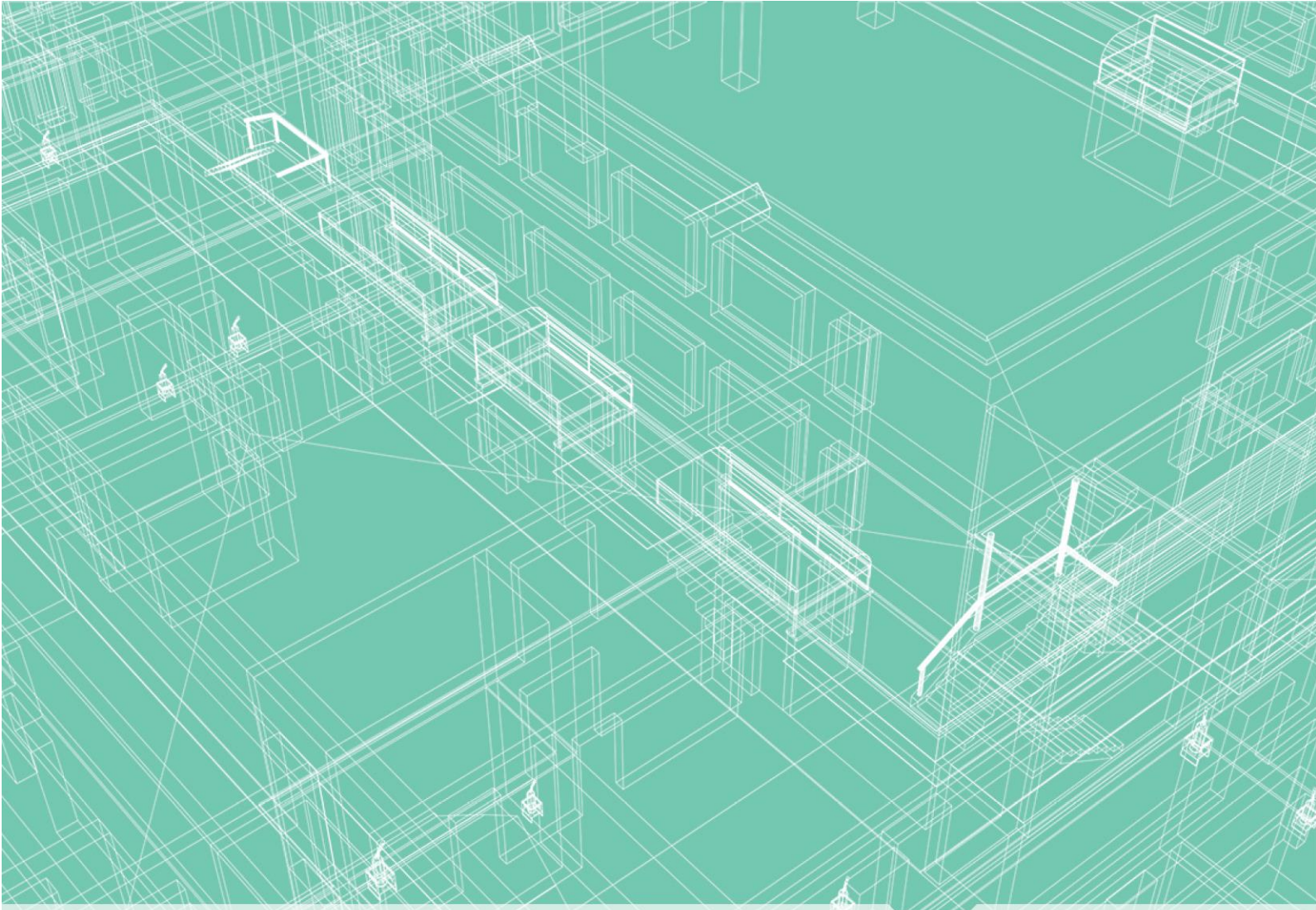

SERVICES INFRASTRUCTURE MANGEMENT PLAN REPORT

MULTI-TRADES AND DIGITAL TECHNOLOGY HUB

ELECTRICAL AND HYDRAULIC SERVICES

JHA

JHASERVICES.COM

This report is prepared for the nominated recipient only and relates to the specific scope of work and agreement between JHA and the client (the recipient). It is not to be used or relied upon by any third party for any purpose.

DOCUMENT CONTROL SHEET

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Project Name	TAFE Meadowbank Multi-Trades and Digital Technology Hub
Description	Services Infrastructure Management Plan Report for SEARS
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Prepared By

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1 EXECUTIVE SUMMARY

This services infrastructure management plan is to address Item 14 Utilities of the SEAR for SSDA reporting which includes the following:

- Item 14.1 Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure
- Item 14.2 Identify any potential impacts of the proposed construction and operation on the existing utility infrastructure and service provider assets, and demonstrate how these will be protected or impacts mitigated.
- Item 14.3 Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non- potable water, and water sensitive urban design.

This document provide a reference to agreements between JHA and the Client and/or their representatives.

JHA in developing the services infrastructure management plan will endeavour to provide value added advice, providing suitable solutions to cost benefits and build-ability, performance, maintenance, flexibility or other requirements of the project.

The document is designed to achieve a summarised, succinct and coherent written description detailing information on the existing capacity, any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure. The document will also identify any potential impacts of the proposed construction and operation on the existing utility infrastructure and service provider assets, and demonstrate how these will be protected or impacts mitigated.

The document is not designed as a specification or bill of materials, nor is it intended to provide detail of the equipment, fitting or services selection.

2 PROJECT DESCRIPTION

TAFE Meadowbank is one of the largest TAFE facilities in Sydney, which offers an extensive range of educational services. TAFE Meadowbank is located at See St, Meadowbank NSW 2114 adjacent to Meadowbank Train Station, in the local government area of City of Ryde Council.

The project consists of a New Multi-Trades and Digital Technology Hub Building – part of SSDA scope.

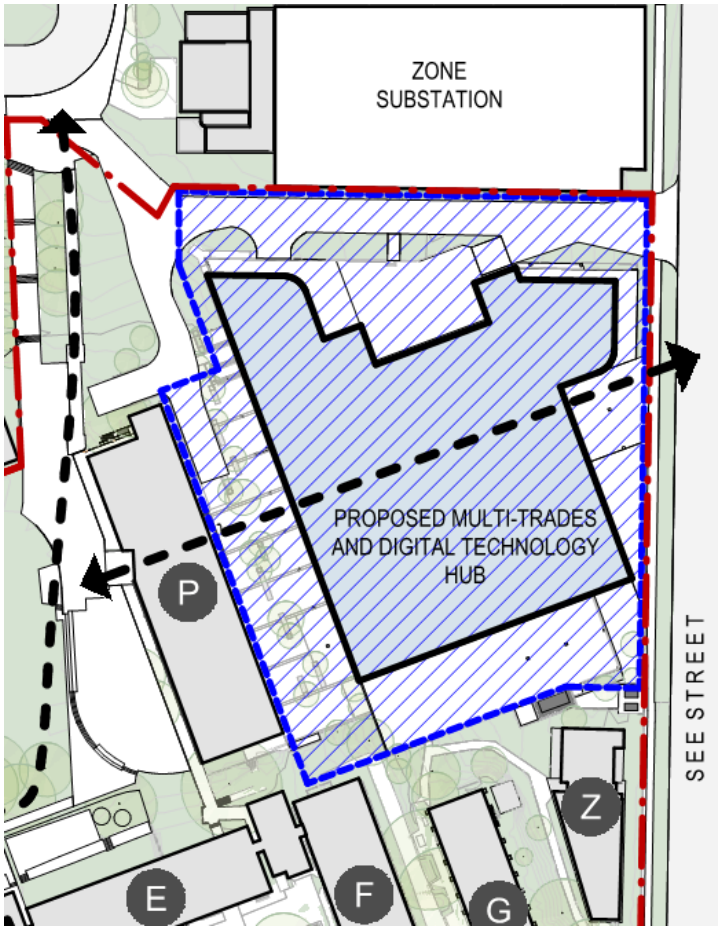


Figure: Proposed New Multi-Trades and Digital Technology Hub Building

3 ELECTRICAL SERVICES

3.1 EXISTING ELECTRICAL SERVICES DESCRIPTION

The site is currently being served by three substations (two outdoor kiosk substation and one chamber substation). The substations are being served by a Zone substation located adjacent to TAFE Meadowbank along Rhodes Street.

