

Attachment C15

Proponent Utilities Review

Appendix M – Utilities review



Goodman

1-3 Burrows Road, St Peters – Utilities Review

1-3 BURROWS ROAD, ST PETERS

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Issue: 01

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Status: For Submission

Prepared by: David McKay

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Edited by: David McKay

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Authorised by: Shayne Blazley

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1.0 EXECUTIVE SUMMARY

HDR | Hurley Palmer Flatt have been appointed by Goodman to undertake a technical review of the utilities services at 1-3 Burrows Road, St Peters.

This involves a high level review of the proposed three (3) Storey Industrial Estate and adjoining six (6) Storey Office earmarked for the site, the potential demand on utility services and likely impact on the existing infrastructure serving the site.

It was found that the existing site is generally well provisioned with utility services located in the council road network for the proposed new building works. HPF note an updated Ausgrid Services Design Offer is required to reflect the current scheme and a Sydney Water Feasibility Study be submitted for confirmation via the authority the utilities require no upgrades.

The impact to utility services to support the proposed development is summarised in the report.

2.0 INTRODUCTION

2.1 Utility Review

HDR | Hurley Palmer Flatt have been appointed by Goodman to undertake a technical review of the utilities services for 1-3 Burrows Road, St Peters.

The report is based on the findings of a desktop study, of existing authority information and the proposed commercial building earmarked for the site.

2.2 Purpose of This Report

The purpose of this report is to gain a high level strategic understanding of the potential demand on utility services and likely impact on the existing infrastructure serving the proposed three (3) Storey Industrial Estate and adjoining six (6) Storey Office.

This report aims to provide a structured guideline to gaining approvals for utility services along with assessing the demand and impact on utilities. Future consideration in the design development phase of the proposed development is required to review opportunities where utility demands can be reduced via sustainable and energy efficient solutions that can be embedded into the design as guiding principles.

2.3 Report Limitations

This report is limited to a high level review of utility services as the first step in understanding the size and scale of works required to support the proposed masterplan site.

Detailed demand modelling will be required as well as authority applications and negotiations before a level of comfort can be achieved for utility services.

The report specifically excludes consideration of the following items which are outside of scope for this assignment:

- Title search, easements, covenants, etc
- Authority fees
- Ground conditions, geotechnical surveys
- EMF measurements
- Seismic risk
- Contamination including hazardous materials

2.4 Disclaimer

This report has been prepared for the benefit of Goodman.

HDR | Hurley Palmer Flatt makes no warranty of any kind with regards to the existing utility services, including, but not limited to, the implied warranties of merchantability and fitness for any particular purpose. Hurley Palmer Flatt shall not be held liable for errors contained herein and/or direct, indirect, special, incidental or consequential damages in connection with furnishing, performance, and/or use of this material.

Prior written approval from Goodman must be obtained before any part of this document may be shared with a third party.

3.0 EXISTING SITE

The existing site is fully developed with an existing industrial estate one (1) storey in height and on ground car park.

Diagram 3.1 shows the extent of the existing site.

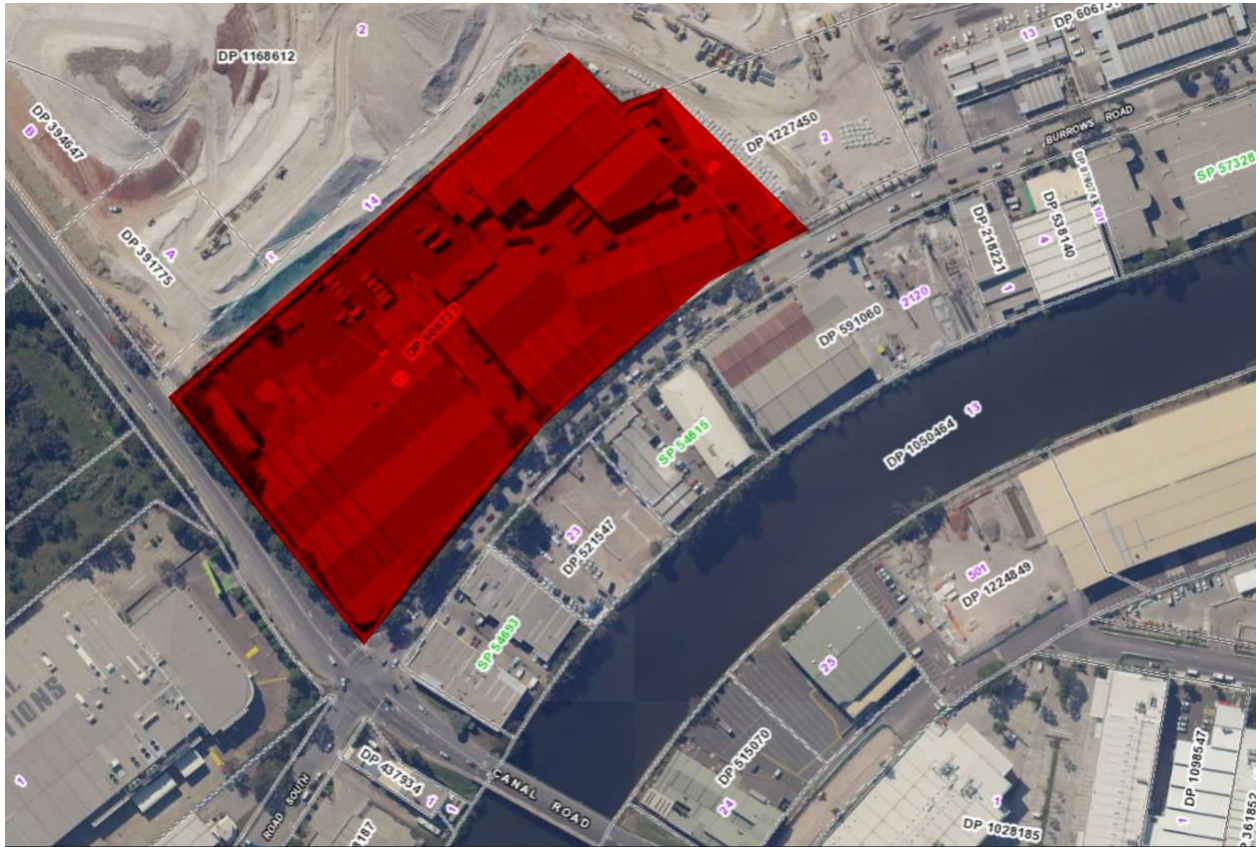


Diagram 3.1 – Existing Site

4.0 EXSTING AUTHORITY UTILITY PROVISIONS

4.1 DBYD Information

A dial before you dig application has been submitted and responses have been received back from the following parties:

- Ausgrid – Power Supply
- Transgrid – Power Supply
- Telstra – Telecommunications Fibre
- Optus UEcomm – Telecommunications fibre
- NBN Co
- AARNet – Telecommunication Fibre
- Nextgen – Telecommunications Fibre
- Verizon – Telecommunications Fibre
- TPG – Telecommunications Fibre
- Sydney Water – Sewer
- Sydney Water – Water
- City of Sydney – Stormwater
- Inner West Council - Stormwater
- Jemena – Natural Gas
- Roads and Maritime Services
- Sydney Desalination Plant

4.2 Ausgrid – Power Supply

There is an existing Ausgrid substation on site. Due to the scale and size of the development, Ausgrid have confirmed that 2 x L type Kiosks substations will be required. The existing substation will also need to be demolished to make space for the new substation location.

An application for connection has been issued to Ausgrid. HPF has received a Design Services Offer based off max demand calculations issued to Ausgrid utilising floor areas detailed in earlier schemes. The existing design offer should be updated to reflect the current architectural scheme issued on 25/10/2019.

Refer to appendix A for Ausgrid offer.

