of the Section 73 Certificate or release of the Bank Guarantee or Cash Bond.

Your Coordinator can tell you about these costs.

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.

Approval of your building plans

Please note that your building plans must be approved. This can be done at Sydney Water Tap in^{TM} . Visit www.sydneywater.com.au > Plumbing, building & developing > Building > Sydney Water Tap in^{TM} or call 13 20 92.

This is not a requirement of the Certificate but the approval is needed because construction/building works may impact on existing Sydney Water assets (e.g. water and sewer mains). In any case, these works MUST NOT commence until Sydney Water has granted approval.

Your Coordinator can tell you about the approval process including:

- Possible requirements;
- Costs; and
- Timeframes.

Note: 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.

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

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. Visit www.sydneywater.com.au > Plumbing, building & developing > Plumbing > Backflow prevention to find a plumber.

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. Visit www.waterrating.gov.au/ to take you to the WELS (Water Efficiency Labelling and Standards (WELS) Scheme
- Consider installing rainwater tanks to capture rainwater runoff, and reusing it, where cost effective. Visit www.sydneywater.com.au > Plumbing, building & developing > Plumbing > Rainwater tanks
- 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.

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 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.

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Large Water Service Connection

A DN200 water main located on the northern side of Quarry Road could possibly 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 inTM. 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 firefighting requirements. (It will help you to know what the firefighting 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.

END