

5th December 2014

Services Infrastructure Northside Private Hospital *Due Diligence Report*



Prepared by:



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Authority Utility Supply Report

Electrical, Communication, Hydraulic
Engineering & Fire Protection Services

Northside Private Hospital St Leonards

Mental Health

Prepared for: DA Submission

Revision: C

Document no: DSA 214090

Revision	Revision Description	Date
A	For Preliminary information	12 Nov. 14
B	Submitted for review and DA Submission	8-Dec-14
C	Minor update to Introduction deleting comment on storm water as covered in report	8-Dec-14

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A Executive Summary

The proposed Artarmon Mental Health Facility will require with 'fit for purpose' Electrical, Communications and hydraulic services systems.

This report addresses authority utility supply services available for this project.

Scope of services covered within this report include:

- Power Systems connected to the Ausgrid Network.
- Communications Systems providers proximity to site.
- NBN availability
- sewerage systems provided by Sydney Water
- potable and Fire Water supplies provided by Sydney Water
- Stormwater disposal connection point provided by Willoughby Council
- natural gas supply provided by Jemena

Authority supply services can be summarised as follows:

- Liaison with Ausgrid was entered into and an NECF01 Enquiry Form submitted.
- Application was made to NBNCo. In relation to NBN availability to the site. Since been rejected as development does not meet NBNCo. Criteria and no NBN Services are available near the site
- Application has been submitted to Telstra as a result of the NBNCo rejection.
- Other communications providers assets do pass by the site, but application has not been made at this point.
- Consultation with Willoughby Council has commenced to verify the condition, capacity, compliance and reliability of the existing stormwater drainage system
- Consultation with Sydney Water has commenced to verify the condition, capacity, compliance reliability and efficiency of the existing Sydney Water sewer mains and water mains infrastructure and have found them to be acceptable for connection. Main extension will be required to suit the proposed sub division of the land.
- Formal section 73 application to Sydney Water is required upon DA approval of the building and sub division to confirm exact Sydney Water requirements.
- Sydney Water pressure / flow computer model on 21 November 2014, confirming suitability for the proposed development works for domestic water and fire hydrant supply.
- water storage and booster pumps be considered to ensure adequate water supply security
- Sydney Water pressure / flow computer model on 21 November 2014, confirming emergency water storage tanks and associated pumping equipment will be required, if the building is protected with automatic fire sprinklers I accordance with AS2118.1-1999.
- Sydney Water confirmation that water supply provided will be in accordance with Australian drinking water guidelines. Based on health industry "best design practice, centralized water filtration plant is recommended
- consultation with Jemena has commenced to verify the condition, capacity, compliance reliability and efficiency of the existing Jemena gas mains infrastructure and have found them to be acceptable for connection
- further detailed design calculations required and application to Jemena / nominated gas supply retailer prior to construction.

B Introduction

The proposed Northside Private Hospital Artarmon development works comprises of:

- Mental Health Facility with 170 patient care beds , consulting and ECT
- Demolition of existing Car show room
- Construction of additional level of car parking spaces

New building works are generally proposed to be serviced as shown on the site services 'masterplans'.

This utility supply report describes the Authority infrastructure capacity to service the proposed Northside Private Hospital Project with Power, communications, sewage, water and natural gas loads.

Electrical and communications services include:

- Power for the site and preliminary Substation sizing.
- Communications providers available around the site.

Hydraulic and fire services include:

- Sewerage
- Domestic water supply
- Fire protection water supply (Fire Hydrant and Fire Sprinkler Protection)
- Natural gas supply

C Utility Supply Description

Authority services adequacy is summarized within the information below

C.1 Electrical Supplies and Substation Arrangements

Supply authority is Ausgrid.

A preliminary estimate of the required power capacity for the proposed development is in the order of 950kVA. A new chamber or pad mount substation will required to provide the power requirements for the new development.

An NECF01 Ausgrid Connection Query Form was submitted to Ausgrid. With the Connection Query form, the preliminary maximum demand was also submitted. Refer appendix H.

Ausgrid have advised the proposed development, if it goes ahead, will require a substation, and that the Ausgrid network can support the proposed development.

From the Dial Before You Dig repose from Ausgrid, the High Voltage network passes by the development in Frederick Street and could be connected into to service a new dedicated substation for the proposed development

It should be noted that Ausgrid high tension transmission lines travel along Herbert and Frederick streets and additional care will be required if works are carried out near these cables.

Ausgrid policy is now for the developer to bear the costs associated with the supply and install of the substation, including the transformer/kiosk. There may be some deductible items that Ausgrid may reimburse.

Typical easement requirements for a padmount substation to Ausgrid standards is 5.3m x 3.3m. This easement is to be fully located on the development site. Details appendix K

Alternatively, a mini chamber substation could be considered. Details appendix L.

C.2 Communications

C.2.1 Communications Systems

General

All major telecommunications services traverse in close proximity of the development site.

It should be noted that major fibre optic services are also present and care will be required in the event of any needed excavation.

Telstra

Telstra services are readily available to the site. The local exchange is located near St Leonards CBD area. Fibre Optic and copper services can be made available subject to finalisation upon formal application for the services.

Application for communications services has been made to Telstra as a follow up to the NBNCo. application. We are awaiting formal input to be received from Telstra but do not anticipate any communications supply issues.

Presently, it appears that a 50pr service exists to the proposed site. This will need to be removed prior to any redevelopment.

Refer to Appendix M for Application Details and DBYD Plans

NBN

NBN is not available to the site at this stage and the development does not qualify for NBN services rollout. There are no NBN works in close proximity to the existing development. Application in the future is possible when NBN rollout commences in the area.

Refer to Appendix O for NBNCo. correspondence.

Optus and Uecomm

Optus services are located in the area. Much of the Optus network is installed into common underground ducts shared with the Telstra services. Presently, it appears that the old car showroom on the corner of Herbert and Frederick Streets has an Optus services to it.

Uecomm services are in the area located to the eastern side of Herbert Street only

Any extension of these services may require additional ducting and extension of the network to the proposed site communications room.

Refer to Appendix P for DBYD Plans

Primus Telecom

Primus services are in the area located to the eastern side of Herbert Street only. Any extension of these services may require additional ducting and extension of the network to the proposed site communications room.

Refer to Appendix Q for DBYD Plans

Verizon

Verizon services are in the area. However, there is limited dedicated ducting as most of the Verizon network is installed into the shared Telstra infrastructure. There are no dedicated Verizon pits located in Frederick Street. Any extension of these services may require additional ducting and extension of the network to the proposed site communications room.

Refer to Appendix R for DBYD Plans

Pipe Networks

Pipe Networks services are in the area located to the eastern side of Herbert Street only. Any extension of these services may require additional ducting and extension of the network to the proposed site communications room.

Refer to Appendix S for DBYD Plans

Vocus Communications

Vocus Communications are located in the area. Much of the Vocus Communications network is installed into common underground ducts shared with the Telstra services. Presently, it appears that a dedicated pit is located at the corner of Frederick and Herbert Streets. This pit connects into a Telstra pit and the services then share the Telstra ducting.

Refer to Appendix T for DBYD Plans

AAPT PowerTel

AAPT PowerTel services are in the area. Plans were not provided by the AAPT PowerTel as part of the DBYD request. It is anticipated that the AAPT PowerTel Assets are located in the Telstra Ducting. Any extension of these services may require additional ducting and extension of the network to the proposed site communications room.

Refer to Appendix U for DBYD Correspondence

Nextgen Group

Nextgen Group services are located in the area. The services appear to be installed into a dedicated ducting system and traverse past the site. Any extension of these services may require additional ducting and extension of the network to the proposed site communications room.

Refer to Appendix V for DBYD Plans

C.3 Stormwater

Table 1: Stormwater

Item	Description
Supply Authority contact	Willoughby Council Kasam Mohammed Ph: 97771000
Sewerage main details	The proposed site has the following storm water mains available for connection. Willoughby Council 600mm sewer in Frederick Street on the north west corner of the subject lot. The main then traverse across Frederick street to the north east and passess through the recently constructed "Supa Centre" Refer Appendix A Sketch plan
Condition and reliability	No reports of major failures, blockages or surcharging / flooding of existing storm water mains
Existing Site load	Current 8777m ² lot Current site discharge for 100 year storm = 600l/sec Permissible site discharge = 1.8l/sec per 100m ² = 158l/sec
Proposed additional storm water loads	Existing site is 100% impervious, therefore there will be no additional storm water flow to the street drainage system as part of theses development works. However refer Council requirements for permissible site discharge and On site detention requirements.
Capacity	225mm sewer complies with WSA code for this development. Final application for Section 73 Notice of Requirements will be made upon receipt of DA approval to determine exact sewer utility augmentation requirements.
Council Requirements	The existing 600mm storm water main will need to be extended east on Frederick street to service each proposed lot. Each lot DA application will require storm water management plan which include on site detention, roof water collection and re-use and water quality control measures to eliminate any impact on the existing Council storm water system. Onsite detention is subject to detailed calculations but are conservatively estimated at approximately 300m ³ . Water treatment measures may include one or more of the following: ❖ Retention - pond, wetland or basin; ❖ Retention and filtration – bio-retention system, sand filter, rain garden; ❖ Retention and volume loss – rainwater tank, surface runoff retention tank, infiltration system; ❖ Filtering and conveyance – grassed swale, filtration system; ❖ Gross Pollutant Trap (GPT) – off-line diversion device. in-line diversion device, trash rack, centrifugal displacement systems, pit basket; ❖ Any device that is capable of capturing and retaining the specified pollutant load;

C.4 Sewerage

Table 2: Sewerage

Item	Description
Supply Authority contact	Sydney Water Robert Wickham Email :robert.wickham@sydneywater.com.au Ph: 88493531 Mobile: 0409380200
Sewerage main details	The proposed site has the following sewer mains available for connection. Sydney Water 225mm sewer in Frederick Street. Refer Appendix A Sewer Diagram.
Condition and reliability	No reports of major failures, blockages or surcharging of existing sewer mains Sydney Water sewerage system Infrastructure failure would not significantly impact the operation of the building. Sewerage main surcharge or blockage would discharge via overflow relief gully. Sydney Water would implement emergency repairs and temporary measures to allow the building to operate normally.
Existing sewage loads	Current Lot Allowance(1 x Industrial lot approximately 9000m2) Equivalent Population (EP) based on WSA 02 Table A1 (Equivalent population for synchronous discharges) 150 EP per Hectare $150EP \times 0.9 = 135EP$ Equivalent Tenements (ET based on WSA 02) = $135 \times 3.4 = 4$ $ET \times 0.0021 = \text{Average Dry Weather Flow} - 0.964lsec$ $5 \times 0.0021 \times ET = \text{Peak Dry Weather Flow} - 4.82l/sec$ As the site is substantially "built up" a factor for ground water and rainwater infiltration is conservatively estimated at 20% additional flow. Therefore total estimated design flow is $4.82 \times 2 + 4.82 = 5.784l/sec$
Proposed additional sewage loads	Proposed (2 x industrial lots (1 and 3) and lot 2 containing 102 beds inpatient / hospital beds) Lot 2 Proposed EP = $102 \times 3.4 = 346.8$ Average dry weather flow – 0.728l/sec ADWF = $ET \times 0.0021$ Peak Dry Weather Flow – 3.641l/sec PDWF = $5 \times 0.0021 \times ET$ Maximum instantaneous flow – 6.0lsec plus other synchronous flow of 5.l/sec = 11l/sec approximately
Capacity	225mm sewer complies with WSA code for this development and should have sufficient capacity for the proposed development and subdivision. Final application for Section 73 Notice of Requirements will be made upon receipt of DA approval to determine exact sewer utility augmentation requirements.

C.5 Domestic water

Table 3: Domestic water

Item	Description
Supply Authority contact	Sydney Water Robert Wickham Email :robert.wickham@sydneywater.com.au Ph: 88493531 Mobile: 0409380200
Water main details	The site has the following water mains surrounding the site • Sydney Water 150mm CICL water main in Frederick Street (North Side) • Sydney Water 180mm PE water main in Herbert Street (West Side) • Sydney Water 200mm water main in Herbert Street (East Side) The existing water supply connections to the site are from the 180mm PE water main in Herbert Street. The proposed potable water connections for the proposed subdivision will be as follows:- Lot 1 Existing Lot fronting Herbert street main connections to be retained Lot 2 Proposed MH building lot – 1 x 100 main connections from 150mm CICL water main in Frederick Street (North Side) Lot 3 Proposed vacant lot for future developments – TBC connections from 150mm CICL water main in Frederick Street (North Side) Refer D Water Main Diagram
Existing domestic water supply loads	Current (1 x commercial lots 9000m²) $ET = 150 \times 0.90 = 135ET$ $1ET = 0.73kl/day$ Total load = $12.6ET \times 0.73kl/day = 98.55kl/day$ Probable maximum simultaneous flow – 6.0lsec
Proposed additional domestic water supply loads	Proposed (3 x commercial lots with lot 2 containing 102 beds inpatient / hospital beds) Lot 2 Proposed ET $ET = 102 \times 0.90 = .91.8ET$ (1 ET = 0.73KL/day) Total load = $91.8ET \times 0.73kl/day = 67kl/day$ Probable maximum simultaneous flow – 9lsec
Condition and reliability	Good. No reports of major failures. Emergency water storage to be considered to provide grade 1 security.
Water supply available flow and pressure	Water supply flow and pressure test results at validate that adequate flow and pressure is available, however booster pumps will be required.
Capacity	Water supply flow test results provided by Sydney Water validate adequate flow capacity.