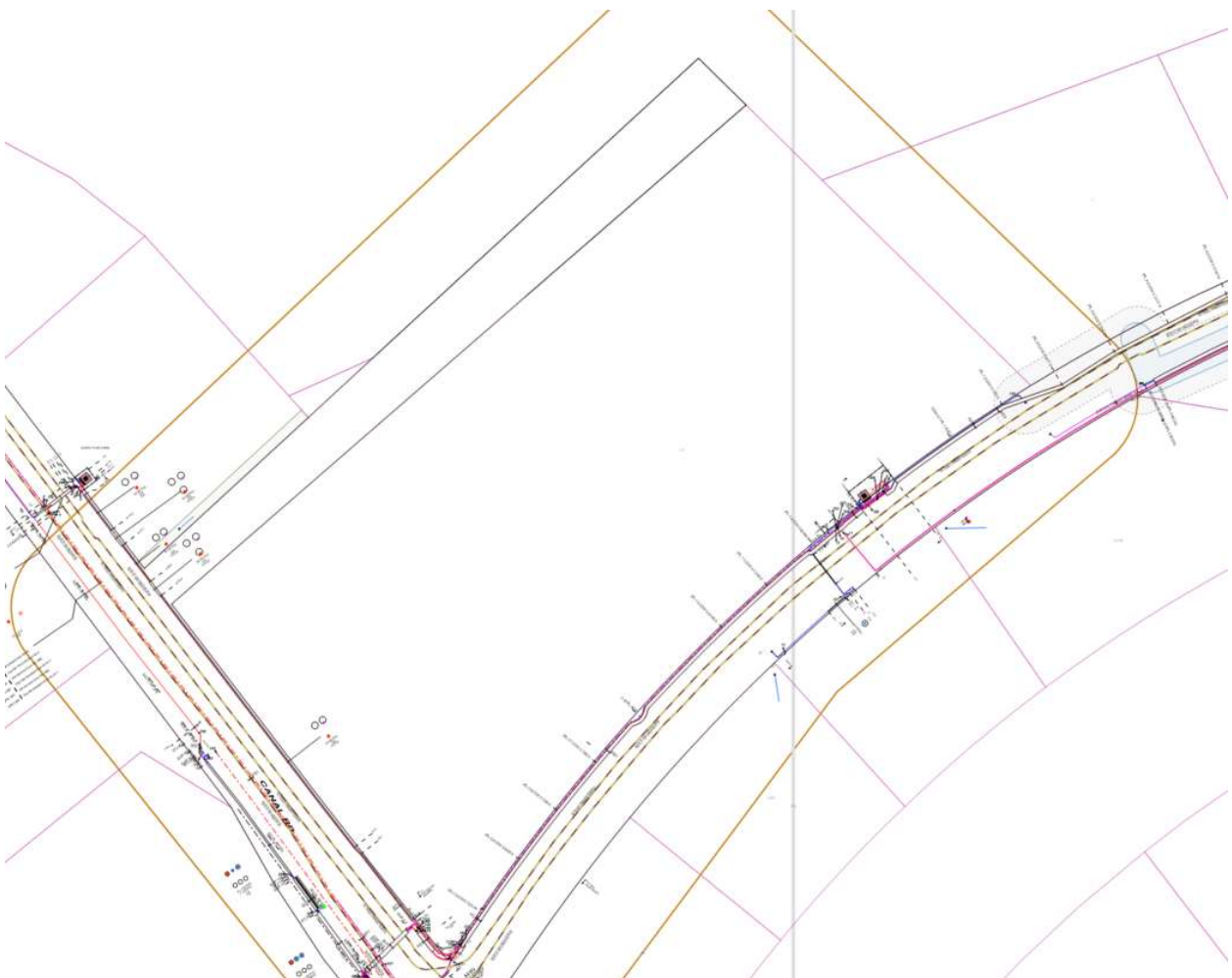


Diagram 4.2 – Existing Site Power Supply

4.3 Transgrid – Power Supply

There is a Transgrid 330,000 Volt Power Cable located on both Canal Road and Burrows Road adjacent to the property boundary. This is considered major electrical infrastructure and all care shall be taken with new site connections, excavation etc.

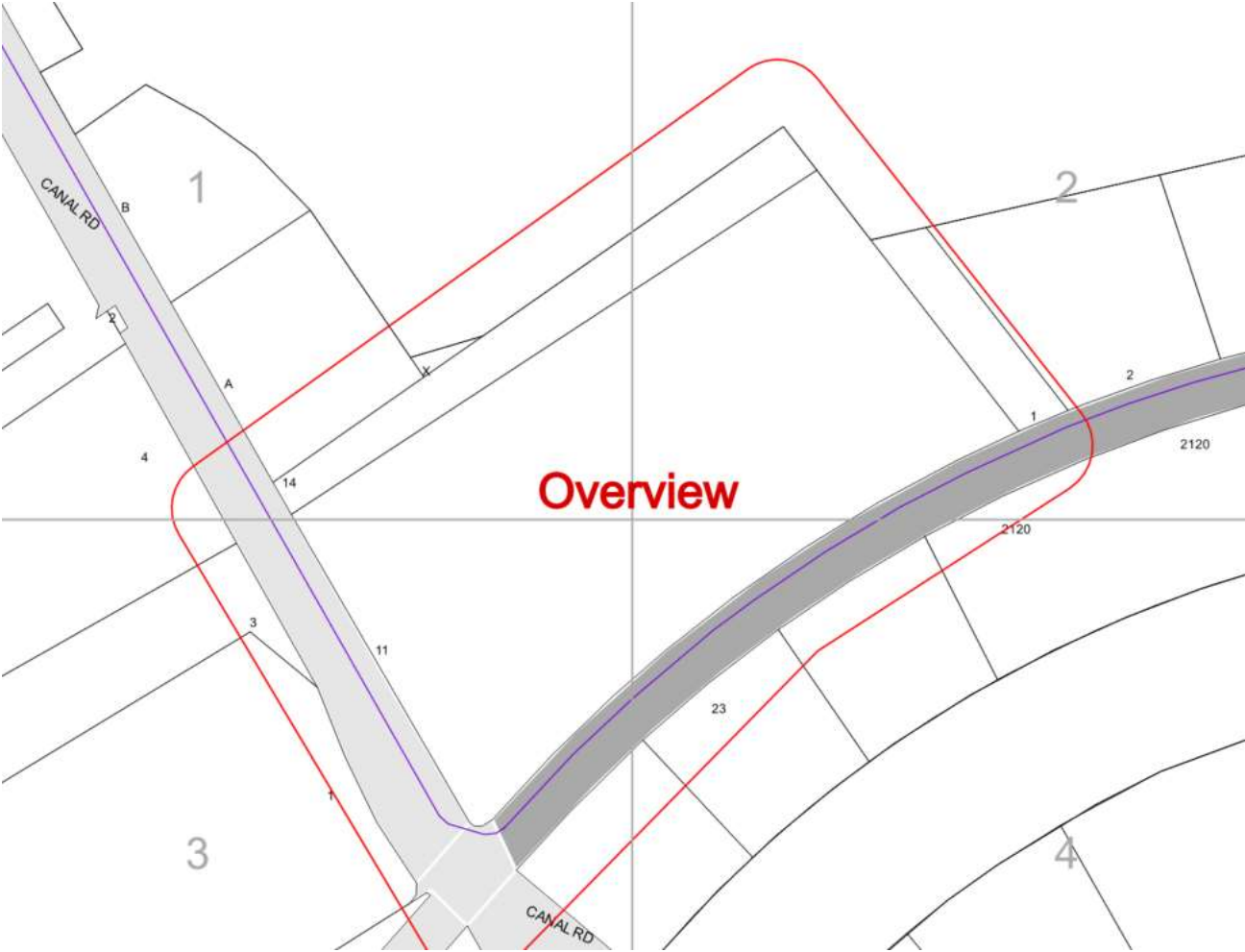


Diagram 4.3 – Existing Transgrid Infrastructure

4.4 Telstra

There is an extensive Telstra copper and conduit network in St Peters. Based from dial before you dig information, there is incoming Telstra cabling running into the proposed site. It is envisaged that the Telstra copper cabling will be disconnected, decommissioned and removed off the site.