The demarcation zone for the electrical services of the site are as follow:

- Block H Electrical Chamber Substation S789 serves Block H Electrical Main Switchboard (MSB1).
  Block H MSB1 serves Block H, A, B, D, E via a mixture of underground along walkway and overhead submain cabling running across a walkway awning/bridge.

- Electrical Kiosk Substation S8665 adjacent to Block A serves an external Electrical Main Switchboard (MSB3).
  MSB3 serves Block K & J via underground submains across driveway.

- Electrical Kiosk Substation S35438 adjacent to Block N (carpark) serves an Electrical Main Switchboard (MSB4).
  MSB4 serves Block N, P, Z. G, F via underground submains across carpark and retaining walls.

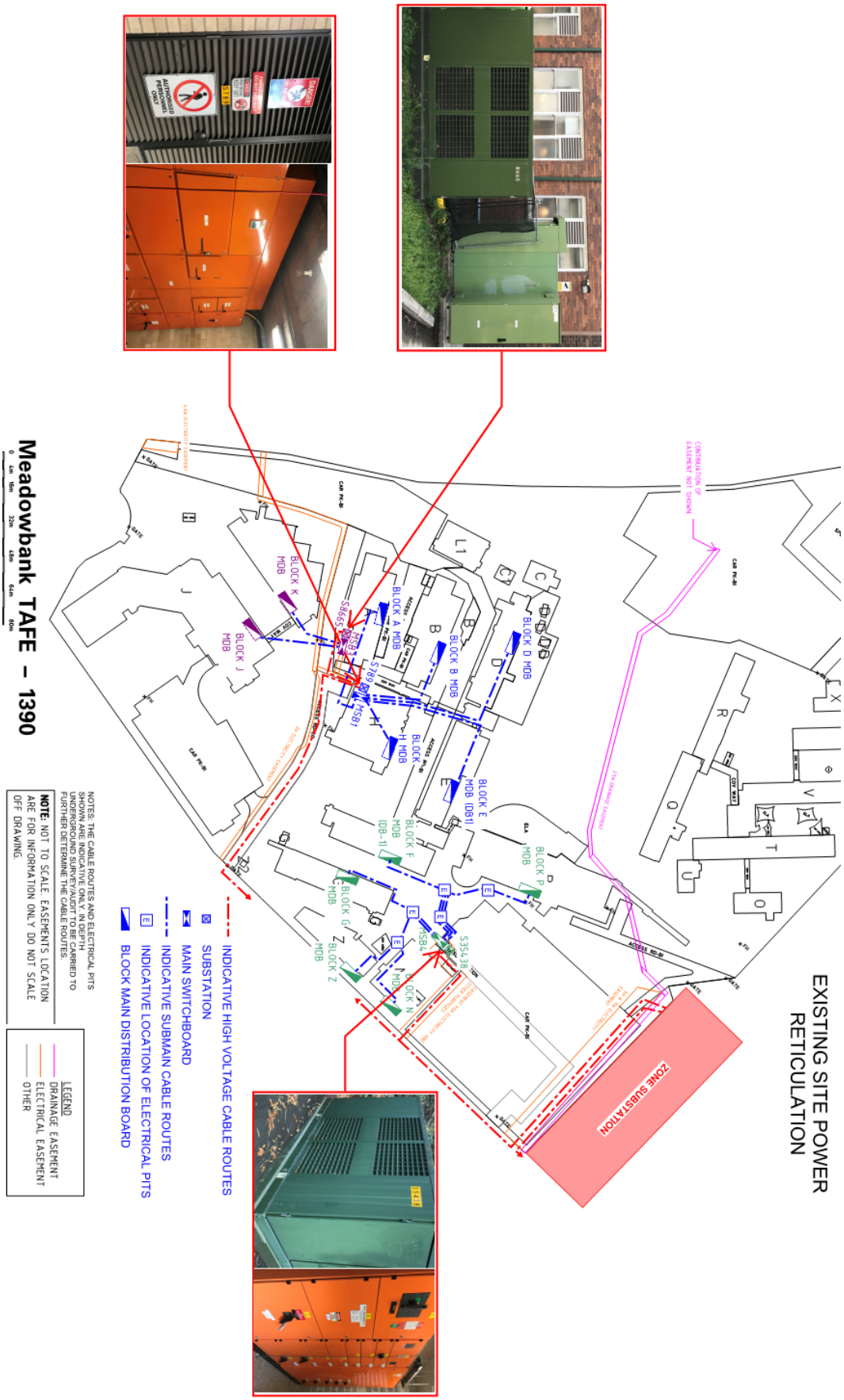


Figure: Existing electrical services demarcation zone

There are currently three existing easements on site serving the substations:

- Easement 1: Zone Substation
- Easement 2: Kiosks Substation S35438
- Easement 3: Kiosks Substation S8665 and Chamber Substation S789