C.6 Fire Service

Table 4: Fire service water supply

Item	Description
Supply Authority contact	Sydney Water Robert Wickham Email :robert.wickham@sydneywater.com.au Ph: 88493531 Mobile: 0409380200
Water main details	The site has the following water mains surrounding the site • Sydney Water 150mm CICL water main in Frederick Street (North Side) • Sydney Water 180mm PE water main in Herbert Street (West Side) • Sydney Water 200mm water main in Herbert Street (East Side) The existing water supply connections to the site are from the 180mm PE water main in Herbert Street. The proposed potable water connections for the proposed subdivision will be as follows:- Lot 1 Existing Lot fronting Herbert street main connections to be retained Lot 2 Proposed MH building lot – 2 x 150 main connections from 150mm CICL water main in Frederick Street (North Side) Lot 3 Proposed vacant lot for future developments – TBC connections from 150mm CICL water main in Frederick Street (North Side) Refer Appendix A Water Main Diagram
Existing fire water supply loads	Fire hydrant 20l/sec for commercial buildings
Proposed fire water supply loads	Fire service = fire hydrant + fire sprinklers Approximately 40 litres second
Condition and reliability	No reports of major failures. Emergency water storage for fire services will be required to provide primary and supplementary water supply for a building with an effective height over 25m.
Water supply available flow and pressure	Emergency water storage for fire services will be required to provide primary and supplementary water supply for a building with an effective height over 25m.Refer Appendix C Fire Flow Results

C.7 Natural gas

Table 5: Natural gas

Item	Description
Supply Authority contact	Jemena Name: Brad Gee (Gas Engineering Officer) Email: Bradley.gee@jemena.com.au Ph:94551513 Mobile: 0429263836
Existing natural gas details	The proposed hospital campus has the following gas mains surrounding the site - Jemena 75mm 210kpa NY gas main in Frederick Street (North Side) - Jemena 32mm 210kpa NY gas main in Herbert Street (West Side 30m south of property boundary)
Existing natural gas supply loads	Unknown
Proposed natural gas supply loads	Refer Appendix E - Proposed gas loads. Total approximately 8,200 MJ/hr for mechanical heating, domestic hot water and commercial kitchen cooking..
Condition and Reliability	No reports of major failures or delivery issues. During gas main failure Jemena would implement emergency repairs and temporary measures to allow hospital to operate normally as soon as possible.
Capacity	Gas authority has advised gas supply for the site can be provided Final determination of contribution charges and / or network augmentation to be confirmed by supply authority upon confirmation of final design loads.

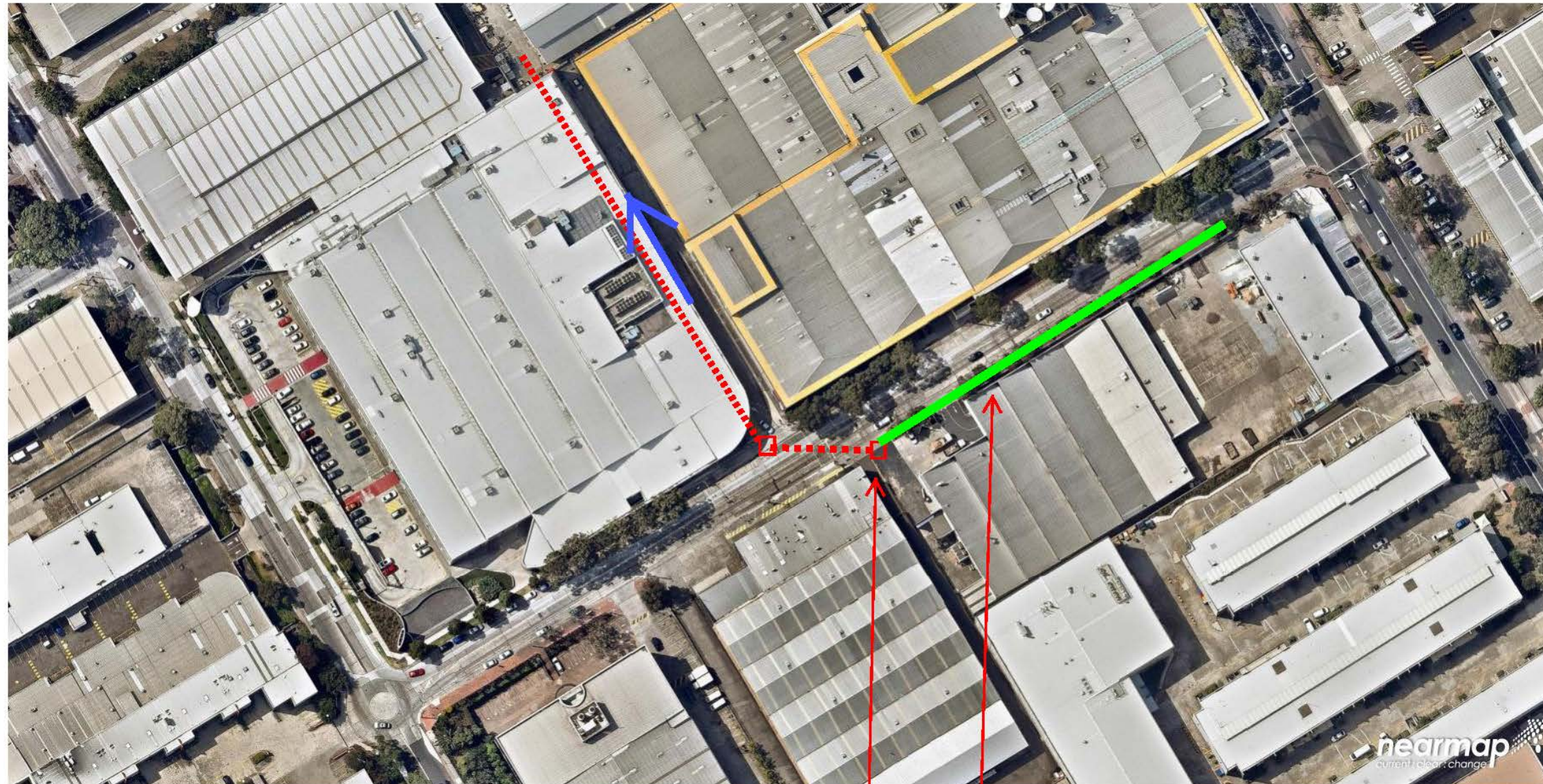
D Appendices

APPENDIX A STORMWATER SKETCH PLAN

12/3/2014

Print - PhotoMaps by nearmap

Date: Fri, 21 Nov 2014 Notes:



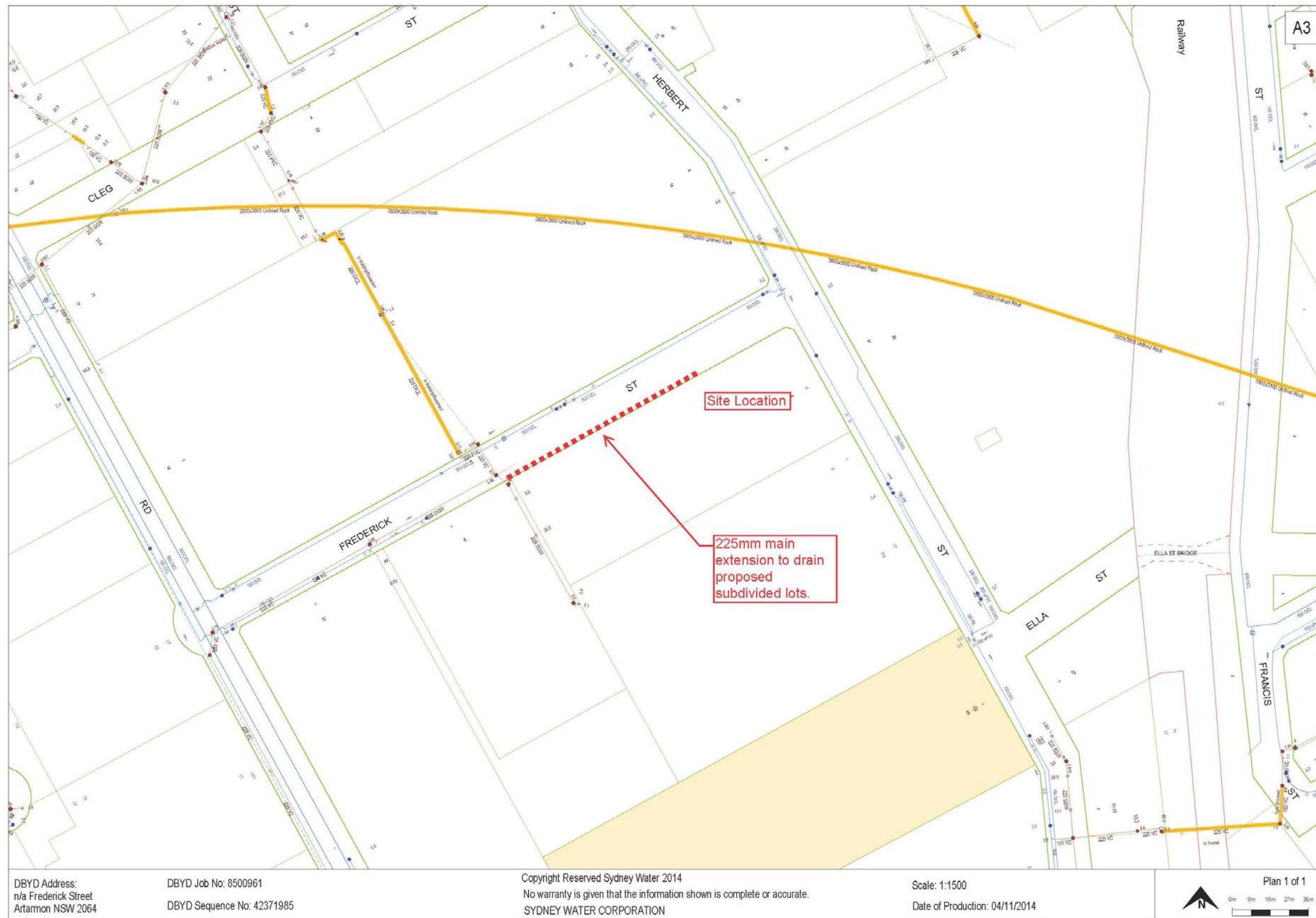
Existing 600mm
stormwater
connection pit

Stormwater main
extension to
service proposed
lot subdivision.

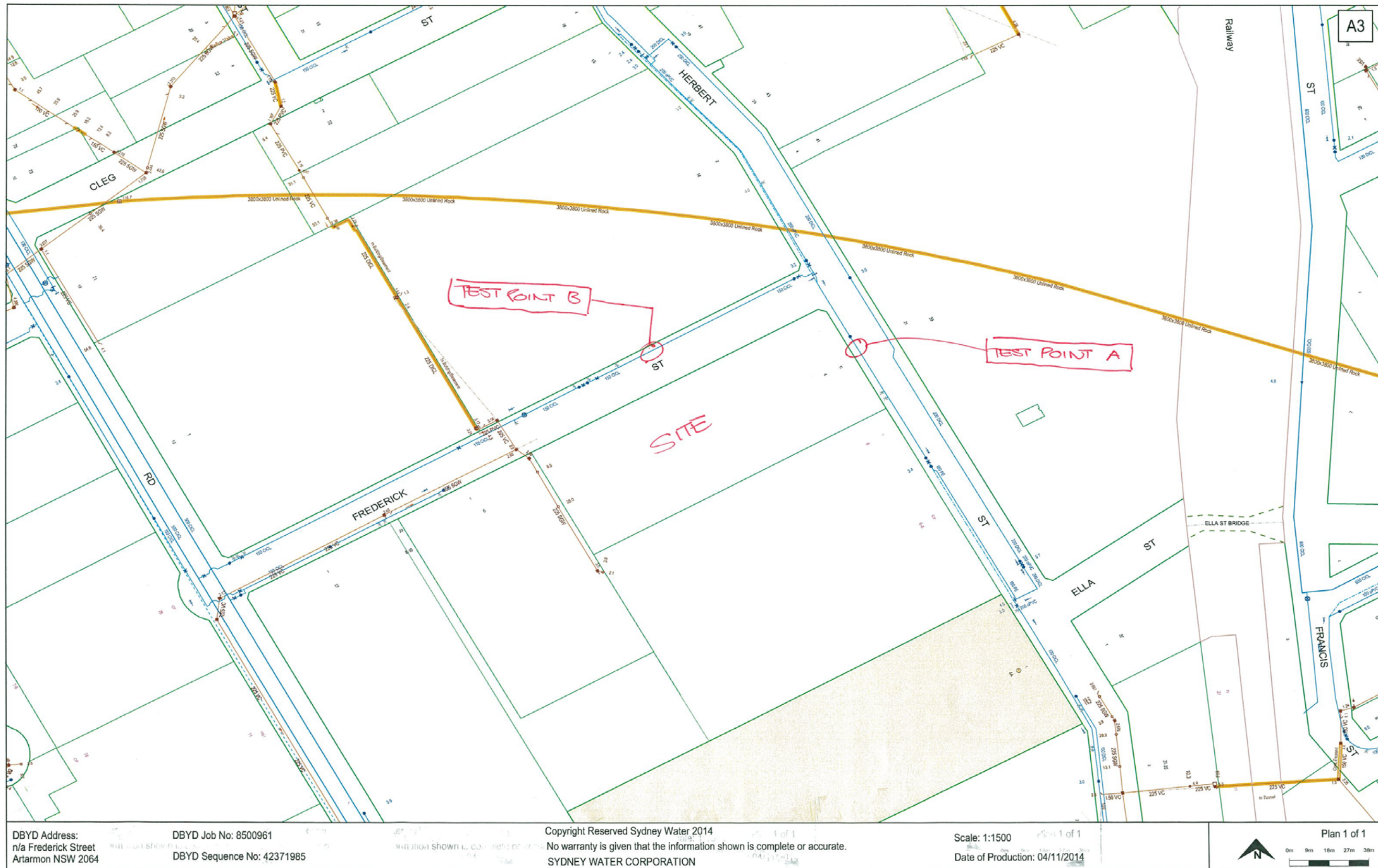
<http://maps.au.nearmap.com/print?north=-33.81618972392352&east=151.19210250034712&south=-33.81823764709935&west=151.18722356214903&zoom=19&date=20141121>

