

Health Infrastructure  
Brookvale Community Health  
Centre  
Infrastructure Management  
Plan/Integrated Water Management  
Plan

REP-EL-INF-01

R2 | 25 June 2015

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 242729

Arup  
Arup Pty Ltd ABN 18 000 966 165



**Arup**  
Level 10 201 Kent Street  
PO Box 76 Millers Point  
Sydney 2000  
Australia  
[www.arup.com](http://www.arup.com)

**ARUP**

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# 1 Introduction

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In order to provide the health requirements for the northern beaches communities, Health Infrastructure and NSW Health have proposed to build a new 6000 m<sup>2</sup> community health building on the corner of Pittwater road and William Street.

This is a brownfield site with a number of utility services located across the site. A dial before you dig investigation was carried out by underground services survey locaters to ascertain the utility assets that are currently located on the site.

The intent of this document is to highlight any existing utility services located on the site and advise of any works that are required in order to remove or relocate the existing services to allow the development of the Brookvale Community Health Centre.

The relevant utility owners have been consulted in the preparation of the infrastructure management plan.

The draft plan has been reviewed with regard to addressing the relevant SEAR's requirements:

- Preparation of an Infrastructure Management Plan in consultation with the relevant agencies, detailing the information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.
- Preparation of an Integrated Water Management Plan detailing any proposed end uses of potable and non-potable water, and water sensitive urban design.

## 2 Existing Electrical Services

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A dial before you dig investigation was carried out to identify the existing utilities located on the proposed development site. The dial before you dig survey highlighted that there may be some Ausgrid assets within the existing site boundary. Subsequently a site survey was commissioned by Johnstaff to identify any key utilities within the site boundary.

The site survey that was provided by Bee & Lethbridge in association with utility locaters identified that there are a number of Ausgrid LV ducts within the site boundary. The incoming LV ducts have been identified and are indicated on the survey layouts as detailed below.

Ausgrid have been contacted in order to establish the extent of their assets currently within the site boundary. This will be used to determine the extent of works required in relation to Ausgrid assets and the scope of works involved.



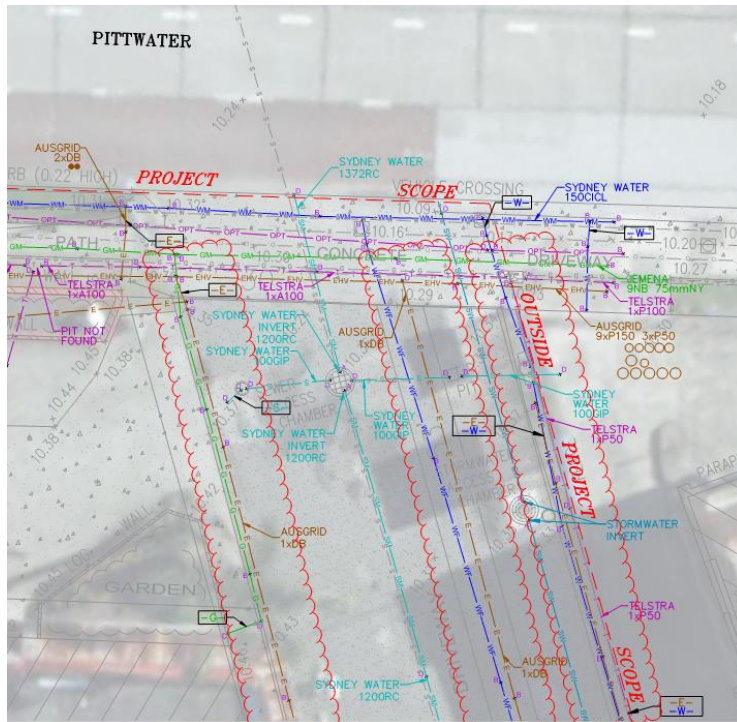


Figure 3 [Incoming Ausgrid ducts from Pittwater Road]

Ausgrid will need to be engaged to review these services and quote for removing the connections back to street level. The ducts can be removed as part of the early works for the site.

At the north end of the site there is an Ausgrid duct which reticulates along the northern perimeter of the site. These may feed buildings which are adjacent to the site and will need to be reviewed in relation to the proposed development. At this stage it does not appear that these will be affected by the proposed development works and if no disruption to the Ausgrid assets is foreseen as the ducts sit within the easement required by Sydney water.