Below is dial before you dig info for Telstra services showing the incoming Telstra cabling to the proposed site.

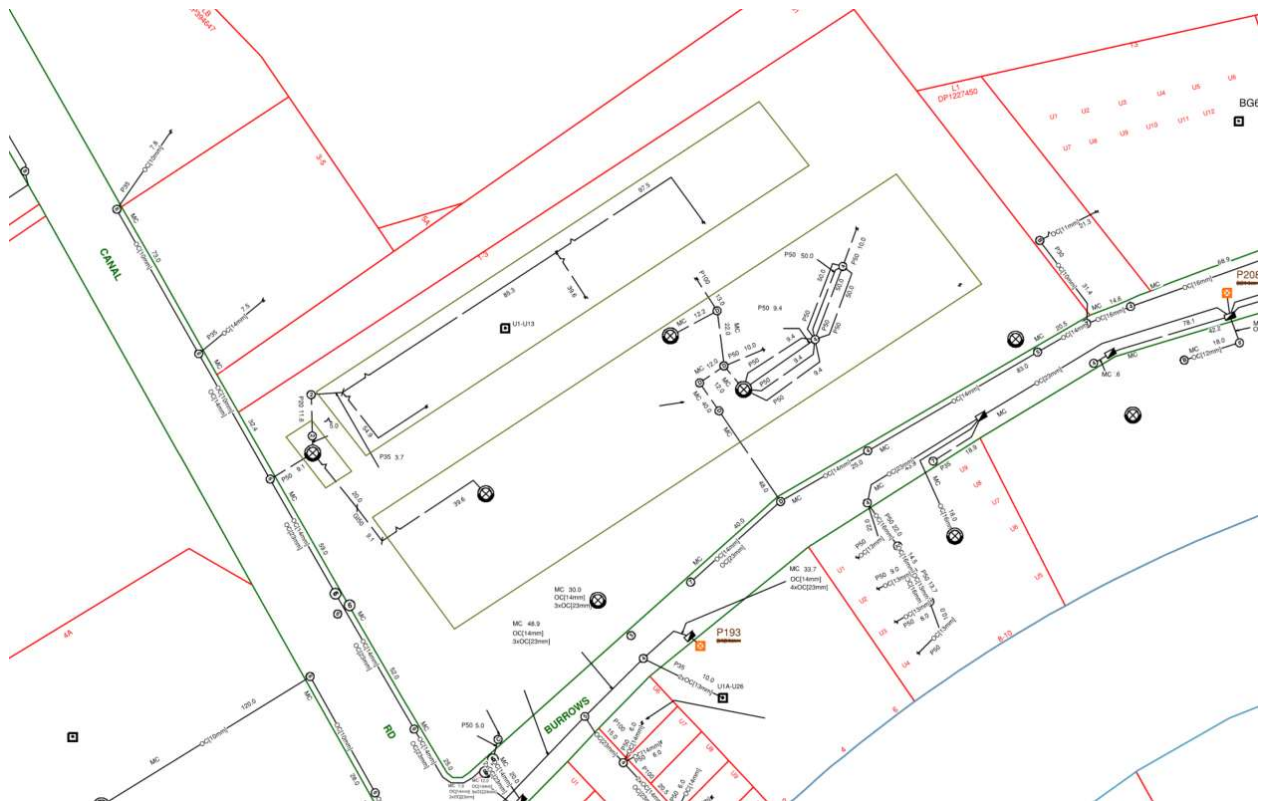


Diagram 4.4 – Existing Telstra Communications Map

4.5 Optus

There is Optus fibre network in St Peters. This service is available to our site. Based on the dial before you dig information, there appears to be no fibre cabling running into the proposed site.

Below is dial before you dig depicting an Optus fibre is not running into the site.

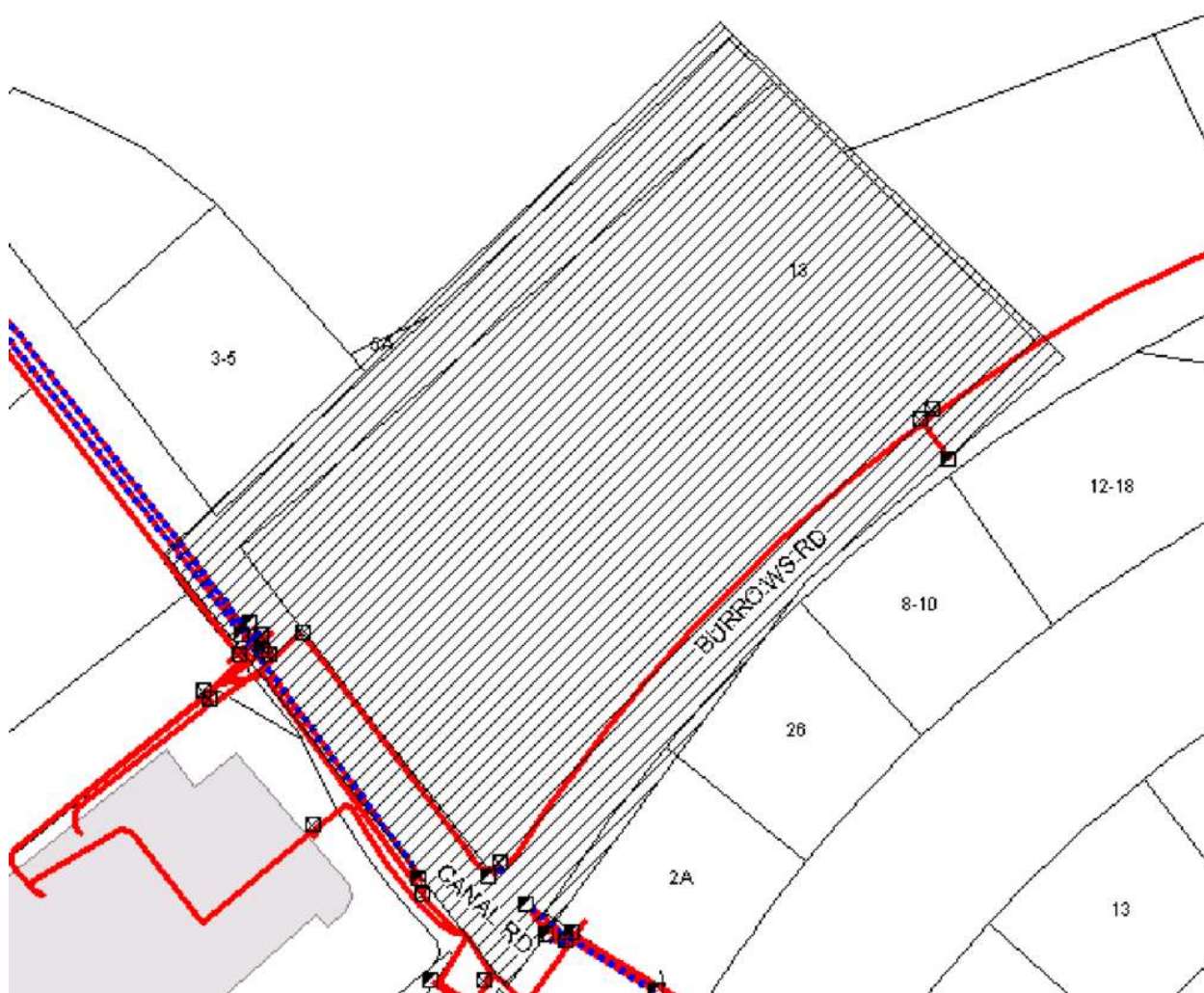


Diagram 4.5 – Existing Optus Communications Map

4.6 National Broadband Network

There is NBN available to the site. NBN infrastructure is located in both Canal Road and Burrows Road. There is currently no site node/connection point installed.



Diagram 4.6 – Existing NBN Locations Map

4.7 Other Communication Services

There are other communication service providers that are close to the vicinity of our site. Below is the communication service provider and what service is currently running into the site.