1/1

APPENDIX B SYDNEY WATER DIAGRAM



APPENDIX C FIRE FLOW RESULTS



Statement of Available Pressure and Flow



Acor Consultants
24 Falcon Street
Crows Nest, 2065

Attention: Melissa

Date: 26/11/2014

Pressure & Flow Application Number: 8952846
Your Pressure Inquiry Dated: Mon November 10 2014
Property Address: 4 Herbert St St Leonards 2065

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: Fredrick St	Side of Street: North
Distance & Direction from Nearest Cross Street	0 metres West from Herbert St
Approximate Ground Level (AHD):	80 metres
Nominal Size of Water Main (DN):	150 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	48 metre head
Minimum Pressure	25 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	25
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	26
	10	24
	15	23
	20	21
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	5	24
	10	23
	15	21
	20	19
Maximum Permissible Flow	24	17

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

connections@sydneywater.com.au

Statement of Available Pressure and Flow



Acor Consultants
24 Falcon Street
Crows Nest, 2065

Attention: Melissa

Date: 20/11/2014

Pressure & Flow Application Number: 8952879
Your Pressure Inquiry Dated: Mon November 10 2014
Property Address: 4 Herbert St St Leonards 2065

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: Herbert St	Side of Street: West
Distance & Direction from Nearest Cross Street	30 metres South from Fredrick St
Approximate Ground Level (AHD):	80 metres
Nominal Size of Water Main (DN):	150 mm

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	48 metre head
Minimum Pressure	25 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	25
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	26
	10	24
	15	23
	20	21
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	5	24
	10	23
	15	21
	20	19
Maximum Permissible Flow	24	17

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

connections@sydneywater.com.au

APPENDIX D GAS MAIN DIAGRAM



APPENDIX E PROPOSED GAS LOADS

Natural Gas Load Calculator

Customer	Artarmon MH
Address	Herbert St
	Artarmon , NSW
Robert Gruber (Acor consultants)	02 9438 5098

Requested Pressure - KPA	100
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Appliance / load Discription	Design Rate Mj/hr	Operating Capacity (include %)	Hours per Day	MDQ Mj's	Days per Week	Weeks per Year	Total Annual Load Mj's	Comment
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Retained load				-				
Existing Mechanical Heating		15%	24	-	7	23	-	
Existing Domestic Hot Water		15%	24		7	52		
Existing Retained Total	-							
Proposed loads								
Mechanical Heating	3,500	15%	24	12,600	7	23	2,028,600	Preliminary estimate
Domestic Hot Water	1,600	15%	24	5,760	7	52	2,096,640	Preliminary estimate
Commercial kitchen	1,300	60%	8	6,240	7	52	2,271,360	Preliminary estimate
Proofing Mechanical Heating	1,000	15%	24	3,600	7	23	579,600	Preliminary estimate
Future Proofing Domestic Hot Water	800	15%	24	2,880	7	52	1,048,320	Preliminary estimate
Proposed new loads	8,200			31,080			8,024,520	

MHQ	8,200		MDQ	31,080		ACQ (Mj's)	8,024,520
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MHQ with Diversity

APPENDIX F ELECTRICAL SUPPLY

Ausgrid

Preliminary Enquiry Application

Preliminary enquiry

FORM NECF-01



Who should use this form

Anyone who has an enquiry about a new or altered connection to the Ausgrid network relating to a specific premises.

General enquiries

More information about the connection process and using this form

can be found on our website www.ausgrid.com.au/connectingtothenetwork or call us on 13 15 35.

Fields marked with an * are mandatory.

Use BLOCK LETTERS only.

How to submit this form to Ausgrid

Sydney, Central Coast and Hunter

Fax: (02) 4399 8007

Fax (local call): 1300 662 089

Email: datanorth@ausgrid.com.au

Upper Hunter only

Fax: (02) 6542 9037

Email: datamuswellbrook@ausgrid.com.au

1. About You - the Enquirer

Title, First Name, Last Name*

MR LEON GOWER

Phone No.* (and/or)

02 99 89 81 62

Postal Address*

PB BOX 1808 HORNSBY NSW 1630

Mobile Phone No.*

0412 90 09 31

Email Address*

leon.gower@edaconsulting.com.au

Fax No.

02 99 89 81 62

How would you prefer us to contact you?

Phone ☐

Email ☒

Post ☐

2. Premises Details and Location Diagram

NMI

Meter No.

Floor No.

Unit No.

Street No. or RMB*

Lot No*

DP No*

Street Name*

FREDERICK ST

Post Code*

2076

Suburb*

ST LEONARDS

Nearest Cross Street

HERBERT ST

Please draw a location diagram of the premises to be connected, using the following symbols as needed

PLEASE REFER ATTACHED

Symbols



North Point



Ground Substation



Pole Top Substation



Ausgrid Pole (indicate No if available)



Ausgrid Pole (indicate No if available)



Ausgrid Pole Standard (indicate No if available)



Customer Pole (Existing or proposed)



Customer Pole (Existing or proposed)



Building



Road Boundary



Lot Boundary

3. Your Question(s). Include comments or additional information.

PROPERTY LOT C DP401305 WILL BE SUB-DIVIDED.

PROPOSED DEVELOPMENT/SITE WILL BE LOT 2 OF THIS SUBDIVISION.

PLEASE REFER ALSO TO ATTACHED LETTER



Electrical
Design
Consulting

Building Services

11 November 2014

Ausgrid
Contestability
Pioneer Ave
Tuggerah NSW 2601

Suite 6, 75 Pacific Hwy
Waitara NSW
PO Box 808
HORNSBY NSW 1630
P 02 9989 8162
F 02 9989 8462

Attn: The Manager

**RE: Feasibility Study for Proposed Northside Private Hospital –
Lot C DP401303 Frederick Street, St Leonards**

Dear Sir/Madam

We have been engaged on behalf of our client to investigate the infrastructure available to the area bounded by Frederick and Herbert Streets at St Leonards. Our client is exercising an option to purchase the property with the opportunity to construct a new hospital on the site. At present, there is no DA.

The proposed works will comprise of a new eight (8) storey building including carparking, treatment rooms, consulting rooms, wards and common facility kitchen and dining room. Approximate area is 14,000sqm (including 1450 sqm of courtyards and approximately 5100sqm of undercover carparking). Note, it is anticipated that a potential additional level may be added to the site in the future.

Our anticipated preliminary maximum demand for the new building is in the order of 935kVA for the initial scheme based on square metre rates. This increases to 1057kVA if an additional level is included.

A set of plans showing the site location, are attached for you information and assessment.

It is proposed the development will require a new dedicated substation. It would be proposed to establish a Type L, 1000kVA padmount substation on the site. Final location to be determined to suit fire rating and smoke clearances required.

Could you please reconfirm the following:

- The ability of the surrounding Ausgrid HV network can sufficiently supply the proposed scheme.
- Site access requirements.
- Any issues you may have which would impact on the proposed development.

As stated, this is a feasibility review only, and as part of this study, we require if this type of development can be carried out on this site, and what restrictions may be in place.

All information attached is confidential and not for general distribution or circulation and is to be used for Ausgrid's assessment purposes only.

If you require any additional information or have any queries in relation to the project, please feel free to contact me.

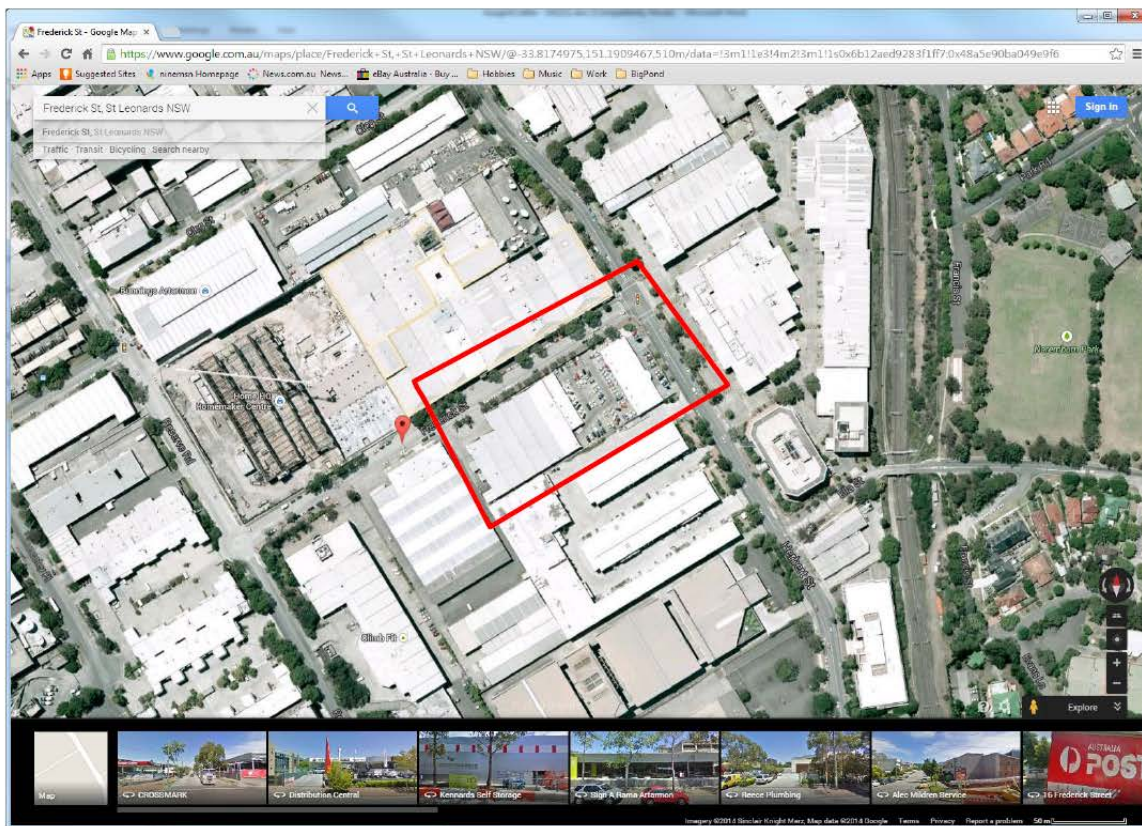
Yours sincerely,

Electrical Design Consulting

Leon Gower
Director
Enc.

Ref: Ausgrid Letter - 141111.doc

APPENDIX G LOCALITY PLAN ELECTRICAL



Location Plan

APPENDIX H PRELIMINARY MAXIMUM DEMAND ASSESSMENT

Proposed Northside PH
Prelim Max Demand - Area Rate- 141111.xls

Northside Private Hospital

New Building

11-Nov-14	Usage	Area	VA/sqm	Load (VA)	amps
Levels 1 & 2 Medical Suites	Carpark	5100	15	76500	110.4182
	Reception Waiting	25	100	2500	3.608439
	Receptionist	12	120	1440	2.078461
	Support Secretary	35	120	4200	6.062178
	Medical Suites	368	140	51520	74.36271
	Sub Waiting Areas	30	80	2400	3.464102
	Beverage Room and Doctors Lounge	30	80	2400	3.464102
	Plant	43	60	2580	3.723909
	Circulation	175	80	14000	20.20726
	SUB- TOTAL	5818		157540	227.389
Level 1	Cafe	20	200	4000	5.773503
	Maintenance	35	100	3500	5.051815
	SUB- TOTAL	55		7500	10.8253
Level 2 Drop Off and Airlock	Drop Off Point/Airlock	40	80	3200	4.618802
	SUB- TOTAL	40		3200	4.6188
Level 3 - Entry/Reception	Reception Desk	20	120	2400	3.464102
	Reception Desk Secure	0	120	0	0
	Security Room / Safe	10	120	1200	1.732051
	Waiting & Retail	132	100	13200	19.05256
	Toilet - Accessible	5	80	400	0.57735
	Toilet Public	4	80	320	0.46188
	Interview Room	7	100	700	1.010363
	Circulation	61	80	4880	7.043673
	SUB- TOTAL	239		23100	33.342
Level 3 - Admissions	Easy Access bays	20	100	2000	2.886751
	Out of Hours NUM	6	120	720	1.03923
	Circulation	0	80	0	0
	SUB- TOTAL	26		2720	3.92598
Level 3 - Education Room	Education Room	50	110	5500	7.938566
	Storage - Furniture/etc	7	110	770	1.111399
	Kitchenette	7	160	1120	1.616581
	Circulation	0	80	0	0
	SUB- TOTAL	64		7390	10.6665
Level 3/4 Rec Areas	Dining Room	250	100	25000	36.08439
	Kitchen	150	250	37500	54.12659
	Catering Managers Office	10	120	1200	1.732051
	Exercise / Gym	150	100	15000	21.65064
	Patient Toilets Female	20	80	1600	2.309401
	Patient Toilets Male	20	80	1600	2.309401
	Accessible Tyollet	5	80	400	0.57735
	Staff Toilet / Shower	0	80	0	0
	Art Room	50	100	5000	7.216878
	Massage booth + Beautician	32	100	3200	4.618802
	Circulation	85	80	6800	9.814955
	SUB- TOTAL	772		97300	140.44
Level 3 Day Programme	Breakout Space	30	80	2400	3.464102
	Group Room 30sqm	90	100	9000	12.98038
	Group Room 20sqm	40	100	4000	5.773503
	Interview Rooms	36	120	4320	6.235383
	Allied Health Coordinator	12	120	1440	2.078461
	Toilets Male	10	80	800	1.154701
	Toilets Female	10	80	800	1.154701
	Toilets Accessible	0	80	0	0
	Circulation	80	80	6400	9.237504
	SUB- TOTAL	308		29160	42.0888
Level 3 Outdoor Areas	Courtyards	1450	5	7250	10.46447
	SUB- TOTAL	1450		7250	10.4645
Level 4 - Staff Area	Dining Room	35	100	3500	5.051815
	Male Change	15	80	1200	1.732051
	Female Change	15	80	1200	1.732051
	Circulation	76	80	6080	8.775724
	SUB- TOTAL	141		11980	17.2916