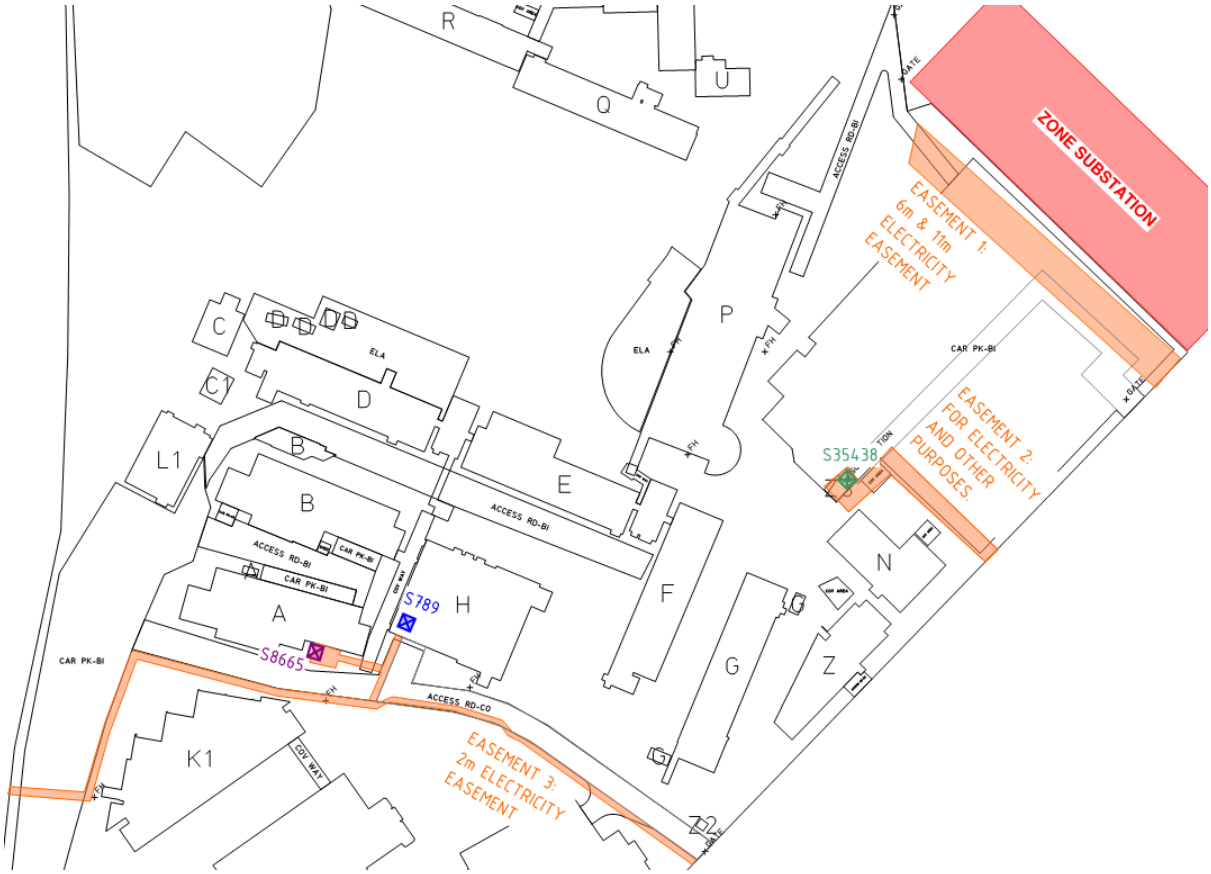


Figure: Existing electrical easements

3.2 PROPOSED ELECTRICAL WORKS

3.2.1 ENABLING WORKS

Decommissioning and removal of existing substation S35438 and MSB4

The existing kiosks substation S35438 is currently located within the proposed new Multi-Trades and Digital Technology Hub development. Hence, the existing kiosks substation need to be decommissioned and removed, resulting in abolishment of the existing S35438 substation's easement (Easement 2).

Main Switchboard 4 (MSB 4) is also located within the new Multi-Trades and Digital Technology Hub development and is required to be removed to allow for the development. All equipment within the Main Switch room including meters, power factor correction etc will need to be removed accordingly.

Establishment of new Kiosk Substation and new Main Switchboard

A maximum demand for the loads proposed to be connected to the new kiosk substation have been calculated as shown below.

Maximum Demand
TAFE Meadowbank - Relocation of S35438
By: JF

Rev : 01

Date: 16/08/2019

BUILDING	LOAD (AMPS/PHASE)	
Block Z - Existing	188.41	
Block G - Existing	391.30	
Block P - Existing	579.71	
Block F - Refurbishment	233.04	
Total TAFE Meadowbank Substation S35438 Max Demand	**1392.46**	**AMPS/PHASE**

Figure: Maximum Demand Calculation for the new kiosk substation

A new 1000kVA kiosk substation and new main switchboard are proposed to be installed in the location as shown in the figure below. An application for connection for the new kiosk substation has been lodged and we are currently awaiting confirmation from Ausgrid. Final location of the kiosks substation to be confirmed pending Ausgrid's approval.

The new kiosk substation and main switchboard are proposed to be built prior to decommissioning and removal of the existing S35438 substation. This is to avoid prolonged disruption to the existing site and allow for a planned outage and duration of the power supply from the existing electrical infrastructure to the new.

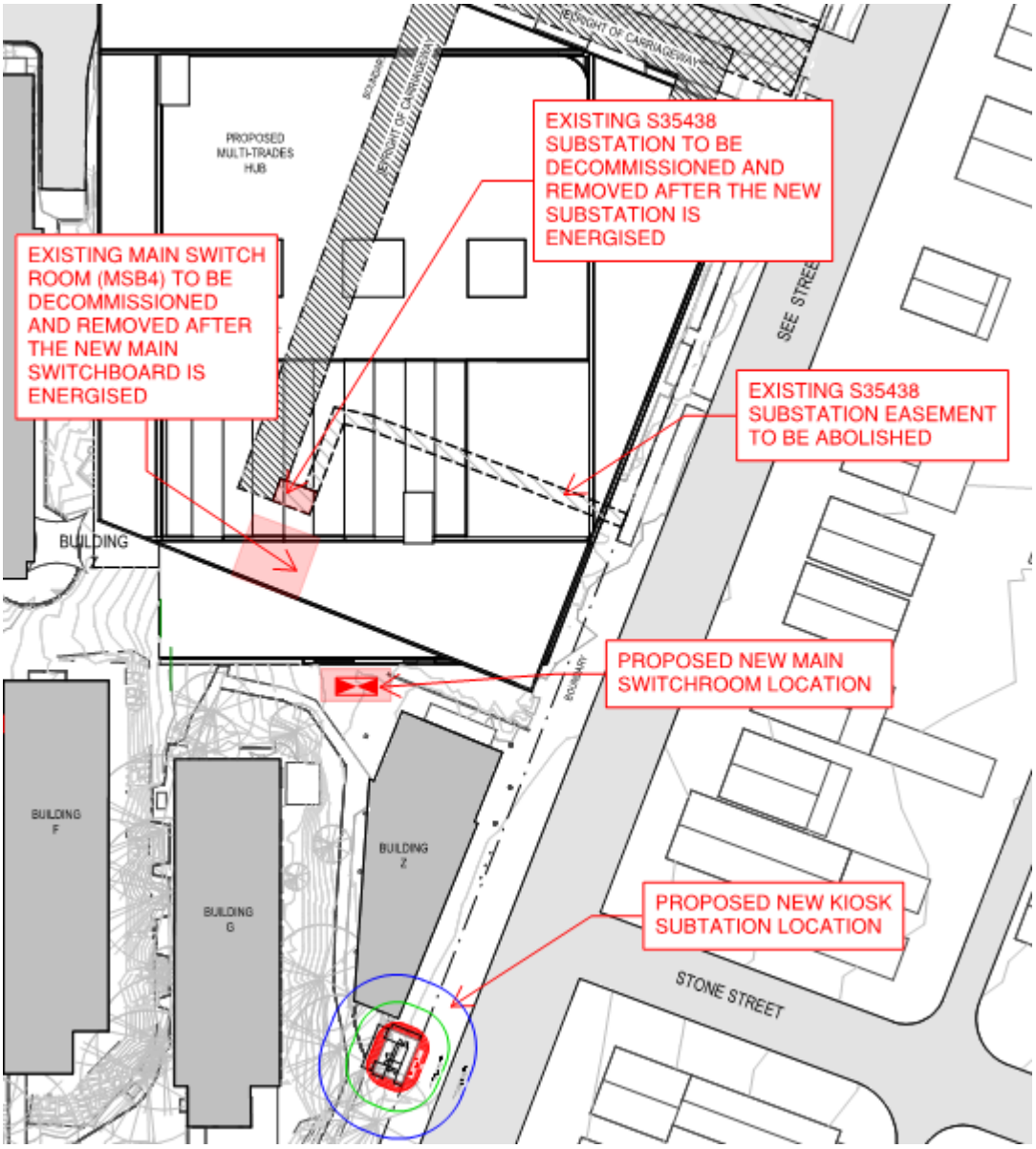


Figure: Proposed substation S34538 replacement works

AUSGRID APPLICATION FOR CONNECTION

An Ausgrid Application for Connection (ref 0027533) has been submitted on the 20th August 2019 for the revised site maximum demand, which factors in the Refurbishment of Block F.

Details of the Application for Connection is appended to the rear of this document (Appendix A).

Ausgrid have acknowledged the offer and have submitted a 'Connection Offer' back to the applicant. (webform Ref 27533, AP ref 800278047). Refer to extract below.