### 3 Existing Telecoms Services

As the site is on the perimeter of Pittwater Road and William Street, there are a number of telecoms services that run within the pedestrian pathways that border the site.

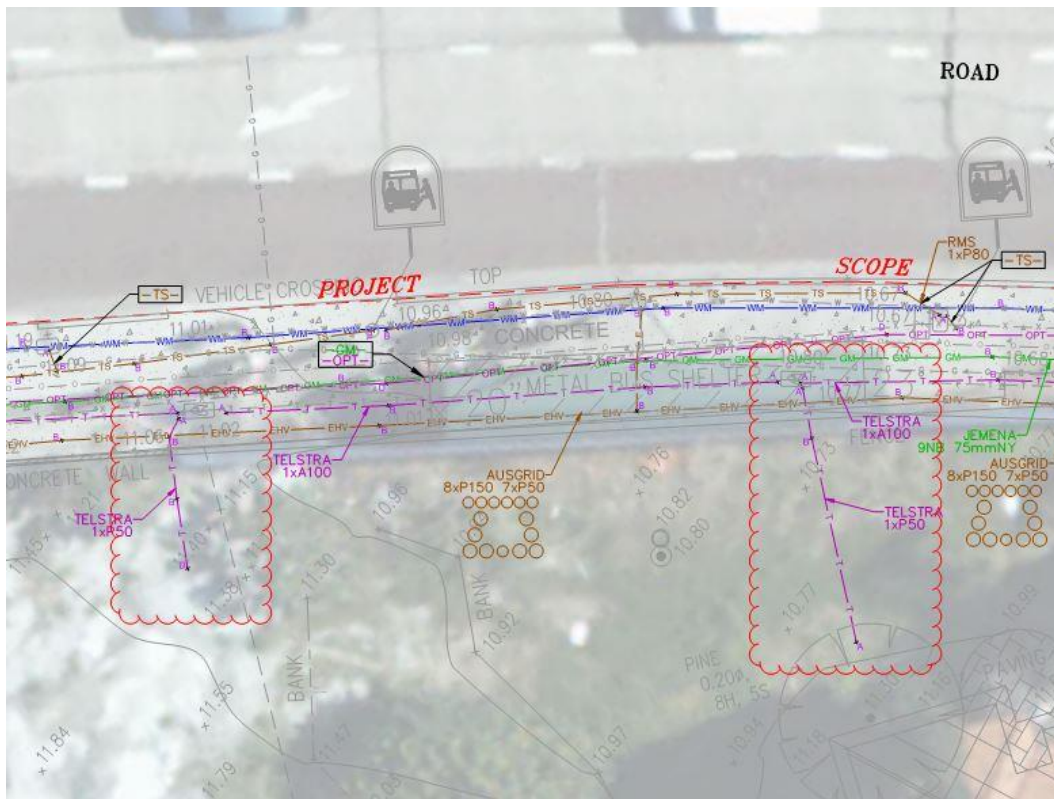


Figure 4 [Incoming Telstra leads in from Pittwater road]

A dial before you dig survey was carried out to identify the telecoms services that could be affected by the planned Brookvale Community Health Centre. From the investigation it appears that Telstra have fibre and copper connections running along the perimeter of Pittwater Road and William Street.

There are two incoming Telstra connections which cross the site boundary from Pittwater Road which appear to be redundant connections for buildings that used to be on the site.

Telstra have been contacted regarding these connections to ascertain if any diversions are required or if these can be removed. Telstra will investigate the lead in cables that they currently have coming onto the site and they will provide a quote for removing these from site.

The lead in telecoms conduits can be removed as part of the development early works. Telstra need to be engaged to remove their cables from within the site back to their connection points within the street adjacent to the site. A separate application will be submitted for new incoming Telstra connections if these services are required by the new development.

Optus also have copper and fibre services running within the pedestrian walkways at street level on the perimeter of the site. It does not appear that they have any services within the site boundary that will be affected by the future development works.



Figure 1. Sydney Water Hydra map.

Sewer Drainage

There is an existing 150mm VC Sydney Water sewer main located at the rear of the site (refer Figure 2.).

620-624 Pittwater Road is currently connected to the 1200mm Sydney Water trunk sewer main adjacent the northern boundary of 624 Pittwater Road. The Sydney Water trunk sewer main is located within a Sydney Water easement.