Proposed Northside PH
Prelim Max Demand - Area Rate- 141111.xls

Northside Private Hospital

New Building

11-Nov-14	Usage	Area	VA/sqm	Load (VA)	amps
Level 4 - Executive Offices	Executive Reception	5	120	600	0.866025
	CEO Office	19	120	2280	3.290897
	PA to CEO	13	120	1560	2.251666
	Large General Office	30	120	3600	5.196152
	1 DCS	14	120	1680	2.424871
	DDCS	14	120	1680	2.424871
	HR Office	13	120	1560	2.251666
	Commercial Managers Office	13	120	1560	2.251666
	Board Room	25	120	3000	4.330127
	Toilets	6	80	480	0.69282
	Beverage Bay	6	60	360	0.519615
	Circulation	54	80	4320	6.235383
	SUB- TOTAL	212		22680	32.7358
Level 4 - General Admin / Sup	Manager Office	9	120	1080	1.558846
	Large Office	40	120	4800	6.928203
	Photocopying and Mail Room	10	120	1200	1.732051
	Discharge Typist Office	7	120	840	1.212436
	Comms PABX	9	160	1440	2.078461
	Store	17	60	1020	1.472243
	Accessible Toilet	5	80	400	0.57735
	Circulation	0	80	0	0
	SUB- TOTAL	97		10780	15.5596
Level 4 - ECT Suite	ECT Suite	300	200	60000	86.60254
	Circulation	0	80	0	0
	SUB- TOTAL	300		60000	86.6025
Level 4 - Plant	Plantroom	82	60	4920	7.101408
	SUB- TOTAL	82		4920	7.10141
Typical Floor	1 Bed Room	476	110	52360	75.57515
	Ensuite	165	110	18150	26.19727
	Ensuite - Special	6	110	660	0.952628
	resus Bay	2	110	220	0.317543
	Linen Bay	2	100	200	0.288675
	Bay - Handwashing	5	100	500	0.721688
	Staff Station	14	120	1680	2.424871
	Office - Clinical Handover	21	120	2520	3.637307
	Interview Room - Large	0	120	0	0
	Treatment Room	15	120	1800	2.598076
	Clean Utility / Medication	11	100	1100	1.587713
	Dirty Utility	10	200	2000	2.886751
	ADL Kitchen	0	160	0	0
	Lounge - pPatient	0	110	0	0
	Lounge Patient TV/Media	35	110	3850	5.556996
	Lounge Patient TV/Media	35	110	3850	5.556996
	Beverage Bay	5	110	550	0.793857
	Laundry	3	120	360	0.519615
	Toilet Accessible	5	80	400	0.57735
	Toilet Staff	3	80	240	0.34641
	Courtyard - Passive - Balcony	6	5	30	0.043301
	Office - NUM	6	120	720	1.03923
	Office - CMO	14	120	1680	2.424871
	Office - VMO	26	120	3120	4.503332
	Plant	20	60	1200	1.732051
	Cleaner	5	60	300	0.433013
	Circulation	312	80	24960	36.02666
	SUB- TOTAL	1202		122430	176.741
	Number of Floors:		4		
	SUB- TOTAL	4808		489800	706.9654
	TOTAL	14412		935320	1350
				935.32 kVA	
<i>Future 5th Level added</i>	<i>Revised Total</i>			<i>1057770</i>	<i>1526.759</i>
				<i>1057.77 kVA</i>	

APPENDIX I AUSGRID RESPONSE

From: Keiran Jackson <Keiran.Jackson@ausgrid.com.au>
 Subject: Re: Preliminary Enquiry, Frederick St, St Leonards
 Date: 19 November 2014 6:28:06 PM AEDT
 To: Leon Gower <leon.gower@edconsulting.com.au>

Hi Leon,

You are definitely going to need a substation, which our network will be capable of supplying.

Regards,

Keiran Jackson | Engineering Officer (Trainee) | Contestability – North | AUSGRID

Building 3A 51-59 Bridge Rd, Hornsby, NSW 2077 Australia
 ☎ 02 85 69 67 32 (Extn 66732) | ✉ Keiran.Jackson@ausgrid.com.au |

Please consider the environment before printing this email

From: Leon Gower <leon.gower@edconsulting.com.au>
 To: Keiran Jackson <Keiran.Jackson@ausgrid.com.au>
 Date: 19/11/2014 11:27 AM
 Subject: Re: Preliminary Enquiry, Frederick St, St Leonards

Keiran,

This is in a feasibility phase only and we are undertaking an infrastructure investigation. All we are after is a reply stating that a substation is required for the development and that the Ausgrid network can support the development.

Our client is looking to purchase the land and does not currently own it.

Please call to discuss if required.

Thanks

Leon

Regards,

Leon Gower
 Electrical Design Consulting
 Suite 6, 75 Pacific Highway Waitara NSW
 PO Box 808 Hornsby NSW 1630
 P: 02 9989 8162 F: 02 9989 8462
 E: leon.gower@edconsulting.com.au
 sent from my iPad

On 19 Nov 2014, at 9:19 am, Keiran Jackson <Keiran.Jackson@ausgrid.com.au> wrote:

Hi Leon,

In response to your preliminary enquiry dated 11th November, can you please submit an NECF03 connection application form.

Regards,

Keiran Jackson | Engineering Officer (Trainee) | Contestability – North | AUSGRID

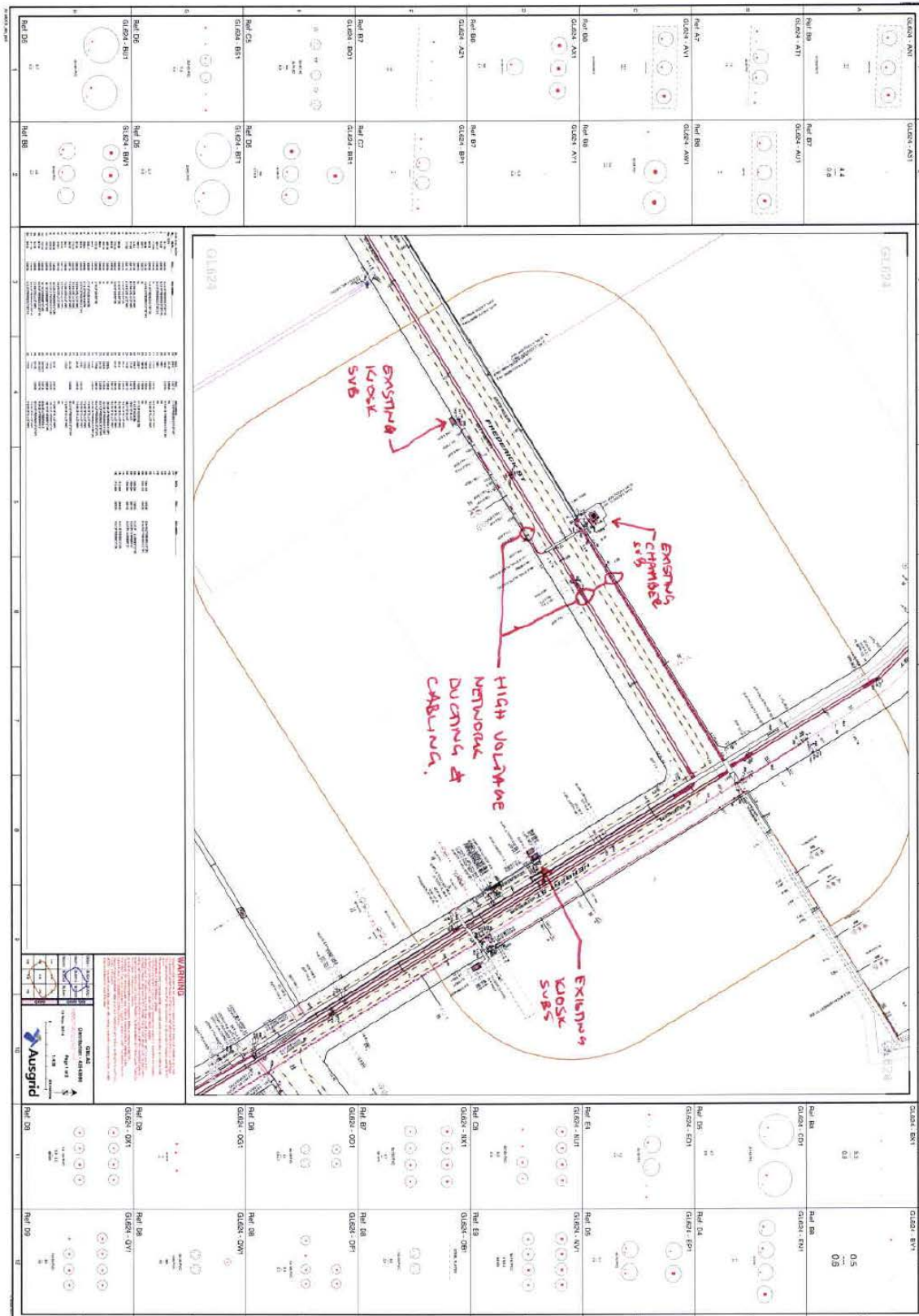
Building 3A 51-59 Bridge Rd, Hornsby, NSW 2077 Australia
 ☎ 02 85 69 67 32 (Extn 66732) | ✉ Keiran.Jackson@ausgrid.com.au |

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APPENDIX J AUSGRID DBYD PLANS

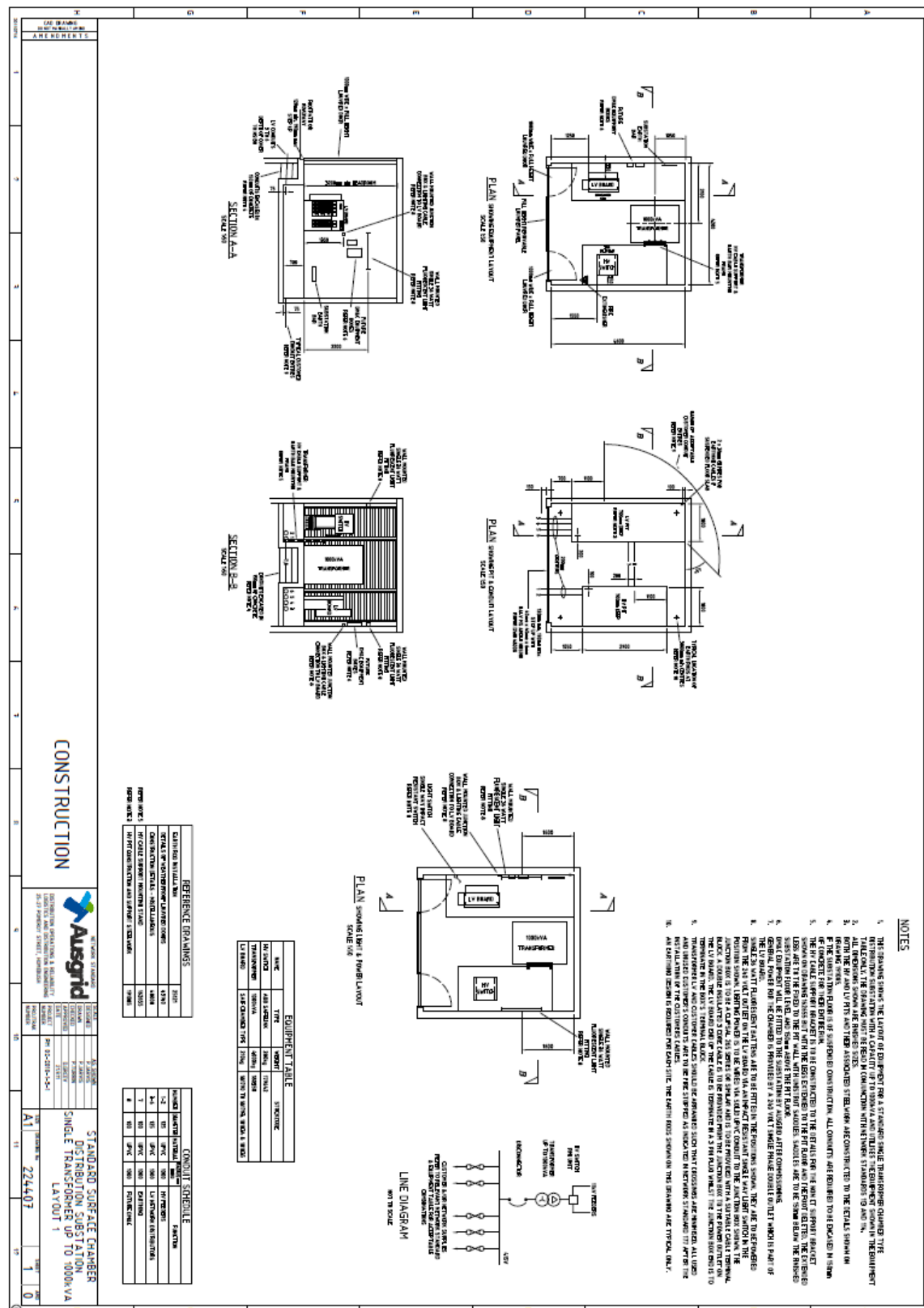




AUSGRID TYPICAL PADMOUNT SUBSTATION DETAILS

APPENDIX L

AUSGRID TYPICAL MINI CHAMBER SUBSTATION DETAILS



APPENDIX M TELSTRA

Registration

From: <registration@telstrasmarcommunity.com>
 Subject: Application for Reticulation Confirmation - Northside Private Hospital Stage 1 - St Leonards 2065
 Date: 24 November 2014 5:12:30 PM AEDT
 To: <leon.gower@edconsulting.com.au>

2 Attachments, 14 KB

THANKS FOR YOUR APPLICATION SUBMISSION
 HERE ARE THE DETAILS

Hi Leon Gower,

Thanks for submitting your Application for Reticulation (AFR) on the Telstra Smart Community website for your development.