The Connection Offer from Ausgrid proposes the following infrastructure provisions for the project (replacement works):

- Installation of a new 1000kVA Kiosk Type substation; and
- Decommission and remove redundant existing substation S35438 (existing substation in carpark);

Note, this submission is for the replacement of the existing substation S35438 only. A separate Ausgrid Application for connection has been submitted for the Multi Trades hub.

OFFER to provide DESIGN RELATED SERVICES

Ausgrid

DESIGN RELATED SERVICES OFFER

Premises address:	**TAFE NSW MEADOWBANK 19 SEE STREET MEADOWBANK 2114**		
NMI - Number:		**Webform Ref**	**27533**
MC Reference:	**1900094708**	**AP Reference:**	**800278047**
This offer is made on	29-08-2019		

By *Ausgrid* of 570 George Street, Sydney NSW 2000.

To the *connection applicant* named in the *connection application* received on 20/08/2019 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:

- Installation of a new 1000kVA Kiosk Type Substation.
- Decommission and remove redundant 1000kVA Kiosk Type Substation S.35438.

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.

For further details, the Connection Offer is appended to the rear of this document (Appendix B).

3.2.2 NEW MULTI-TRADES AND DIGITAL TECHNOLOGY HUB DEVELOPMENT

Establishment of two new kiosks substation

Based on preliminary load calculations (architecture areas received on the 19/08/2019), the new Multi Trades Hub development will require a three phase power supply of 2075 Amps (approx. 1450kVA).

Maximum Demand

TAFE Meadowbank - Trade Hub (New Building)

By: JF

Rev : 02 **(DRAFT ONLY)**

Date: 22/08/2019

	AREA (m2)	VA/sqm		VA	
		Lighting + Power	Mechanical		
Multi Trade Hub					
Basement 03 - M-A130					
Carpark	4157	5	15	83140	
Comms room	12	300	150	5400	
Level 01 - M-A131					
Outdoor Workshop	205	50	10	12300	
Workshop	1045	70	20	94050	
Amenities	78	10	10	1560	
Circulation	252	10	10	5040	
Café	63	300	40	21420	
Learning Space	58	50	40	5220	
Digital Enabled Learning	37	50	40	3330	
Comms room	12	300	150	5400	
Basement 02 - M-A132					
Carpark	4104	5	15	82080	
Plant Room	89	35	35	6230	
Switch room	15	35	35	1050	
Comms room	20	300	150	9000	
Level 02 & Basement 01 - M-A133					
Carpark	4104	5	15	82080	
Circulation	200	10	10	4000	
Plant Room	116	35	35	8120	
Amenities	154	10	10	3080	
Office	15	50	35	1275	
Learning Space	73	50	40	6570	
Workshop	338	70	20	30420	
Self Directed Learning	82	50	40	7380	
Switch room	15	35	35	1050	
Comms room	20	300	150	9000	
Level 03 - M-A134					
Outdoor Workshop	992	50	10	59520	
Workshop	2204	70	20	198360	
Workshop	736	70	20	66240	
Learning Space	463	50	40	41670	
Digital Enabled Learning		50	40	0	
Circulation	434	10	10	8680	
Amenities	108	10	10	2160	
External Loading Yard	556	10	0	5560	
Garbage Room	44	10	10	880	
Self Directed Learning	136	50	40	12240	
Workshop Storage	518	10	10	10360	
Switch room	45	35	35	3150	
Comms room	12	300	150	5400	
Level 04 - M-A135					
Learning Space	859	50	40	77310	
Circulation	893	10	10	17860	
Amenities	95	10	10	1900	
Workplace	56	50	40	5040	
Industry Engagement	366	50	40	32940	
Comms room	12	300	150	5400	
Level 05 - M-A136					
Workplace	1008	50	40	90720	
Learning Space	997	50	40	89730	
Industry Engagement	675	50	40	60750	
Amenities	98	10	10	1960	
Circulation	627	10	10	12540	
Comms room	12	300	150	5400	
Level 06 - M-A137					
Industry Engagement	938	50	40	84420	
Industry Engagement	258	50	40	23220	
Amenities	98	10	10	1960	
Circulation	902	10	10	18040	
Comms room	12	300	150	5400	
	29418			**1437005**	**VA**
	Total			**2074.14**	**A/Phase**
Total TAFE Meadowbank - Trade Hub (New Building) Max Demand	**2074.14**	A/Phase		**1437.01**	**kVA**
	0.8	diversity			
	1659.31	A/Phase		**1149.60**	**kVA**

Figure: Maximum Demand Calculation for the new Multi-Trades and Digital Technology Hub development

As such two new 1000kVA Ausgrid kiosks substations are proposed to be installed to serve the new Multi-Trades and Digital Technology Hub development. Proposed location of the two kiosks substations are as shown in the figure below. Final location pending Ausgrid's approval.