- AARNet (Service is not affected)
- NextGen (Service is not affected)
- TPG (Service is not affected)
- Verizon (Service is not affected)

Services that are affected as noted above are minor proposed works. The service provider will need to be contacted to remove and disconnect the service from the existing building to make space for the new proposed development.

4.8 Sydney Water – Sewer

The existing site and surrounding areas are not serviced via a Sydney Water Gravity Sewer system, with all surrounding sites and the current development serviced via a rising main system.

The existing site rising main connection would be proposed to be reused for these works, with confirmation from a WSC on behalf of Sydney Water required via a feasibility study/submission to Sydney Water for the proposed new works.

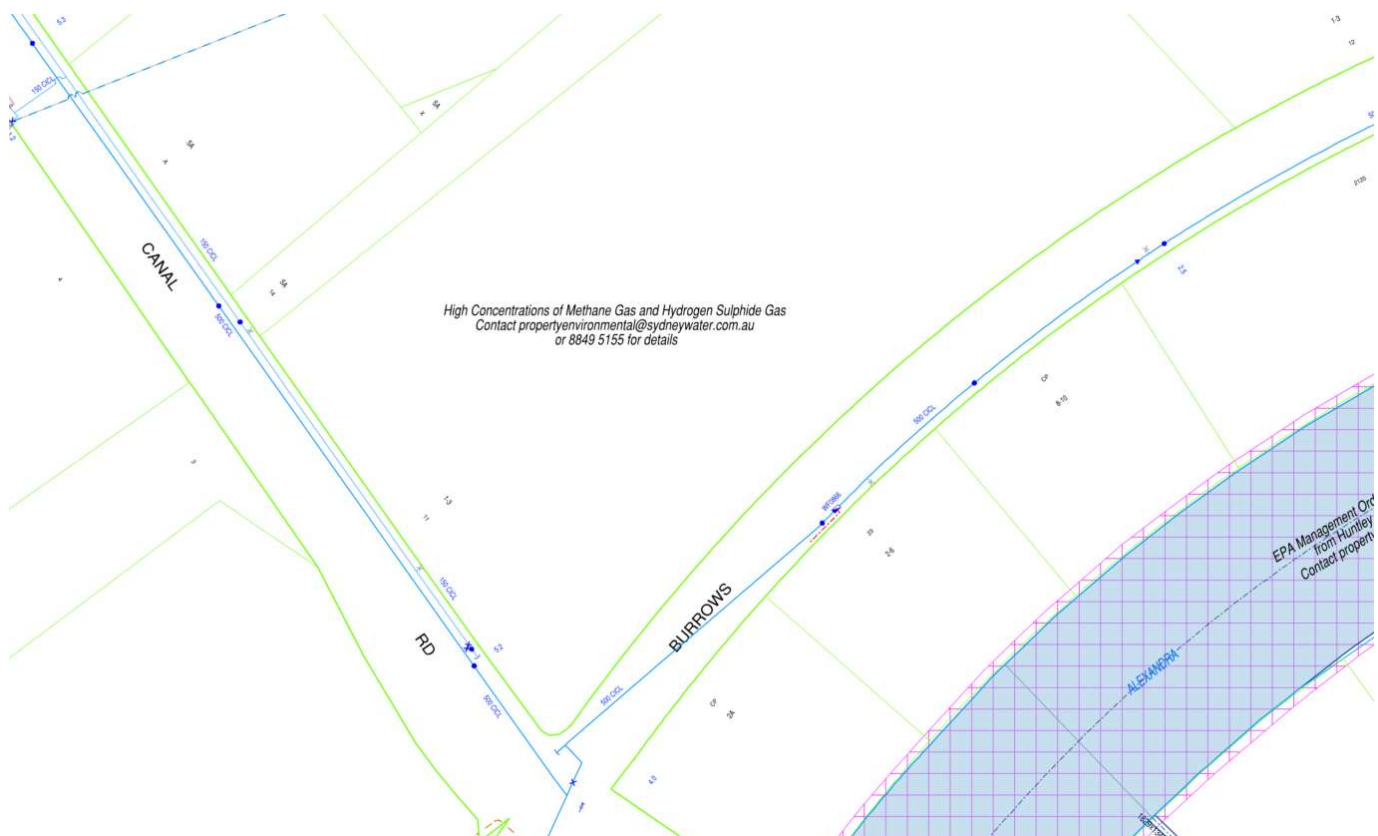


Diagram 4.8 a – Existing Sydney Water Map

HDR I Hurley Palmer Flatt note, the Sydney Water Map details the site has a high concentration of methane gas and hydrogen sulphide gas. HDR I Hurley Palmer Flatt have contacted Sydney Water – Refer to Appendix B for Sydney Water Response (please note it is recommended a Geotechnical Engineer be engaged to confirm existing site soil requirements).

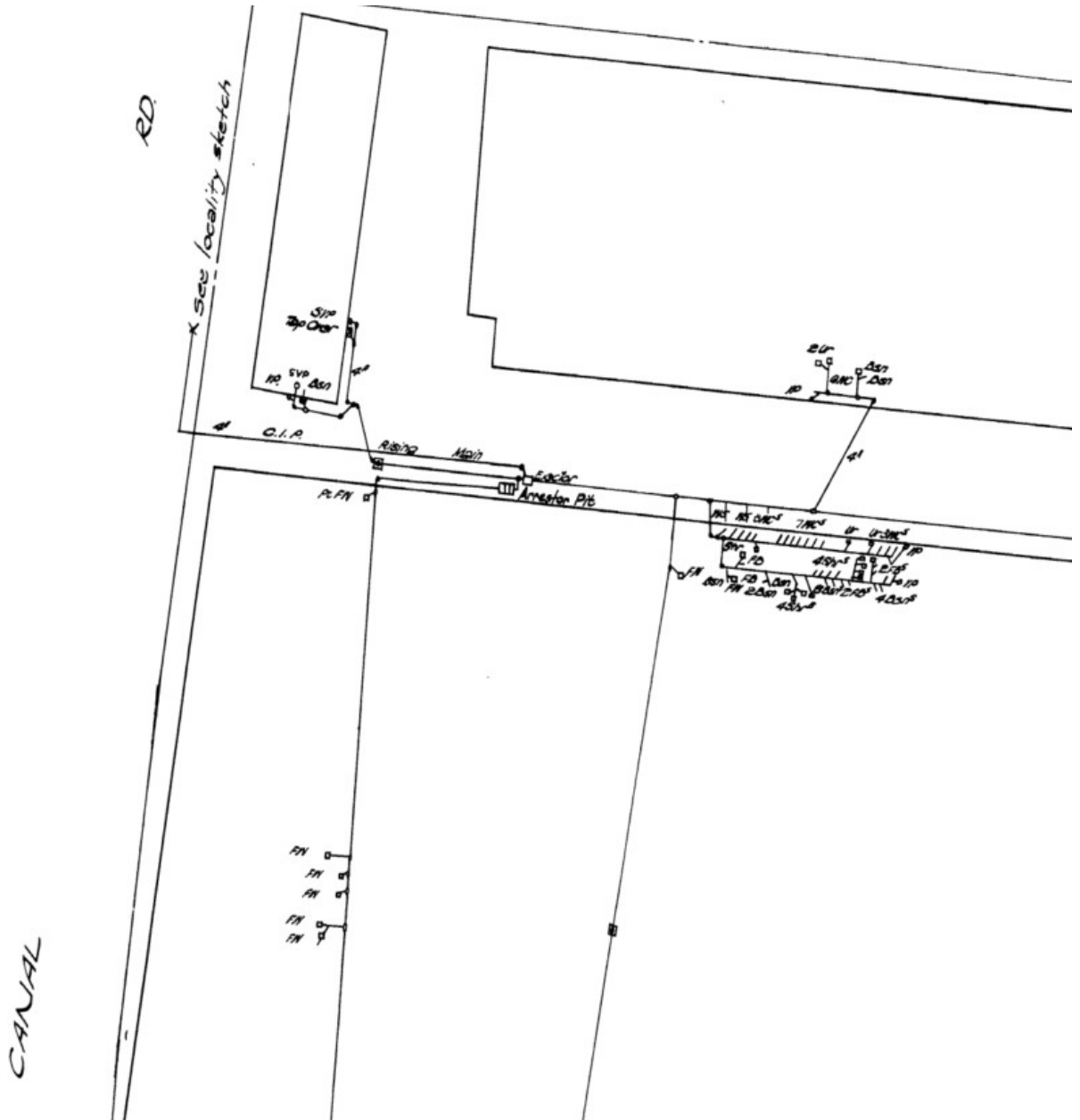


Diagram 4.8 b – Existing Sewer Service Diagram (House Drainage)
(Refer to Appendix C for Complete Sewer Service Diagram)