An existing 150mm Sydney Water sewer main which extends to 612 Pittwater Road is available for connection. Refer to the attached Sydney Water Feasibility Letter.

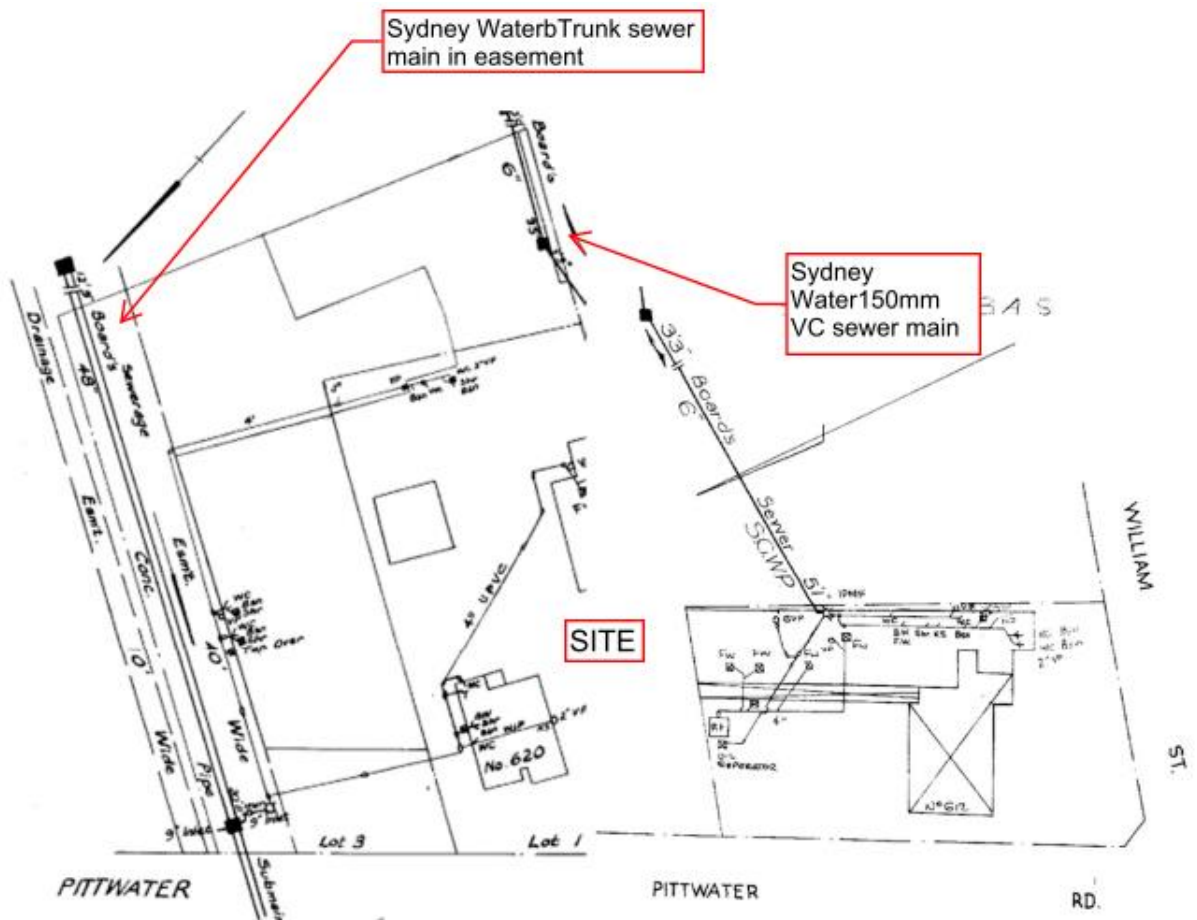


Figure 5. Sydney Water House sewer diagram

Natural Gas

There is an existing Jemena 75mm nylon medium pressure (210kPa) gas main located in Pittwater Road adjacent to the property boundary (refer Figure 3.) which has adequate capacity to service the proposed development and is available for connection.