IMPORTANT NOTE

The construction of Telstra's network dates back over many years. Some of Telstra's pits and ducts were manufactured from asbestos-containing cement. You must take care in conducting any works in the vicinity of Telstra's pits and ducts. You must refrain from in any way disturbing and damaging Telstra's network infrastructure when conducting your works. We recommend that before you conduct any works in the vicinity of Telstra infrastructure that you ensure your processes and procedures eliminate any possibility of disturbing, damaging or interfering in any way with Telstra's infrastructure. Your processes and procedures should incorporate measures having regard to the nature of this risk.

Your AFR number is: 17346471. You can use it and your password to view, change or add details at any stage of your development. Attached are the details provided with your application, which you might want to keep handy. They can also be viewed on the Telstra Smart Community website at <http://www.telstra.com.au/smarcommunity/developers.html>

The details of the files attached with this development are as follows:

File Name, File Type, File Size

1: 2014-11-07 - 590 - SK drawing issue.pdf, Adobe PDF files, 1.6Mb

For your reference, here are the details of Telstra's Community Development Consultant for St Leonards:
 1800 226 543
 dev4national@team.telstra.com
 Locked Bag 6018 Hunter Region Mail Centre 2310

Government policy and your development

Recent changes to Federal Government policies on the provision of infrastructure in new developments will have a significant impact on your proposed development. These changes can be viewed at http://www.dbcde.gov.au/broadband/national_broadband_network/policy_statements. Telstra will work with Government, NBN Co and stakeholders on the implementation of the new policy on Greenfield estates. Our key concerns are to maintain services to developers and end customers and to meet our obligations. We are asking developers to stay in contact with us so we can work together to provide infrastructure that takes into account the new policy and the circumstances and timing of each development. Note there are no changes to Telstra's policy announced in March 2010 as a result of the Government's proposed Greenfield legislation. Also Telstra will no longer install copper infrastructure as standard practice.

Telstra will contact you once there is more information available

Best regards,
 Telstra Urban Development Team

Telstra - <https://telstra.com.au/>
 Privacy - <https://www.telstra.com.au/privacy/privacy-statement/>
 Contact us - <http://www.telstra.com.au/help/contact/>

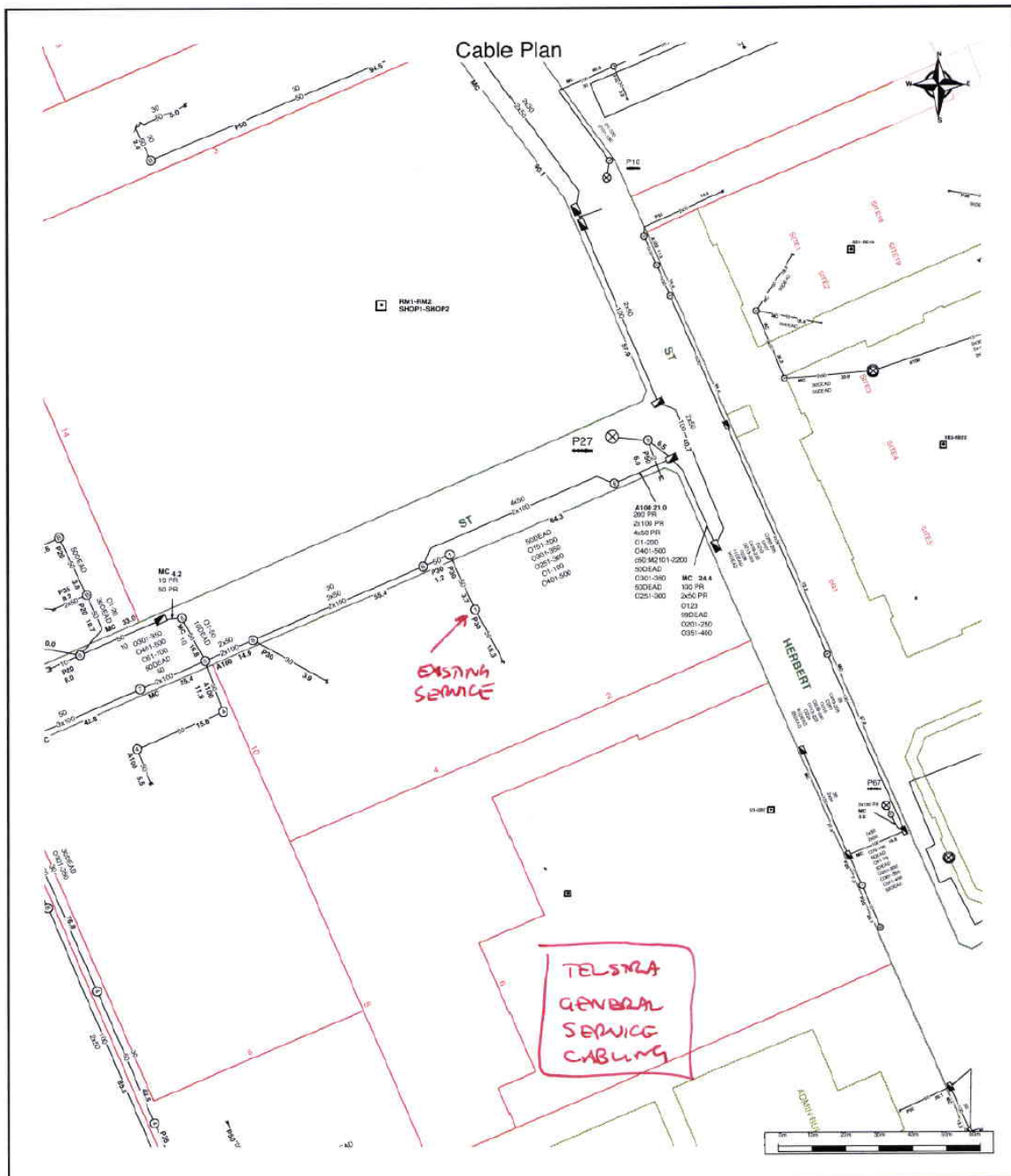
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Corporation Limited, ABN 33 051 775 556. [terms_buildi...html \(12 KB\)](#) [17346471.txt \(2 KB\)](#)

APPENDIX N TELSTRA PLANS



	For all Telstra DBYD plan enquiries - email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)	Sequence Number: 42543881
TELSTRA CORPORATION LIMITED A.C.N. 051 775 556 Generated On 13/11/2014 14:20:45		

CAUTION: Critical Network Route in plot area.
DO NOT PROCEED with any excavation prior to seeking advice from Telstra Plan Services on : 1800 653 935

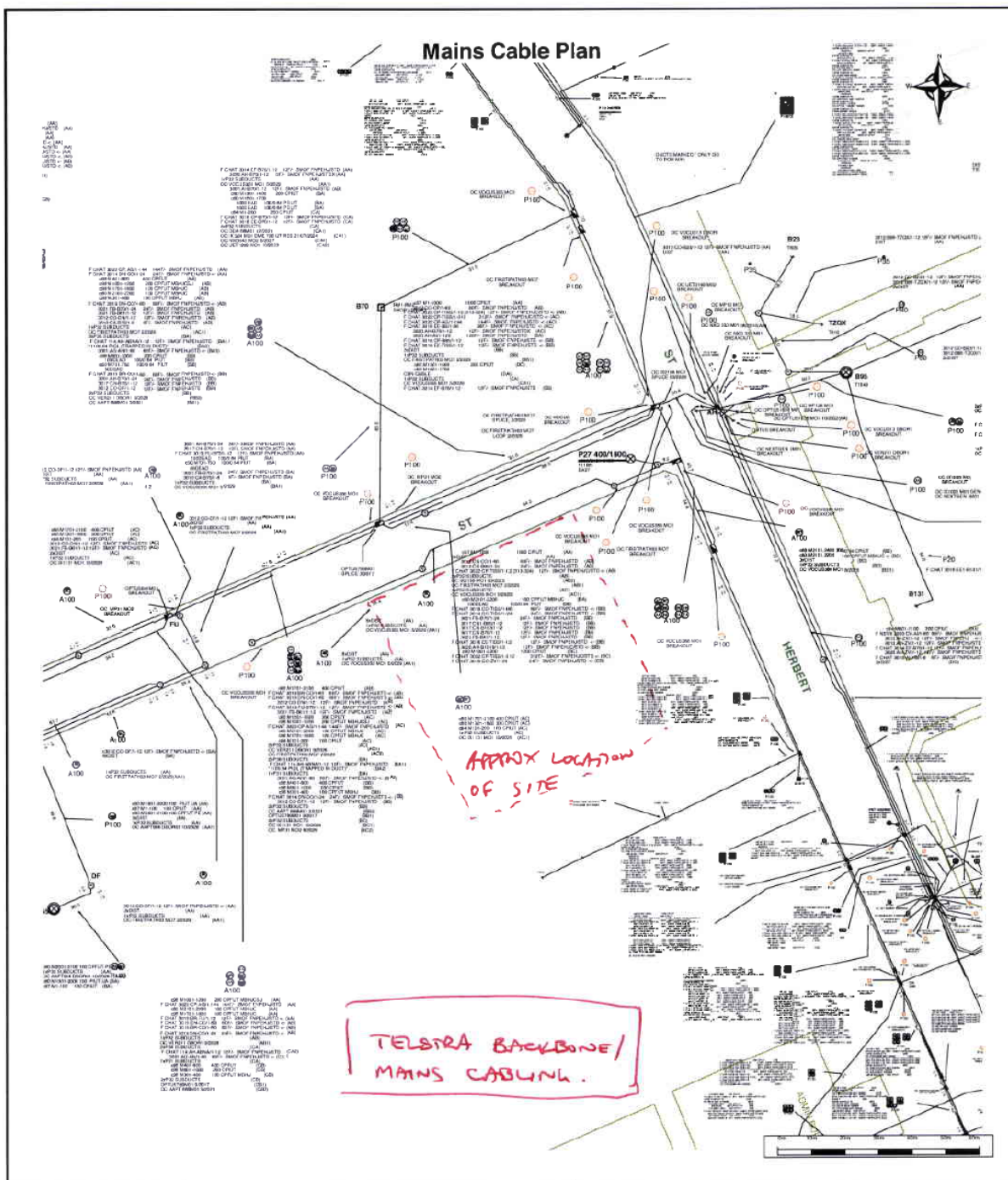
The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.



	For all Telstra DBYD plan enquiries - email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)	Sequence Number: 42543881
	TELSTRA CORPORATION LIMITED A.C.N. 051 775 556	CAUTION: Critical Network Route in plot area. DO NOT PROCEED with any excavation prior to seeking advice from Telstra Plan Services on : 1800 653 935
Generated On 13/11/2014 14:21:28		

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

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Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

APPENDIX O APPENDIX C – NBNCO.

From: <developerliaison@nbnco.com.au>
 Subject: NBN Co: Development rejected for Northside Private Hospital - Feasibility - AYCA-1QC1JJ
 Date: 21 November 2014 2:15:02 PM AEDT
 To: <david.shreeve@dsaconsulting.com.au>, <leon.gower@edconsulting.com.au>

5 Attachments, 10 KB

Development reference: **AYCA-1QC1JJ**

Your development: **Northside Private Hospital - Feasibility**

Dear Ramsay Healthcare c/- DSA Consulting,

Thank you for your registration for Northside Private Hospital - Feasibility.

Unfortunately, as your new development is for less than 100 premises (units/dwellings), and therefore doesn't meet the Federal Government's 'Fibre in New Developments Policy', we are unable to progress your registration at this time.

The Federal Government's 'Fibre in New Developments Policy', which can be found at <http://www.nbnco.com.au/industry/new-developments/new-developments-policy-information.html>, sets out options for the provision of infrastructure and services in this situation.

If you have any questions, please call us on **1800 OUR NBN (1800 687 626)** or email DeveloperLiaison@nbnco.com.au.