4.9 Sydney Water – Water

The existing site is served via a 150mm Cast Iron Cement Lined (CICL) Water Main located in Canal Road, and a 500mm Cast Iron Cement Lined (CICL) Trunk Water Main located in Canal Road and Burrows Road. The new proposed works would connect to the existing 150mm CICL Sydney Water Main located in Canal Road subject to a Sydney Water feasibility study

Existing site connections are required to be made redundant and removed within the property by a Sydney Water accredited Plumber and in accordance with Sydney Water requirements to allow for the construction of the new building footprint.

A Sydney Water Statement of Available Pressure and Flow has been received (refer to Appendix D), with the maximum flow rate of 50 litres/second @ 390 meters head available. HDR | Hurley Palmer Flatt note the new works will require fire tanks due to the classification to serve the High Hazard sprinkler system.

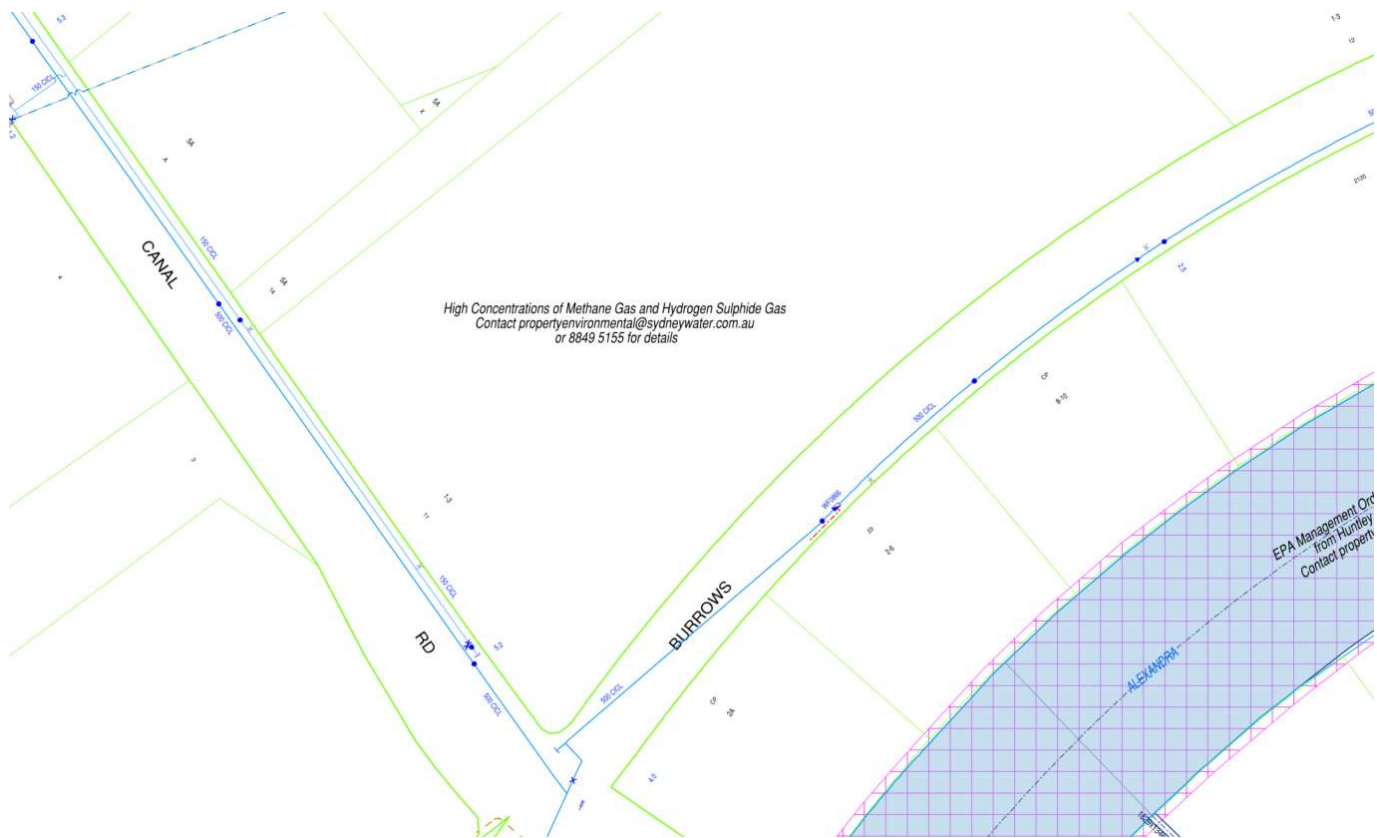


Diagram 4.9 – Existing Sydney Water Map

4.10 City of Sydney – Stormwater

The existing site is served via council stormwater mains located in Canal Road and Burrows Road. The two main points of connection for the site are the kerb inlet pit located at the corner of Canal Road and Burrows Road and the kerb inlet pit located mid way along the southern boundary in Burrows Road.

The existing City of Sydney Council infrastructure indicated the potential to support the proposed building, due to there being no additional impervious area subject to City of Sydney review during the DA submission of Civil stormwater plans.



Diagram 4.10 – City of Sydney Council Stormwater Map

4.11 Inner West Council – Stormwater

The existing site is traversed via a council stormwater main through the northern driveway. The site is served via kerb entry pits located along Canal Road discharging into the adjacent Canal.

The existing City of Sydney Council infrastructure indicated the potential to support the proposed building, due to there being no additional impervious area subject to Inner West Council review during the DA submission of Civil stormwater plans.