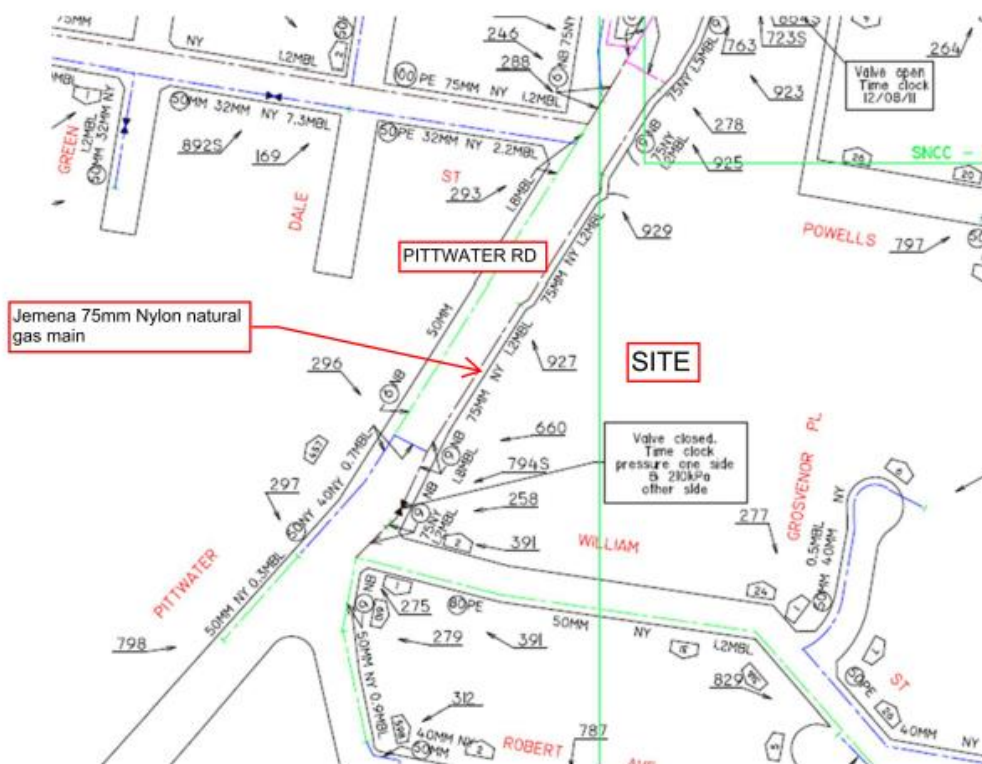


Figure 6 Jemena Natural gas map

## 5 New Electrical Services

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A preliminary maximum demand for the Brookvale Community Health Building has been calculated to establish the new electrical requirements for the new development.

The preliminary MD was calculated at 650 kVA for the new development based upon the current design GFA of 6000m<sup>2</sup>. An application has been submitted to Ausgrid for 650 kVA supply to the site. The current site can be served by either a kiosk type / chamber type substation which is currently being planned with the architects.

The maximum demand for the project is estimated to be 650 kVA (100VA/m<sup>2</sup> overall). Additional capacity may be required for the car park to be built adjacent to the site and this will be developed during the design stage.

## 6 New Telecoms Services

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New incoming telecoms will be required for the new Brookvale Community Health Centre. Telstra and Optus services are available on the perimeter of the site as the main telecommunications services routes run parallel with the site along Pittwater road.

A new application will need to be submitted to either Telstra or Optus to allow connection to the new incoming comms.

Incoming telecommunications pits will be laid as part of the new development to a pit located on the boundary of the site to allow the connection of the new telecoms services.

## 7 New Hydraulic Services

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New incoming Hydraulic services will be required for the new Brookvale Community Health development. Sydney Water and Jemena services are available for site connection in Pittwater Road and in the rear south east corner of the site.

### Water Supply

New water main connections for domestic water and fire services water supplies will be from the 150mm CICL main in Pittwater Road.

Sydney Water has been consulted and the water main will provide sufficient flow and pressure for the proposed development.

### Sewer Drainage

Sewer drainage for the new building will connect to the existing Sydney Water 150mm sewer drainage main located in the rear of 624 Pittwater Road.

Alternatively sewer drainage from the proposed development can connect to the Sydney Water sewer trunk main under 624 Pittwater Road.

### Natural Gas

A new Natural gas connection will be made to the existing Jemena 75mm medium pressure (210 kPa) gas main in Pittwater Road. A new regulator and meter set will need to be provided. The pressure will step down to 7kPa at the site boundary and reticulated within the new building as required.