Thank you and regards,

NBN Co Developer Liaison Team



Visit our New Developments site: www.nbnco.com.au/newdevelopments

Subscribe to our New Developments eNewsletter: www.nbnco.com.au/subscriptions

View our privacy policy: www.nbnco.com.au/privacy

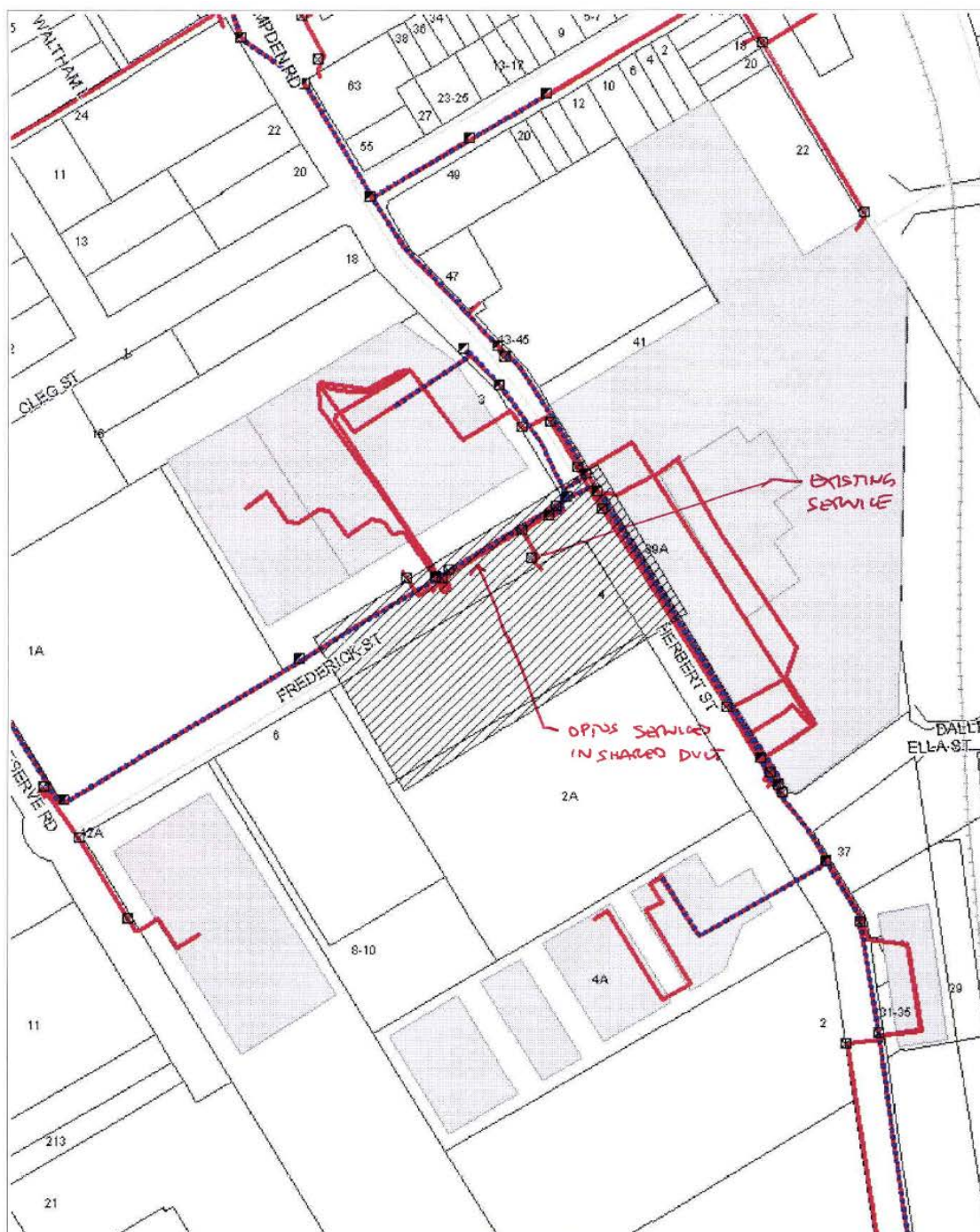
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PLEASE CONSIDER OUR ENVIRONMENT BEFORE PRINTING

APPENDIX P OPTUS AND UECOMM

Optus DBYD Plan



WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

Sequence Number: 42543882

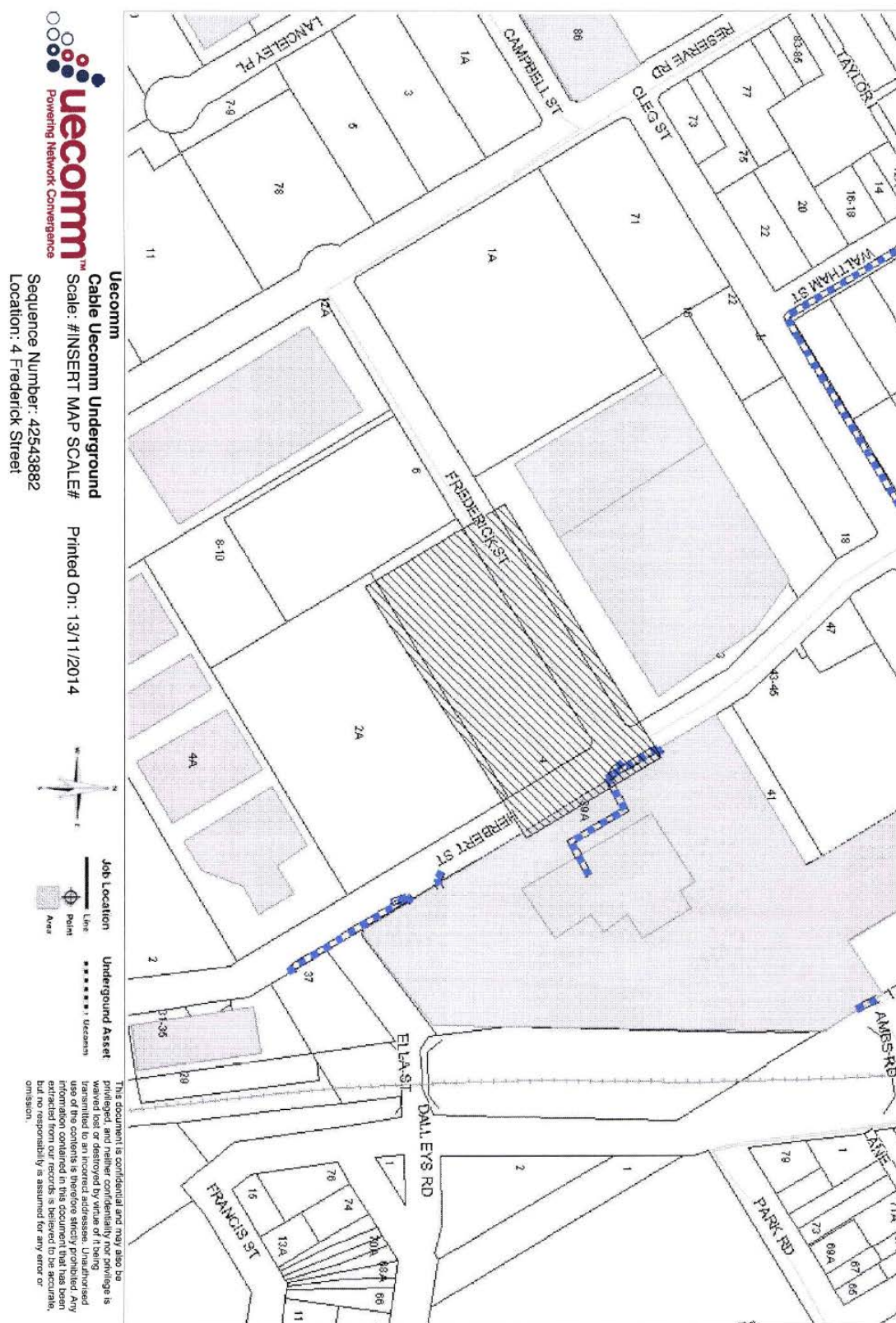
Date Generated: 13/11/2014



For all Optus DBYD plan enquiries –
Email: fibre.locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208