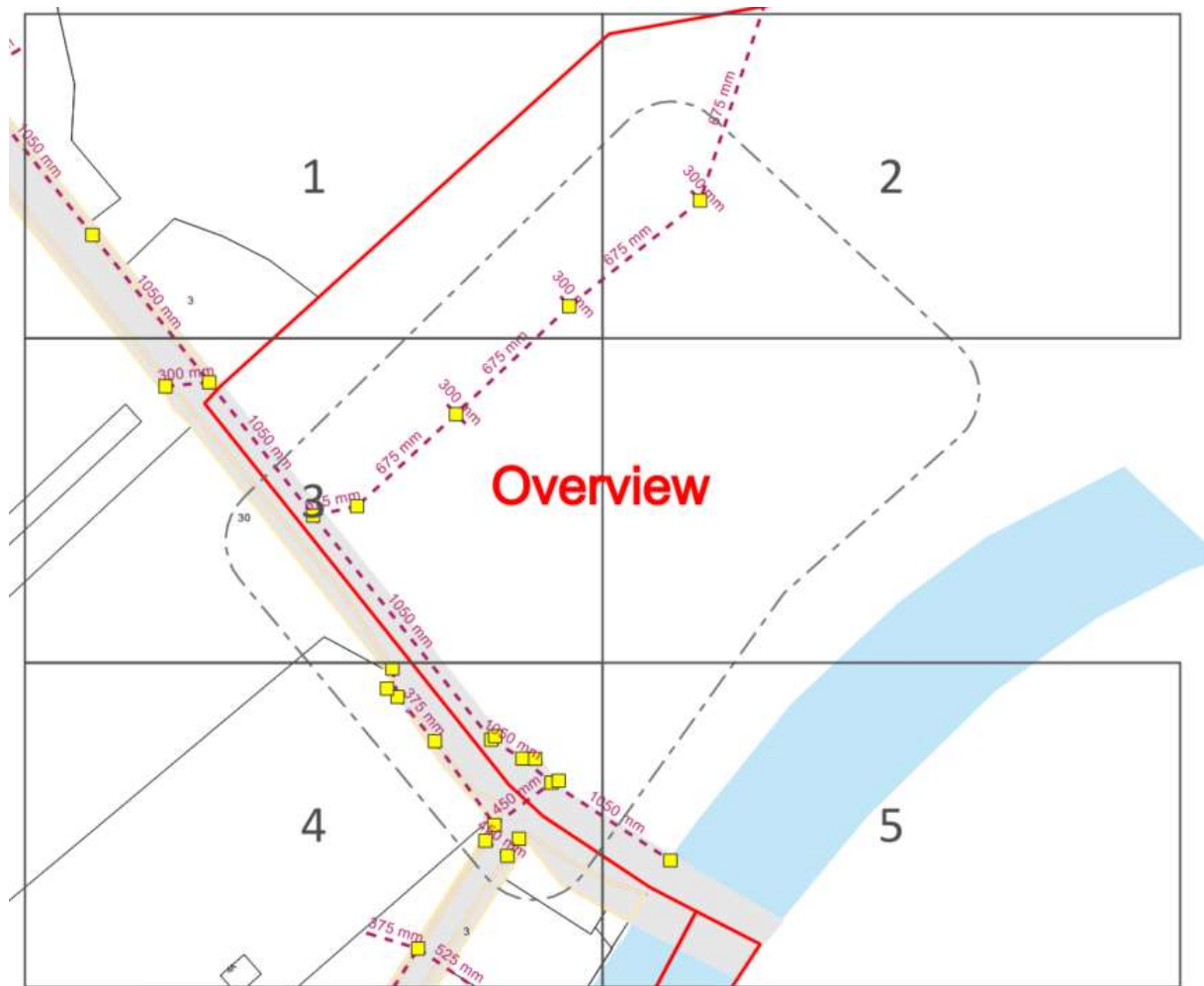


Diagram 4.11 – Inner West Council Stormwater Map

4.12 Gas Services

The existing site is served via a 75mm 210 kPa Nylon Gas Main located in Burrows Road.

Existing site connections are required to be made redundant and removed within the property to allow for the construction of the new building footprint.

The existing Jemena infrastructure indicates the potential to support the proposed new building and increase in GFA subject to approval and letter of offer from Jemena.



Diagram 4.12 – Jemena Gas Main Map

4.13 Sydney Desalination Plant

The existing site is crossed at the upmost north eastern corner of the site via a Sydney Desalination Plant Pipeline. The pipeline is protected by multiple gazetted easements. HDR | Hurley Palmer Flatt recommend a detailed survey plan and all property information pertaining to easements be reviewed as part of the Sydney Desalination Plant Pipeline.

The existing Pipeline does not impact any proposed new building works, subject to final confirmation with Sydney Desalination Plant.

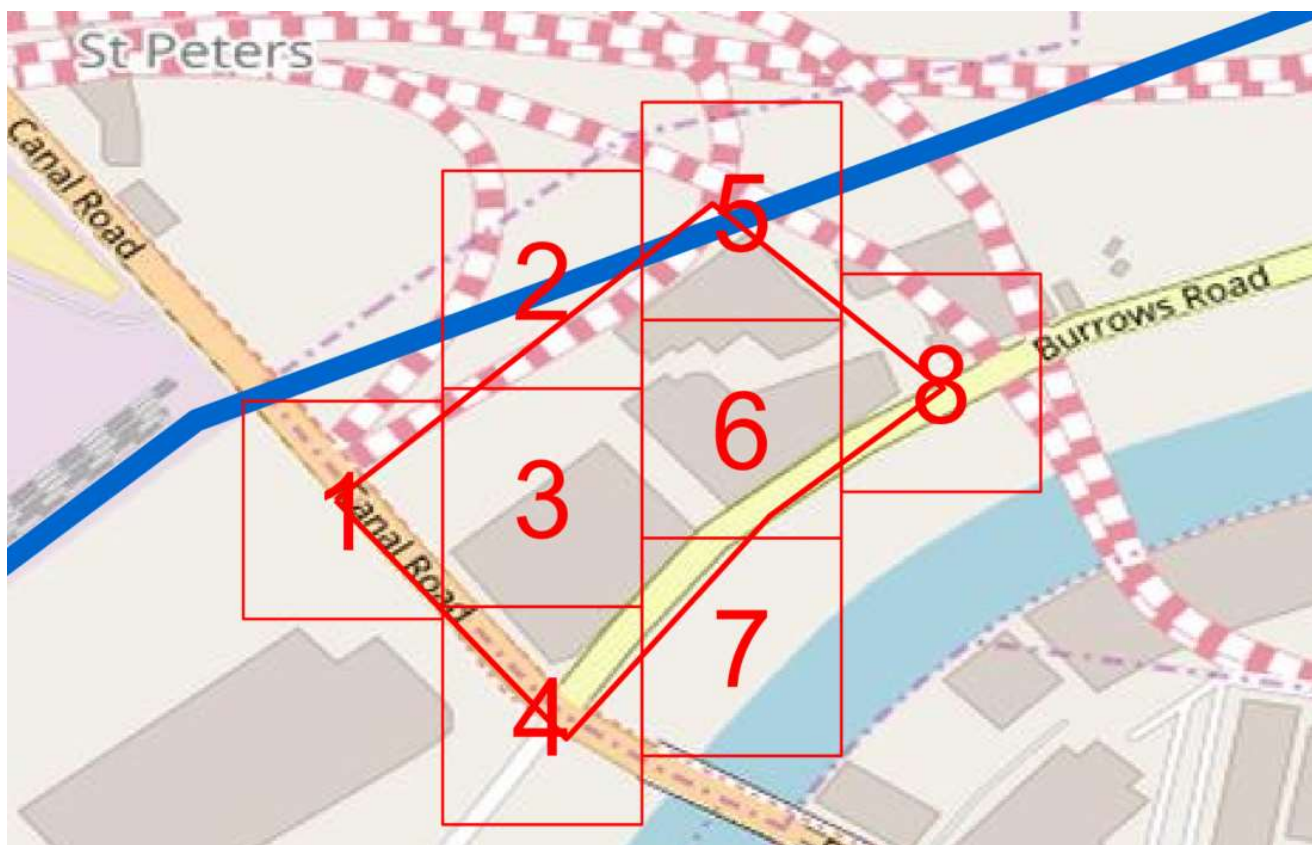


Diagram 4.13 – Sydney Desalination Pipeline Main Map

5.0 SUMMARY OF AUTHORITY CONSULTATION

5.1 Electrical Services

A preliminary maximum demand was undertaken. The maximum demand was assessed to be in the order of 2800 amps three phase.

An application has been issued to Ausgrid, with a Design Services Offer received noting no upgrades required to the Ausgrid infrastructure – a requirement for the demolition of the existing substation and installation of 2 x new Kiosks is required to serve the proposed development. HDR | Hurley Palmer Flatt recommend the Design Services Offer be updated to reflect the new scheme's associated max demand calculation.

5.2 NBN, Telstra and Optus Services

There is NBN available to the site.

There is minor works associated with Telstra. Telstra will be required to be contacted to disconnect and remove the existing services prior to demolition. There is no impact on Optus services as there is no service running into the site.

5.3 Other Communication Services

Based on the dial before you dig information, there is no services affected by the other communication providers.

5.4 Water and Sewer Services

Initial review of the existing Water and Sewer utilities indicates the potential to support the proposed development. HDR | Hurley Palmer Flatt recommend a feasibility study required to be carried out with Sydney Water confirming the existing infrastructure can support the required Waste and Potable Water estimates.