## **8 Integrated Water Management**

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The below water supplies have been considered and the following are proposed;

### Potable water

Uses: Amenities areas, drinking water, fire services, ablution water.

### Non Potable water

Uses: bin wash down rooms, dirty utilities rooms, clean rooms.

Non potable water will be provided via back flow prevention devices located as required to serve the above mentioned high risk zones.

### Rainwater re use water

Uses: Not Applicable.

Rainwater reuse is not generally incorporated into Health Infrastructure projects.

The overall costs to install and maintain a reuse system is not value for money as the payback period on a system like this would be approximately 80 years.

### Water Sensitive Urban Design

Water sensitive urban design principles consistent with Warringah Council's Northern Beaches Stormwater Management Plan, June 1999 have been implemented to manage stormwater runoff quality discharged from the site. Refer to civil consultant's report for details.

## Statement of Available Pressure and Flow



**Warren Smith and Partners**  
123 Clarence St  
Sydney , NSW, 2000

WMS No: **264090**  
Contact No: 8849-3531  
Fax No: 8849-3071

Attention: Warren

Date: 13/03/2013

Pressure & Flow Application Number: 8360781  
Your Pressure Inquiry Dated: Fri February 22 2013  
Property Address: 620-622 Pittwater Rd, Brookvale 2100

The expected maximum and minimum pressures available in the water main given below relate to modelled existing demand conditions, either with or without extra flows for emergency fire fighting, and are not to be construed as availability for normal domestic supply for any proposed development.

**ASSUMED CONNECTION DETAILS**

Street Name: Pittwater	Side of Street: East
Distance & Direction from Nearest Cross Street	70 metres North from William
Approximate Ground Level (AHD):	11 metres
Nominal Size of Water Main (DN):	150 mm

**EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT**

Normal Supply Conditions	
Maximum Pressure	99 metre head
Minimum Pressure	78 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	78
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	89
	10	88
	15	88
	20	87
	30	86
	40	84
	50	82
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	60	79
	5	78
	10	78
	15	77
	20	77
	30	76
Maximum Permissible Flow	40	74
	50	72
	60	70
	67	68

(Please refer to reverse side for Notes)

  
For **Robert Wickham**  
Principal Planner  
Urban Growth – Asset Services

Sydney Water Corporation ABN 49 776 225 036  
1 Smith St Parramatta 2150 | PO Box 399 Parramatta 2124 | DX 14 Sydney | T 13 20 92 | sydneywater.com.au  
Delivering essential and sustainable water services for the benefit of the community





Case Number: 145594

1 June 2015

Health Infrastructure  
Ryan Thoroughgood  
c/- WARREN SMITH & PARTNERS PTY LTD**FEASIBILITY LETTER**

**Developer:** Ryan Thoroughgood  
**Your reference:** 4199001  
**Development:** Lot 612-624 Pittwater Road, Brookvale  
**Development Description:** Construction of a Community Health Centre with multi-level Car parking.  
**Your application date:** 13 May 2015

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:**

## 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 150 mm C/CL water main in Pittwater Rd will serve your development. Your development must have its own connection to that water main and a water service and meter.

#### 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.

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Sydney Water has assessed your application and found that:

- The existing 150mm SGW sewer main will serve your development.

## 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. Stamping and Approval of your Building Plans

You must have your building plans stamped and 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 *Guides to Building Over/Adjacent to Sydney Water 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.

**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 any Quick Check agent 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 a Quick Check Agent. 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 fire flow 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

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**SYDNEY WATER CORPORATION**

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**Case No: 145594**

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**

## 9 Conclusion

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It must be noted that one of the main utility routes for electrical and communications services is located within street level on Pittwater road which runs parallel to the front of the proposed Brookvale Community Health Centre site. It is not envisaged that the proposed site works will affect these services at the front of the site, however any access routes into the site will need to be reviewed to ensure they do not affect these service routes.

The existing electrical and telecoms services within the site boundary have been reviewed and where required will be removed as part of the early works to prepare the existing site for the future development. Both Telstra and Ausgrid have been contacted in order to establish the extent of their assets on the site.

New electrical and telecoms provision will be provided as required for the new development to allow connection to the utility services. A new chamber substation is to be provided within the new development to Ausgrid standards to allow future electrical installation.

Telecoms lead in infrastructure will be provided from a pit on the site boundary to the main incoming telecoms room within the proposed development to allow incoming telecoms services to be connected into the building once required.