Uecomm Plans and Schematics

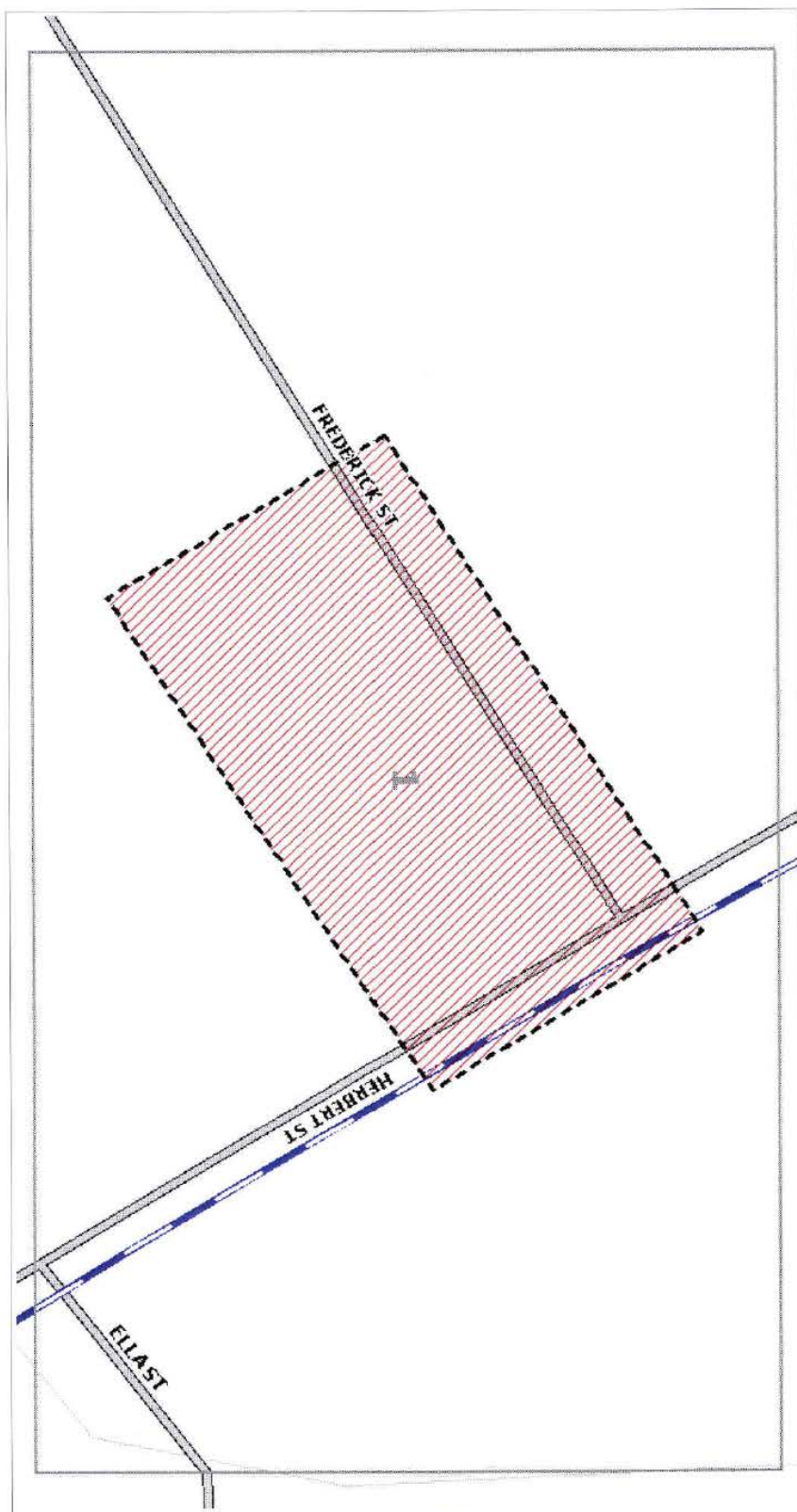


APPENDIX Q PRIMUS COMMUNICATIONS

Primus DBYD Plan

Primus
TELECOM

Assets
Sequence Number : 42543885
4 Frederick Street, St Leonards, NSW, 2065



Create Date: 20/1/2014

Scale: 1:1575

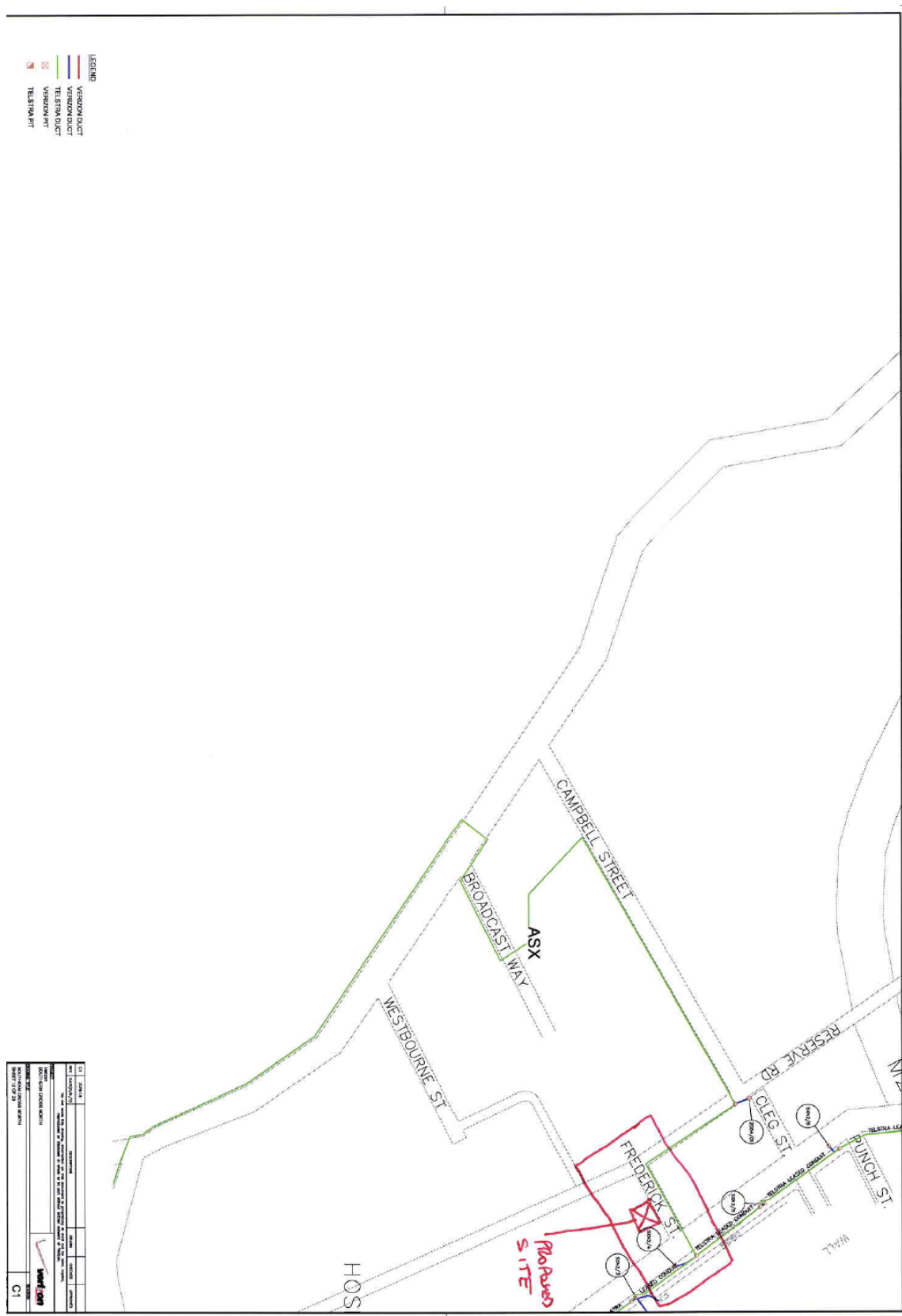
DISCLAIMER:

This document has been prepared solely for the use of Primus Telecom Pty Ltd for use in maintaining Primus facilities it has not been created for any other use. It should be scaled to locate Primus assets. No warranty is given that the information is accurate or complete.



APPENDIX R VERIZON

Verizon DBYD Plan



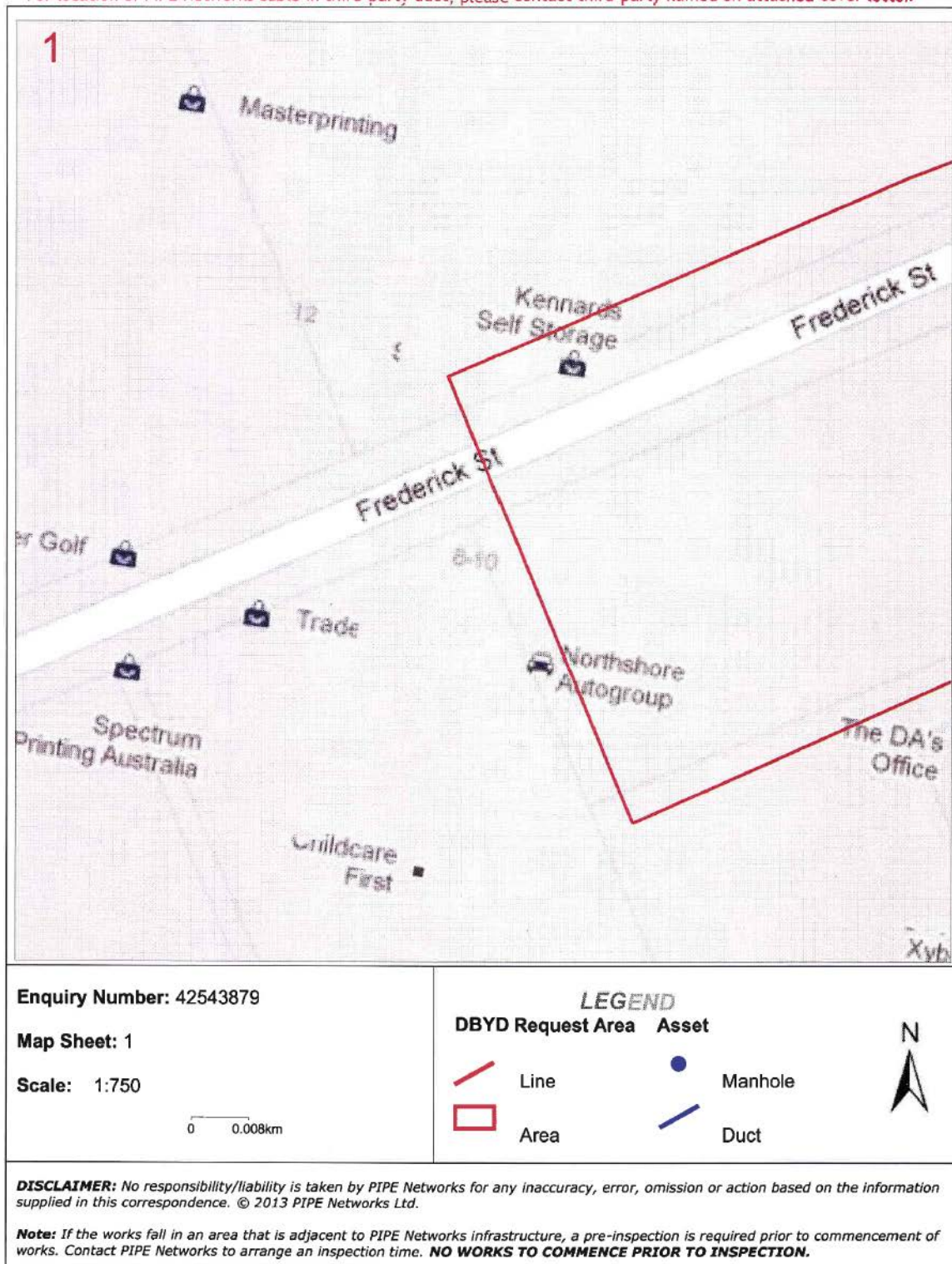
APPENDIX S PIPE NETWORKS

Pipe Networks DBYD Plan



Only PIPE Networks' duct displayed.

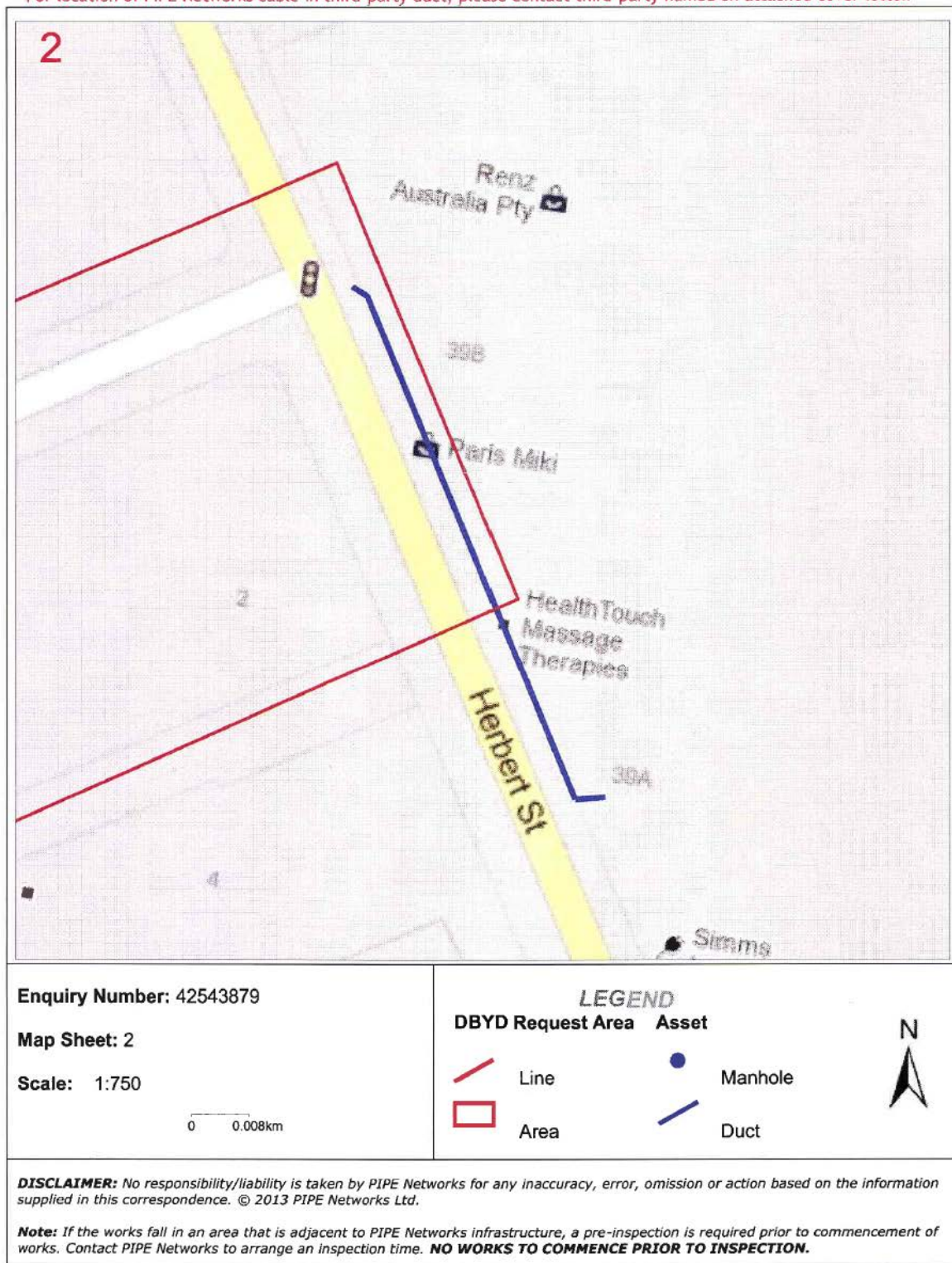
For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.





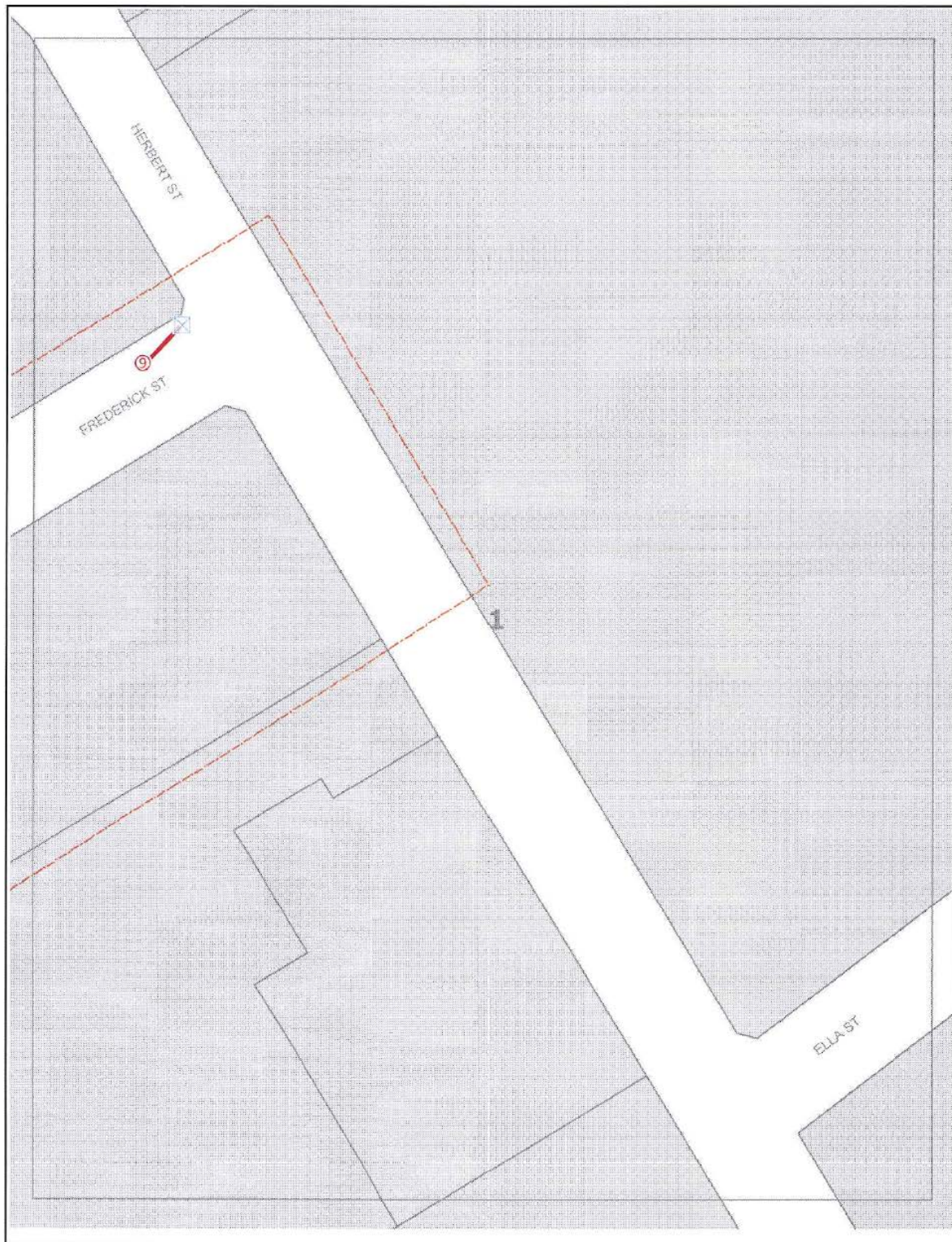
Only PIPE Networks' duct displayed.