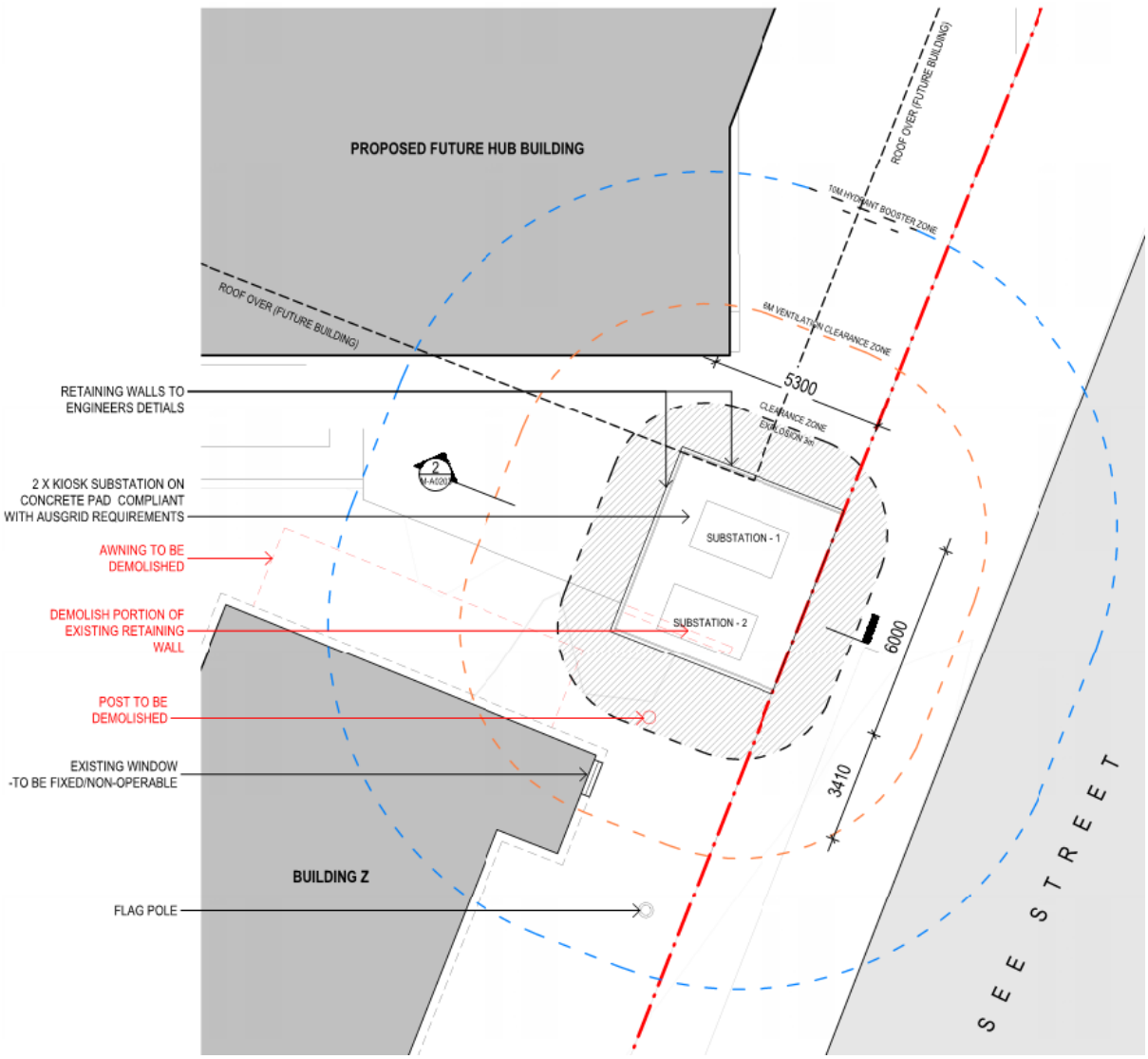


Figure: Proposed location of two new 1000kVA substations

AUSGRID APPLICATION FOR CONNECTION

An Ausgrid Application for Connection (ref 0029281) has been submitted on the 28th August 2019 for the revised site maximum demand, which factors in the New Multi-Trade and Digital Technology Hub building.

Details of the Application for Connection is appended to the rear of this document (Appendix C).

Ausgrid have acknowledged the offer and have submitted a 'Connection Offer' back to the applicant. (webform Ref 29281, AP ref 800279579). Refer to extract below.

The Connection Offer from Ausgrid proposes the following infrastructure provisions for the project:

- Installation of 2 x Kiosk Type substations

OFFER to provide DESIGN RELATED SERVICES

Ausgrid

DESIGN RELATED SERVICES OFFER

Premises address:	**19 SEE STREET, MEADOWBANK 2114**		
NMI - Number:		**Webform Ref**	**29281**
MC Reference:	**1900094898**	**AP Reference:**	**800279579**
This offer is made on	07-09-2019		

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

To the ***connection applicant*** named in the *connection application* received on 28/08/2019 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:

- Installation of 2 x Kiosk type substations.

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.

For further details, the Connection Offer is appended to the rear of this document (Appendix D).

3.2.3 PROTECTION OF THE EXISTING TO REMAIN EASEMENTS

3.2.3.1 Zone Substation Easement (Easement 1)

The Zone substation is proposed to remain as existing to serve the site. Hence, the zone substation easement (Easement 1) will need to be protected and taken into account as part of the Multi-Trades and Digital Technology Hub development. There will be a strategic distance between the zone substation and the Multi-Trades and Digital Technology hub to allow for the required zone substation easement. Note that no structural building of the Multi-Trades and Digital Technology Hub will be within the easement of the zone substation.

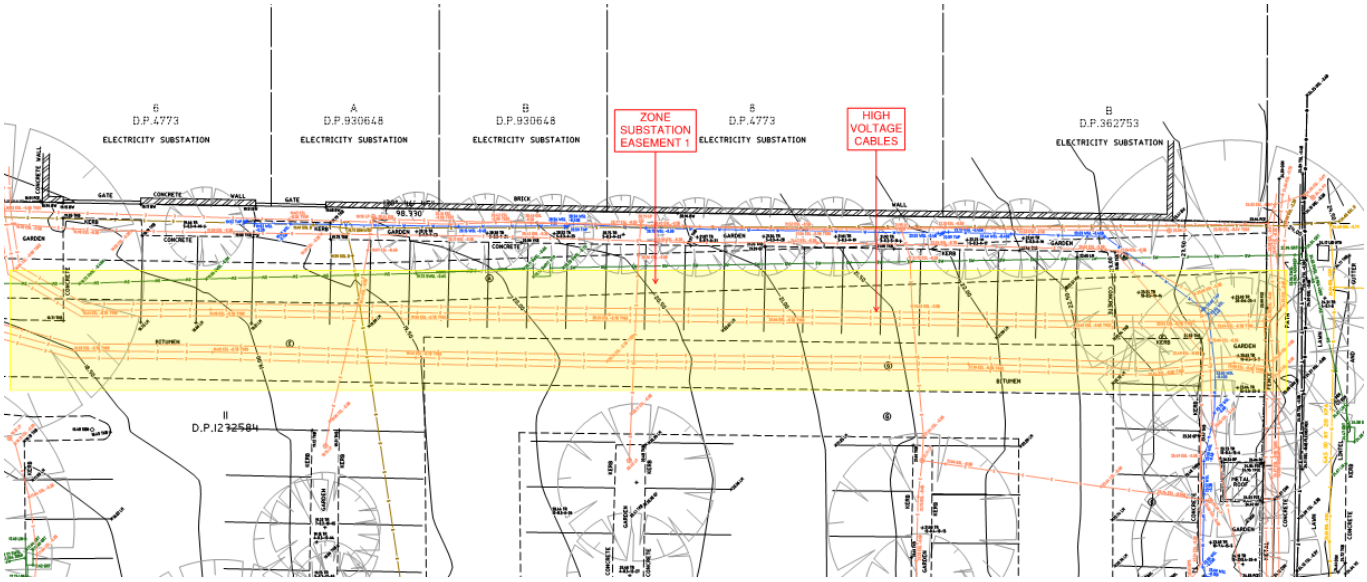


Figure: Survey Drawing noting high voltage cables running along zone substation easement

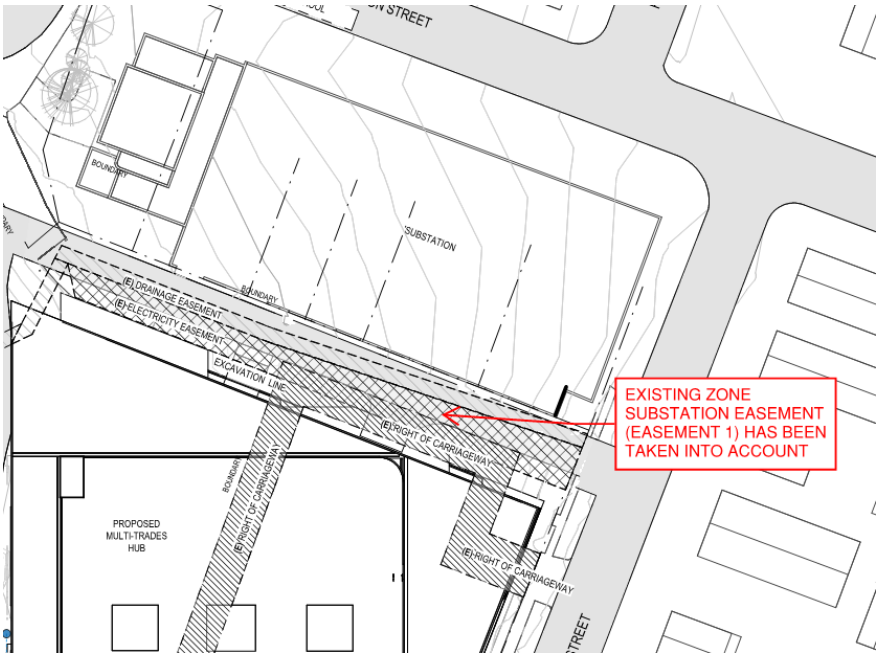


Figure: Existing zone substation easement (easement 1) being taken into account

3.2.3.2 Kiosks Substation S8665 and Chamber Substation S789 Easement (Easement 3)

Kiosks Substation S8665 and Chamber Substation S789 are also proposed to remain as existing to serve the remainder of the site. Hence, the associated easement (Easement 3) will be protected and retained as part of the works.