APPENDIX A
AUSGRID DESIGN SERVICES OFFER

DESIGN RELATED SERVICES OFFER

Premises address: 3 BURROWS ROAD SOUTH, ST PETERS 2044

NMI - Number: TBA

Webform Ref 39909

MC Reference: 1900095611

AP Reference: 800286184

This offer is made on 09.10.2019

By *Ausgrid* of 24 Campbell St, Haymarket NSW 2000.

To the **connection applicant** named in the *connection application* received on 10/3/2019 in respect of the *premises* referred to above.

Ausgrid has determined that network alterations are required to connect your development and we cannot proceed to a connection or relocation offer at this stage. To enable Ausgrid to further consider and process your application you will require a certified design and associated certification number. Your application remains technically incomplete until you have been issued a certification number.

This Design Related Services Offer provides guidance on how to obtain a certified design and associated certification number.

Scope of Network Alterations

Ausgrid has determined that the following works are likely to be required:

- **Stage 1:** Establish 2 x L type kiosks substations and commission.
- **Stage 2 :** Transfer network distributors from substation S.1629 to proposed kiosk substations and decommission substation S.1629

These works are classified as contestable, which means that you are required to fund the design and some or all of the construction works. If you have not already done so, you will need to engage and manage suitably qualified contractors, known as Accredited Service Providers (ASPs) to undertake the design and construction.

Initially, your ASP Level 3 (ASP/3) will undertake the design, and then your ASP Level 1 (ASP/1) will undertake construction in accordance with the design and Ausgrid's policies and standards. The timeframe for the works will vary depending on factors such as the complexity and the way in which you manage your ASP's.

Once the works have been satisfactorily completed and electrified, the premises connection assets will be owned and maintained by Ausgrid as part of the electricity distribution network.

Contract for Design Related Services

This letter is an offer for the Applicant to enter into a Contract for Design Related Services with Ausgrid. It remains open for acceptance for 45 business days. No work will be undertaken by *Ausgrid* until a Design Contract is in place.

You are encouraged to contact ASP/3's and ASP/1's to understand the likely overall costs you will incur for design and construction before you accept and commit to the Contract for Design Related Services.

IMPORTANT: The contractual arrangements provide the framework for a design to be prepared by your ASP/3, and NOT by *Ausgrid*. *Ausgrid's* fees as outlined below are for the design related network services we provide during the design phase, and are IN ADDITION to the fees charged by your ASP/3 in preparing the design.

Acceptance Fees

The acceptance fees relating to the Contract for Design Related Services are outlined in the attached Acceptance Fee Summary and also detailed on the Ausgrid Portal page. *Ausgrid* will invoice **the Applicant** once we receive acceptance via the Ausgrid Portal. The Contract will commence when you pay the invoiced fee.

The acceptance fees are an estimate for the *Ausgrid* services required and are payable up front by the **Applicant**. Further fees may apply for any additional services required and these will be quoted via the Ausgrid Portal on each occasion.

Ausgrid's published rates for our services are amended from time to time in our Alternative Control Services Fee Schedule Publication, and in accordance with the Contract, *Ausgrid* reserves the right to charge the rates that are applicable at the time the service is provided.

Fees for *Ausgrid's* services are in addition to the design and construction costs charged by your ASP's, and some fees may not be refundable if the service has already been provided. Fees and rates are set by the Australian Energy Regulator:

WHAT TO DO NEXT

- To move ahead, please accept the offer (see below) outlined in this document and then pay the invoice that will be forwarded to you
- Engage an ASP Level 3 designer
 - On the Ausgrid Portal, nominate the ASP/3 as the designer for this project
 - Advise the ASP/3 that the Design Information Category for this project is **Standard**

Enclosures:

Contract terms – via website at:
<https://www.ausgrid.com.au/-/media/Documents/Technical-Documentation/Contracts-and-Deeds/Contract-for-Design-Related-Services/Design-Contract-2017.pdf>.

Acceptance Fee Summary – attached

PLEASE REVIEW THE OFFER OUTLINED IN THIS LETTER, ALONG WITH THE TERMS LINKED ABOVE, THEN PROCEED TO THE AUSGRID PORTAL

IF YOU WISH TO ACCEPT THIS OFFER

SELECT "ACCEPT" AGAINST THE OFFER ON THE AUSGRID PORTAL WITHIN 45 BUSINESS DAYS

IF YOU WISH TO DECLINE THE OFFER

SELECT "DECLINE" AGAINST THE OFFER ON THE AUSGRID PORTAL.

Should you wish to proceed in the future, a new connection application will need to be lodged.

DESIGN RELATED SERVICES OFFER

ACCEPTANCE FEE SUMMARY

Service Description	Unit	Quantity	Price per unit	Total Price
Administration of Contestable Works - General - Design	Service	1.00000	\$236.71	\$236.71
Design Certification - Other - R3	Hour	15.00000	\$196.39	\$2,945.85
Design Information - Standard	Hour	10.00000	\$196.39	\$1,963.90
SUBTOTAL				\$5,146.46
GST (10%)				\$514.65
TOTAL				\$5,661.11

These fees are an **initial estimate** for the services we will require to provide throughout the design contract and are payable up front by the **Applicant**, on acceptance of the contract.

IMPORTANT: Additional services may be required through the course of the design contract (e.g. asset number requests, specialist services, consultancy services). The fee for such services will be billed to the **Applicant** in accordance with the contract, and are payable prior to design certification. Typical examples include, but are not limited to, fees for asset creation, additional certification effort and requests to vary network standards.

APPENDIX B
SYDNEY WATER – CONTAMINATED SOIL RESPONSE

David McKay

From: PropertyEnvironmental <propertyenvironmental@sydneywater.com.au>
Sent: Friday, 11 October 2019 4:38 PM
To: David McKay
Subject: RE: 3 Burrows Road St Peters - Referred

Hi David,

The annotation is related to current or former contaminated land that has been reported to NSW EPA. Further information is available on NSW EPA's contaminated land record (<https://apps.epa.nsw.gov.au/prclmapp/searchregister.aspx>) and / or their current or former notified contaminated sites list (<https://www.epa.nsw.gov.au/your-environment/contaminated-land/notification-policy/contaminated-sites-list>).

Sydney Water includes this information on our service diagrams for internal health and safety management reasons so our workers know there may be residual contamination if they plan to undertake any subsurface works. Please note the contamination is not related to Sydney Water or our infrastructure.

Regards,

Lewis

Lewis Fogerty
A/Team Manager – Environmental Services
Property
Sydney Water, Level 13, 1 Smith Street, Parramatta NSW 2150

Ph 02 8849 4192
Mob 0428 364 533
lewis.fogerty@sydneywater.com.au
All enquiries to propertyenvironmental@sydneywater.com.au

From: David McKay <david.mckay@hurleypalmerflatt.com>
Sent: Friday, 11 October 2019 1:12 PM
To: PropertyEnvironmental <propertyenvironmental@sydneywater.com.au>
Subject: 3 Burrows Road St Peters - Referred

Hi,

We are looking into a new design for a property at 3 Burrows Road St Peters and the Sydney Water DBYD has noted to contact this email due to 'high concentrations of methane gas and hydrogen sulphide gas'. Can you confirm any requirements/applications we need to undertake as per this note?

Any queries please let me know.