For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.



APPENDIX T VOCUS COMMUNICATIONS

Vocus Communications DBYD Plan



VOCUS
communications



13/11/2014

NSW

1:1000

DIAL BEFORE YOU DIG RESPONSE Fibre Assets

Sequence Number: 42543886, DBYD Job No 8537807

-  Vocus Pit
-  Vocus Asset
-  Telstra Manhole

APPENDIX U AAPT POWERTEL

AAPT PowerTel Correspondence

AAPT (PowerTel) Limited
 GPO Box 7041
 Sydney 2001
 Phone: 1800 786 306
 A/H 1800 786 306
 Date: 13/11/2014 02:17:00 PM

**AAPT (POWERTEL) FIBRE OPTIC CABLE – JEOPARDY**

Sequence Number : 42543878

Location Address : 4 Frederick Street, St Leonards, NSW

To : Mr Leon Gower

Fax Number : 0299898462

Customer Address: PO Box 808, Hornsby, Nsw, 2077

In relation to your enquiry at the above address, AAPT (PowerTel) advises as follows.

The records of AAPT (PowerTel) Limited disclose that there are underground FIBRE OPTIC/TELECOMMUNICATIONS cables in the vicinity of the above enquiry.

Your enquiry has been dispatched to a AAPT (PowerTel) Route Technician who will contact you ASAP with further information regarding the exact location of the AAPT (PowerTel) network.

It is essential that no excavations are undertaken until you have been contacted by a AAPT (PowerTel) Representative. Your local AAPT (PowerTel) Field Representative can be contacted on mobile ph: 0405 133 156

DUTY OF CARE

Due to the nature of underground cables and the age of some cables and records the accuracy and/or completeness of the information cannot be guaranteed and, accordingly, they are indicative only and as a result AAPT (PowerTel) does not accept any responsibility for any inaccuracies of its plans. They should not be solely relied upon when undertaking underground works. It is also inaccurate to assume that fibre optic cables follow straight lines and careful onsite investigations are essential to locate an assets exact position.

The following minimum clearances must be maintained.

- 1) 300mm when laying asset's inline, horizontal or vertical.
- 2) 500mm when operating vibrating equipment. Eg: Vibrating plates.
- 3) 1000mm when operating mechanical excavators or Jackhammers.

ON SITE LOCATING OF AAPT'S (POWERTEL) CABLING AND INFRASTRUCTURE MUST BE CONDUCTED BY AAPT'S (POWERTEL) PERSONNEL ONLY. AAPT (POWERTEL) WILL USE ALL LEGAL MEANS TO SEEK DAMAGES AND ANY OTHER REMEDIES AVAILABLE TO IT IN THE EVENT THAT ITS CABLE OR ANY OTHER NETWORK INFRASTRUCTURE IS DAMAGED BY YOU OR YOUR PERSONNEL AND/OR CONTRACTORS. IT IS AN OFFENCE TO OPEN ANY AAPT'S (POWERTEL) PITS OR MANHOLES AND/OR ANY ASSOCIATED INFRASTRUCTURE BELONGING TO OR PART OF

AAPT'S (POWERTEL) NETWORK

Due to the inherent dangers associated with excavation in the vicinity of underground cables, precautions should be taken in the undertaking of any underground works, including (but not limited to) the following.

All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs & Manhole covers must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the possibility of damage to the cable.

EG: Blades of hand equipment should be orientated parallel to the line of the cable rather than digging across the cable.

All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.

All excavations must be undertaken in accordance with the relevant legislation and regulations.

ANY DAMAGE TO AAPT (POWERTEL) NETWORK MUST BE REPORTED IMMEDIATELY TO 1800 786 306

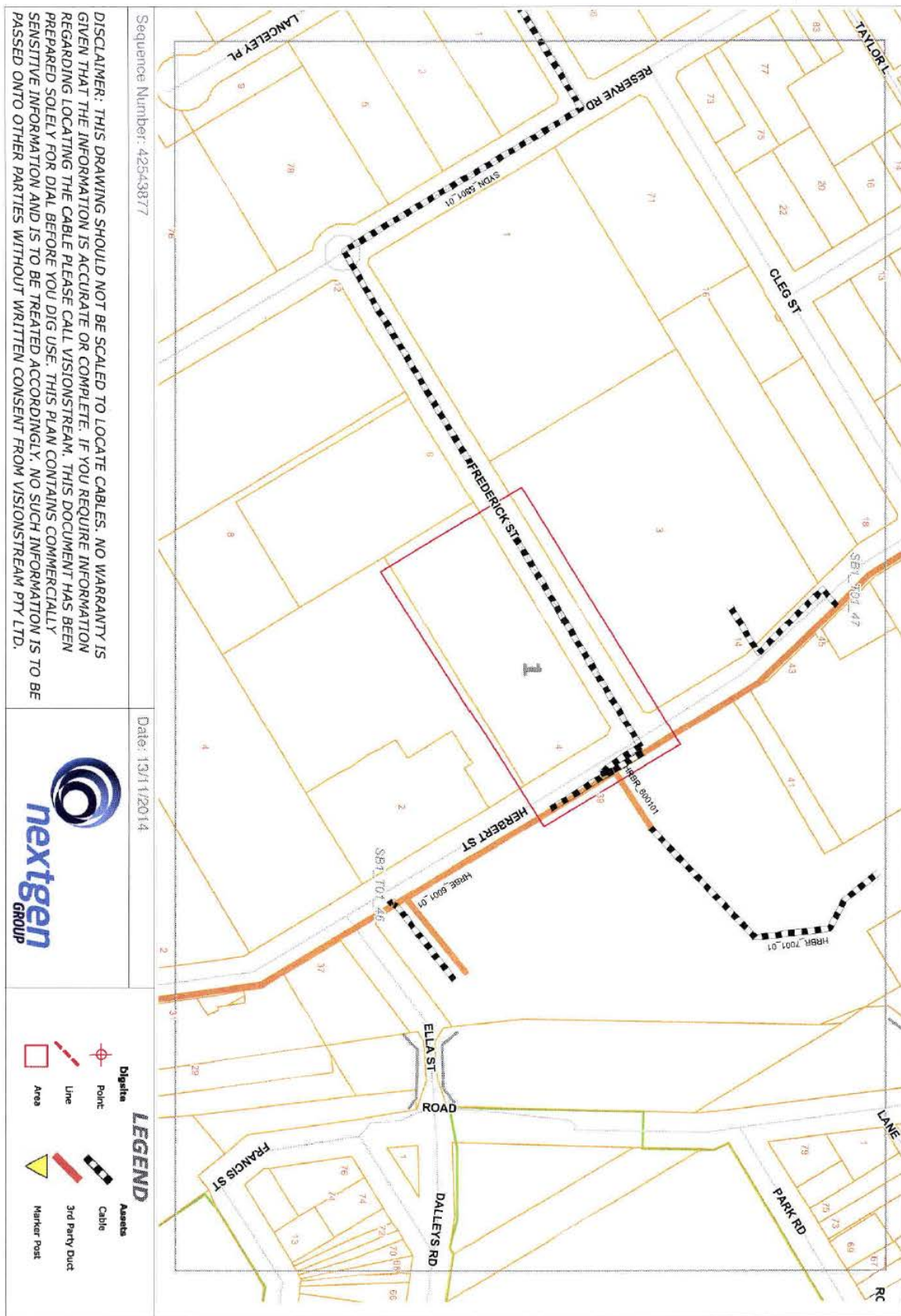
Any information provided is valid only for 28 days from the date of issue of this document.

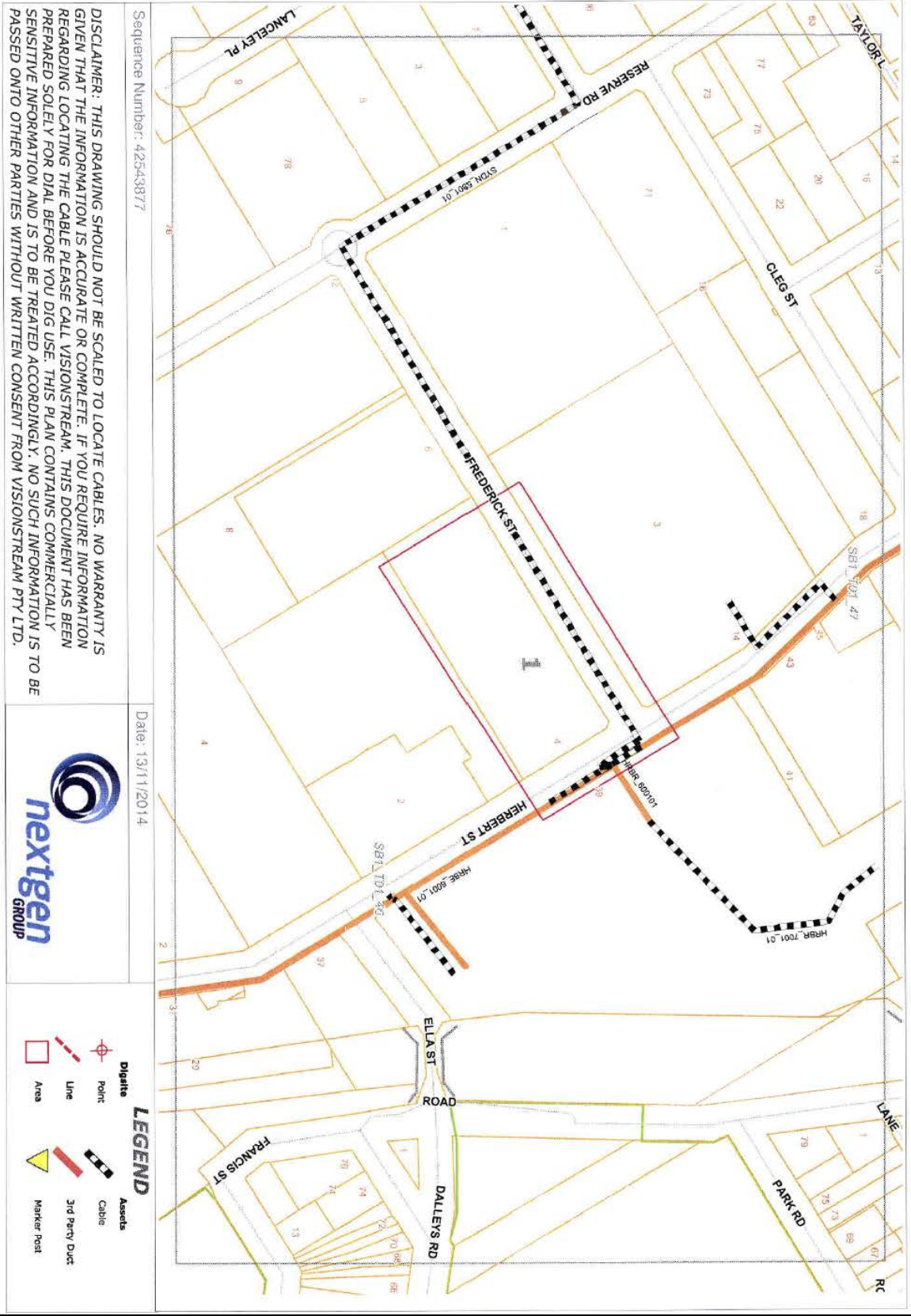
If the work operations extend beyond this period, or if the designs are altered in any way, you are requested to re-submit your proposal for re-assessment by contacting Dial Before You Dig ph:1100 or www.dialbeforeyoudig.com.au

Onsite visits by AAPT (PowerTel) agents may incur costs, this would solely depend on the type and extent of the work to be carried out. EG: Major roadwork's, network relocation's, Large planning and design work's.

APPENDIX V NEXTGEN GROUP

NextGen Group DBYD Plan





APPENDIX W AUTHORITY CONSULTATION SCHEDULE

Proposed Consultation List	Authority Contact	Project Team Member Responsible	Comments
Sydney Water Water and Sewer Supply Mains	Sydney water Dial before you dig	Robert Gruber	Site main drawings received 21 st November 2014
Telstra Communications Supply Mains	Telsta Dial before you dig	Leon Gower	Site main drawings received 21 st November 2014
NBN Communications Supply Mains	NBN	Leon Gower	Site main drawings received 21 st November 2014
Ausgrid Electrical Supply Mains	Ausgrid Kieran Jackson	Leon Gower	Site main drawings received 21 st November 2014
Sydney Water Water supply	Robert Wickham	Robert Gruber	Application for additional water supply pressure and flow availability issued 20 st November 2014 response 26 November 2014
Jemena Gas Supply	Bradley Gee	Robert Gruber	Email to Jemena (Bradley Gee 21 st November 2014)
Jemena Gas Supply Mains	Dial before you dig	Robert Gruber	Site main drawings received 21 st November 2014
Sydney Water Sewer	Robert Wickham	Robert Gruber	21 st November 2014 response
Jemena Gas Supply	Bradley Gee	Robert Gruber	Email to Jemena (Bradley Gee 21 st November 2014)
Willoughby Council Storm Water	Kasam Mohammad	Robert Gruber	Response provided from council including retention

Report produced by

DSA Consulting in association with Acor Consultants and EDC Consultants