3.3 ELECTRIC AND MAGNETIC FIELDS (1HZ-100KHZ)

Electric and Magnetic fields, in particular source from the zone substation have considered in line with the INCIRP, 2010 standards. Refer to JHA's Electric and Magnetic Fields report (EMF report) for further information.

3.4 EXISTING COMMUNICATIONS SERVICES DESCRIPTION

The TAFE Meadowbank Site currently is serviced by a Telstra GWIP fibre connection with 200MBps Up /200MBps Down.

The main comms fibre incoming feeds enter from See Street into Block J, where the campus distributor racks are currently located.

Figure: Dial before you Dig noting Optus underground incoming cable

The ICT / Fibre Hub campus distributor is currently located in Block J. There are four communications racks located within the Block J campus distributor.

Figure: Existing campus distributor

Figure below shows a high level representative of the ICT / Fibre backbone reticulation through the site that will be affected by the proposed works. Note that the routes shown are indicative.

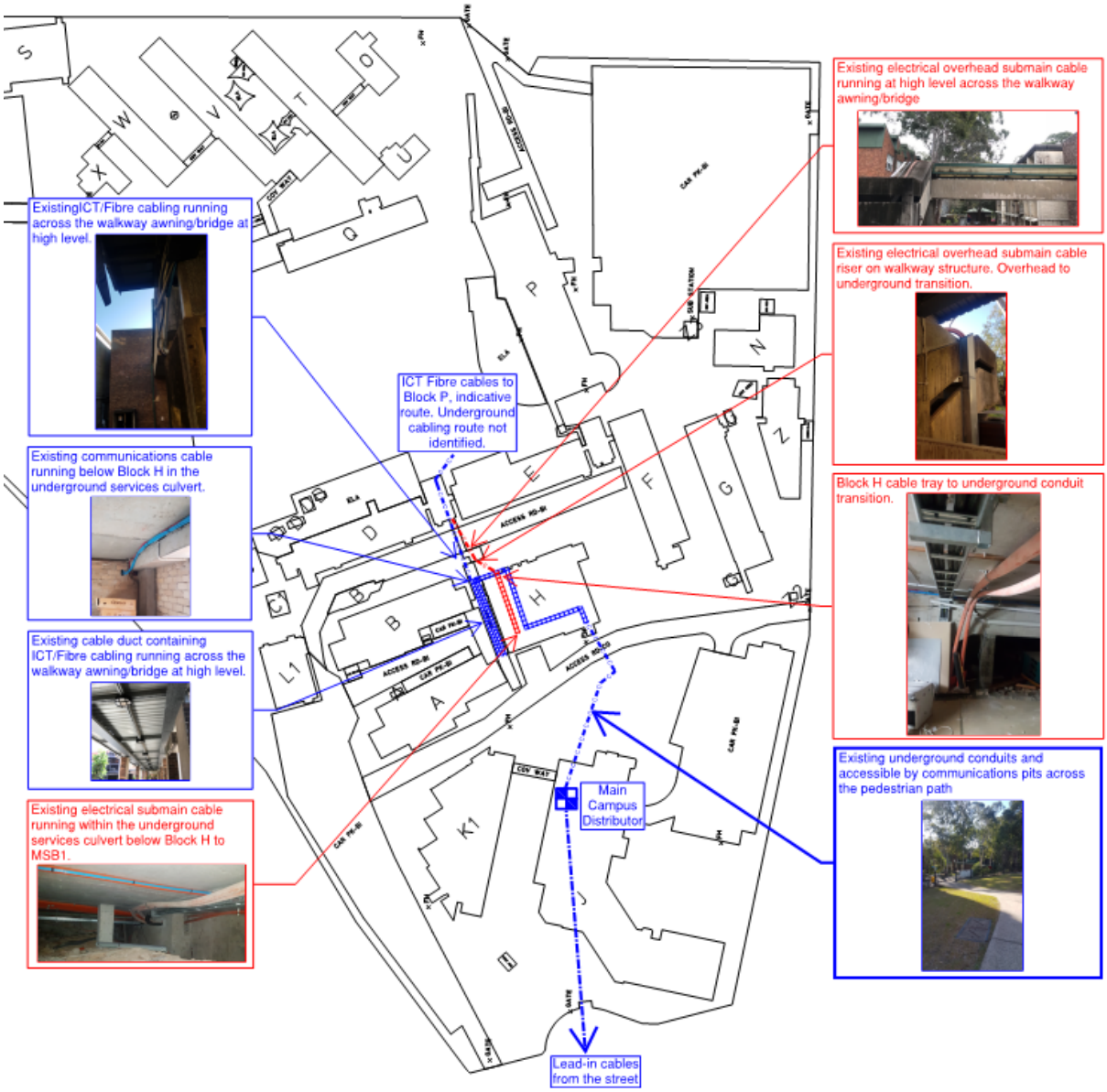


Figure: Existing ICT/Fibre and security reticulation

3.5 PROPOSED COMMUNICATIONS WORKS

3.5.1 SITE WIDE COMMUNICATIONS SERVICES RETICULATION

New fibre will be run, connecting the new multi-trades and digital technology hub to the Block J campus distributor (for dedicated intranet connections). The new fibre cables are proposed to be run underground in conduit and pits, with an indicative cabling route as shown below.