Kind Regards,

David McKay

Associate

HDR | Hurley Palmer Flatt
Level 12
6 O'Connell Street
Sydney NSW 2000 Australia

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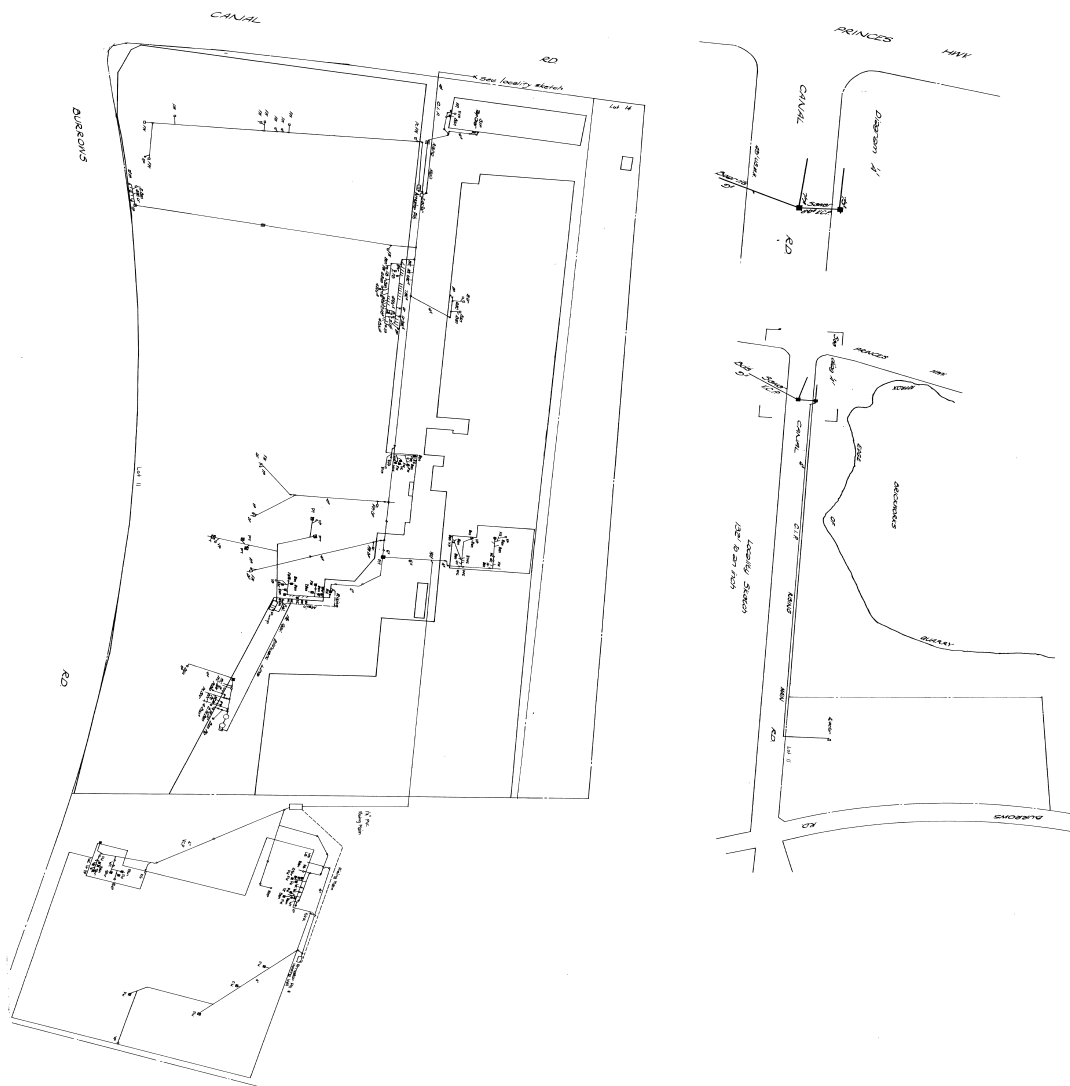
NOTICE: This email is confidential. If you are not the nominated recipient, please immediately delete this email, destroy all copies and inform the sender. Sydney Water Corporation (Sydney Water) prohibits the unauthorised copying or distribution of this email. This email does not necessarily express the views of Sydney Water. Sydney Water does not warrant nor guarantee that this email communication is free from errors, virus, interception or interference.

APPENDIX C
SEWER SERVICE DIAGRAM

Sewer Service Diagram

Application Number: 767456

334-1008
 Approved by: *[Signature]*
 Date: 19/11/2019
 No. 2019/000



Document generated at 19-11-2019 11:12:33 AM

Disclaimer

The information in this diagram shows the private wastewater pipes on this property. It may not be accurate or to scale and may not show our pipes, structures or all property boundaries. If you'd like to see these, please buy a **Service location print**.

APPENDIX D
SYDNEY WATER PRESSURE AND FLOW ENQUIRY

Statement of Available Pressure and Flow

Date: 14/11/2019

Pressure & Flow Application Number: 742263
Your Pressure Inquiry Dated: 2019-10-09
Property Address: 1-3 Burrows Road, Alexandria NSW 2015

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: Canal Road	Side of Street: East
Distance & Direction from Nearest Cross Street	60 metres North from Burrows Road
Approximate Ground Level (AHD):	3 metres
Nominal Size of Water Main (DN):	150 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	72 metre head
Minimum Pressure	40 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	40
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	41
	10	41
	15	41
	20	41
	26	40
	30	40
	40	40
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	50	39
	5	40
	10	40
	15	40
	20	40
	30	39
Maximum Permissible Flow	40	39
	50	38
	60	38
	67	37

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

swtapin@sydneywater.com.au

General Notes

This report is provided on the understanding that (i) the applicant has fully and correctly supplied the information necessary to produce and deliver the report and (ii) the following information is to be read and understood in conjunction with the results provided.

1. Under its Act and Operating Licence, Sydney Water is not required to design the water supply specifically for fire fighting. The applicant is therefore required to ensure that the actual performance of a fire fighting system, drawing water from the supply, satisfies the fire fighting requirements.
2. Due to short-term unavoidable operational incidents, such as main breaks, the regular supply and pressure may not be available all of the time.
3. To improve supply and/or water quality in the water supply system, limited areas are occasionally removed from the primary water supply zone and put onto another zone for short periods or even indefinitely. This could affect the supply pressures and flows given in this letter. This ongoing possibility of supply zone changes etc, means that the validity of this report is limited to one (1) year from the date of issue. It is the property owner's responsibility to periodically reassess the capability of the hydraulic systems of the building to determine whether they continue to meet their original design requirements.
4. Sydney Water will provide a pressure report to applicants regardless of whether there is or will be an approved connection. Apparent suitable pressures are not in any way an indication that a connection would be approved without developer funded improvements to the water supply system. These improvements are implemented under the Sydney Water 'Urban Development Process'.
5. Pumps that are to be directly connected to the water supply require approval of both the pump and the connection. Applications are to be lodged online via Sydney Water Tap in™ system - Sydney Water Website – www.sydneywater.com.au/tapin/index.htm. Where possible, on-site recycling tanks are recommended for pump testing to reduce water waste and allow higher pump test rates.
6. Periodic testing of boosted fire fighting installations is a requirement of the Australian Standards. To avoid the risk of a possible 'breach' of the Operating Licence, flows generated during testing of fire fighting installations are to be limited so that the pressure in Sydney Water's System is not reduced below 15 metres. Pumps that can cause a breach of the Operating Licence anywhere in the supply zone during testing will not be approved. This requirement should be carefully considered for installed pumps that can be tested to 150% of rated flow.

Notes on Models

1. Calibrated computer models are used to simulate maximum demand conditions experienced in each supply zone. Results have not been determined by customised field measurement and testing at the particular location of the application.
2. Regular updates of the models are conducted to account for issues such as urban consolidation, demand management or zone change.
3. Demand factors are selected to suit the type of fire-fighting installation. Factor 1 indicates pressures due to system demands as required under Australian Standards for fire hydrant installations. Factor 2 indicates pressures due to peak system demands.
4. When fire-fighting flows are included in the report, they are added to the applicable demand factor at the nominated location during a customised model run for a single fire. If adjacent properties become involved with a coincident fire, the pressures quoted may be substantially reduced.
5. Modelling of the requested fire fighting flows may indicate that local system capacity is exceeded and that negative pressures may occur in the supply system. Due to the risk of water contamination and the endangering of public health, Sydney Water reserves the right to refuse or limit the amount of flow requested in the report and, as a consequence, limit the size of connection and/or pump.
6. The pressures indicated by the modelling, at the specified location, are provided without consideration of pressure losses due to the connection method to Sydney Water's mains.