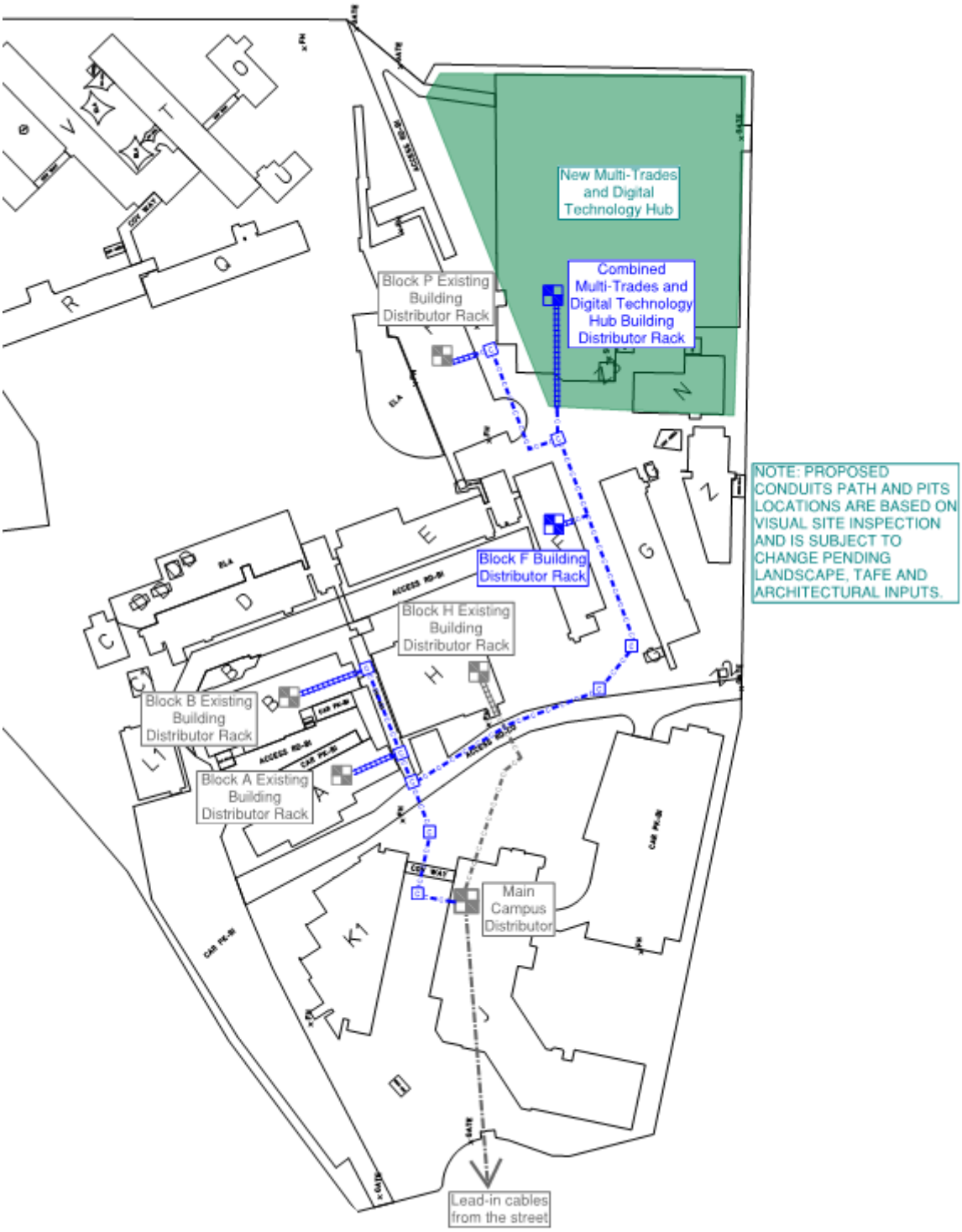


Figure: Proposed new fibre route

As the communications cabling connecting Block J to Block P is running at high level across the existing walkway awning/bridge that is proposed to be removed, new underground fibre needs to be run to Block P as shown above. It is proposed that the new underground fibre, conduits and pits to be run to Block P prior to removal/demolishment of the existing walkway awning/bridge and any overhead cables/cable containments in accordance to the site wide staging plan to minimise disruption to the remaining of the site during construction.

Similar to the Multi-Trades and Digital Technology Hub, new fibre will be run, connecting the Refurbished Block F back to the Block J campus distributor (for dedicated intranet connections). Refer to figure above for indicative fibre connection route.

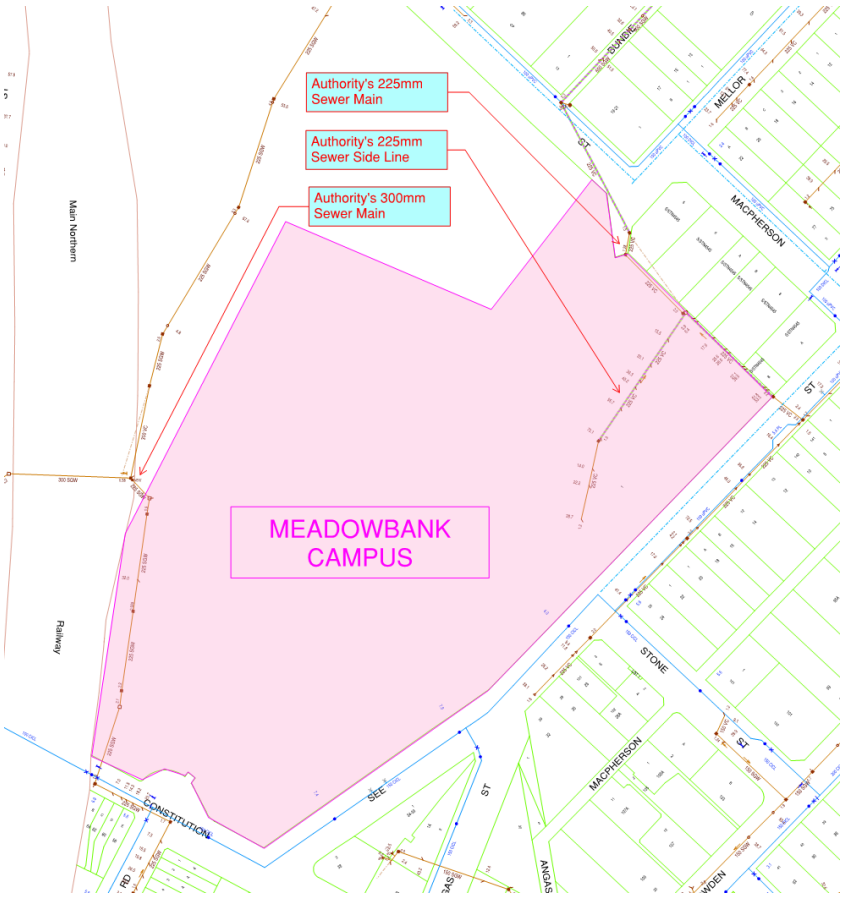
4 HYDRAULIC SERVICES

4.1 EXISTING SERVICES DESCRIPTION

4.1.1 SEWER SYSTEM

There are several Sydney Water sewer mains currently servicing the site, located adjacent to and within the college which facilitate multiple private sewer connections as shown in the figure below.

A 225mm Sydney Water sewer main exists within the North Eastern carpark directly within the proposed footprint of the new MTH/DTH. This sewer line is understood to serve Blocks N and Z. As such, demolition of the authority sewer line to make way for the new MTH/DTH will need to consider reconnection of these blocks to a private sewer main.



The authority's 300mm sewer main West of the college receives sewer discharge from two (2) of the college's main private sewer lines serving the majority of buildings. It is understood that the private sewer mains to the north of Block D and E is in disrepair with ongoing issues and will need to be replaced.

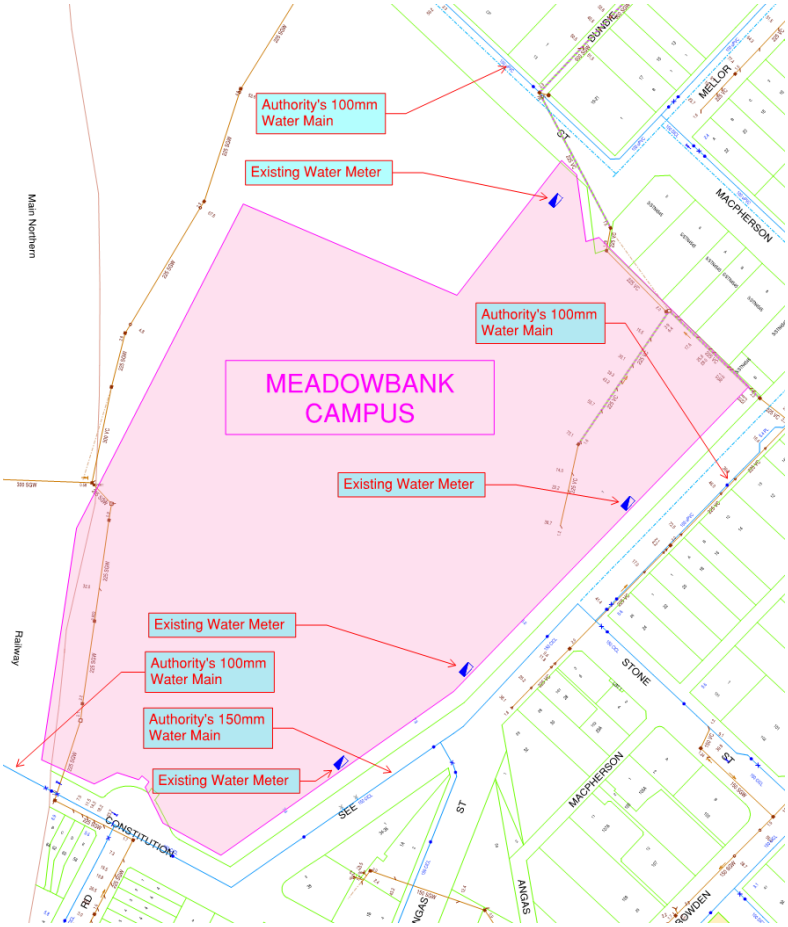
4.1.2 WATER SERVICES

The college is bound by three (3) authority's water mains located in See Street (100 to 150mm main), Constitution Road (100mm main) and Rhodes Street (100mm main). There are several water supplies to the college coming of the See Street main and another potable water and fire hydrant connection of the Rhodes Street main.

Based on survey information and site observations the following incoming water supplies have been noted:

- Rhodes Street – 100mm to water meter and fire hydrant booster for Block P and surrounding areas;
- See St (North) – 20mm to 2 x water meters to carpark water and Block N;
- See St (Central) – 100mm to water meter to several buildings through the central area;

- See St (Central) – 100mm to fire hydrant booster for Blocks J and K; and
- See St (South) – 150mm to water meter for Block J and carpark and fire hydrant booster for Blocks A, B, D, E and F.



4.1.3 FIRE SERVICES

As noted above, there are several water mains with the streets around the college. Based on site inspections and the Lucid Fire Hydrant Report, there appears to be three fire hydrant connections as follows:

- Rhodes Street – 100mm, 4 point booster for Block P;
- See St (Central) – 100mm, 4 point booster to a pump assembly for Blocks J and K; and
- Carpark (South at Block J) – 150mm, 4 point booster for Blocks A, B, D, E and F.

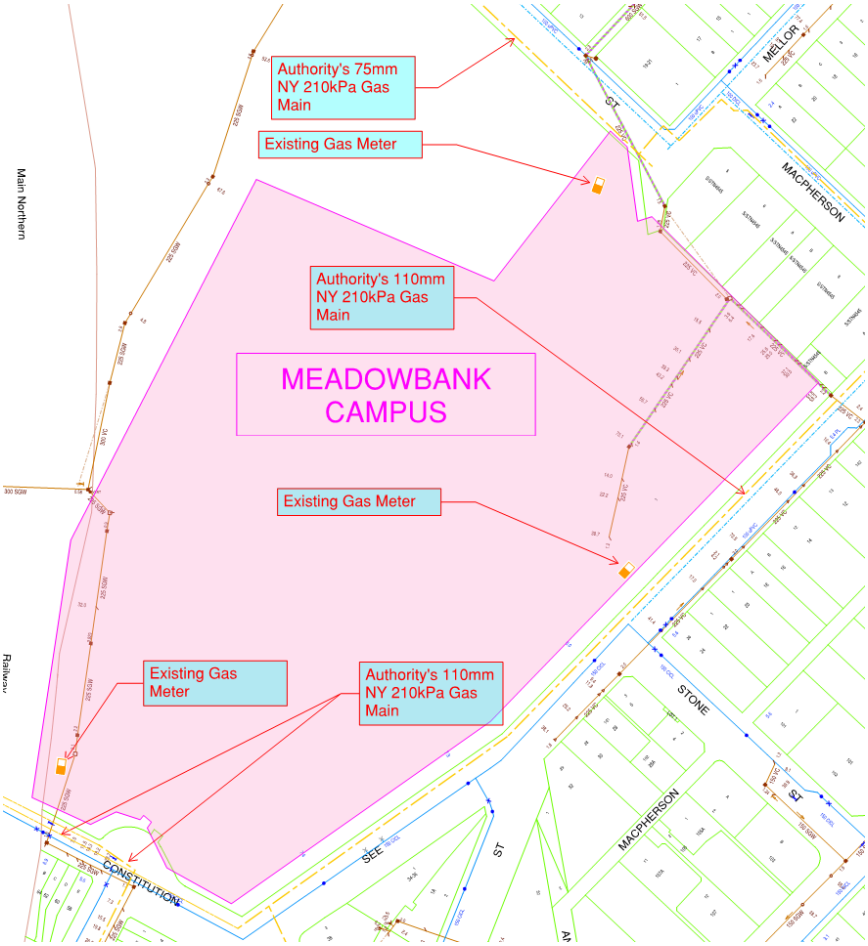
A fourth fire hydrant system is located in Block H and is a dry hydrant system with no direct water supply.

4.1.4 NATURAL GAS SERVICES

Authority's gas mains are located in See Street (110mm@210kpa), Constitution Road (110mm@210kpa) and Rhodes Street (75mm@210kpa).

Similar to water services, the college has multiple gas supplies as follows:

- Constitution Road – main supply to the majority of buildings;
- See St (Central) – 20mm supply to Block Z; and
- Rhodes Street – 25mm to Block P with second stage regulator at the rear of the building,



4.1.5 STAGING FOR BLOCK P

As outlined above, the connections for incoming water, fire hydrants and gas supply for Block P are located at the Rhodes Street entrance to the college. The meter and booster assemblies are located on the school's property and will require relocation.

4.2 PROPOSED WORKS

4.2.1 SEWER SYSTEM

The development of the new MTH/DTH will require the following works from the existing sewer service:

- Decommission of the existing Sydney Water sewer main; and
- Potential replacement of the private sewer line adjacent Blocks D and E.

The development of the new MTH/DTH will require the decommissioning of the existing Sydney Water sewer main along the existing carpark to enable the excavation of the basement levels.

JHA issued a variation letter on Thursday 12th September, consisting of a quotation from MGP Building and Infrastructure, a recommended and accredited Water Servicing Coordinator (WSC), with a scope to facilitate the decommissioning of the authority sewer main. As the sewer service is an authority asset, a WSC is required to liaise with and complete applications to Sydney Water to allow the construction works to commence.

Blocks N and Z are potentially connected to the aforementioned authority sewer main. As such, reconnection of these buildings to a private sewer main would be required.

In addition, further CCTV works are being facilitated to determine the condition of the existing private sewer line adjacent Blocks D and E. This main sewer line is proposed to serve the new MTH/DTH. It is understood that the sewer line is in disrepair and potentially in need of replacement.

Assumptions

- Portion of the private sewer service along Blocks D and E are in disrepair and will require replacement; an
- Blocks N and Z are connected to the authority sewer main to be decommissioned. As such, new connections to a private sewer line is required.

Design criteria

Application	Criteria
Standard Pipe Gradients	40-65 -2.5% 100 - 1.65% 150 – 1% 225 – 0.85%

4.2.2 ROOF DRAINAGE

The proposed roof layout consists of multiple areas requiring various rainwater collection methods. The roof consists of surface drainage for the plant room areas, box gutters for the sawtooth roof, and eaves gutters for the remaining roof areas.

Design criteria

Application	Criteria
Average Recurrence Interval/ Rainfall Intensity	1:100yr – 224mm/hr 1:20yr – 174mm/hr
Standard Pipe Gradients	100 - 1.00% 150 – 1.00% 225 – 0.65%

	300 – 0.40%

4.2.3 WATER SERVICES

Sydney Water's current policy states that one water connection is to be supplied to one lot for water supply and fire services. As the college is one lot and currently has six (6) or more water connections, Sydney Water will not permit further connections. Contact with Sydney Water should be made through a Water Servicing Coordinator to facilitate direction on what is possible.

To serve the new MTH/DTH, the water supply will be extended from the existing 100mm supply off See Street, south of Block Z at the See Street boundary. Due to the location of the proposed new substation (adjacent to the Block Z), the route of the new water supply will need to divert around the substation exclusion zone. This works will form part of an early works package.

The water supply will reticulate to a new water meter assembly and pump assembly to serve the MTH/DTH fixtures, plant and equipment.

Assumptions

- Sydney Water will not permit further water connections; and
- Sydney Water will permit upgrading of existing meter assembly if required to serve the development.

Design criteria

Application	Criteria
Operating pressures at fixture outlets.	Minimum - 250kpa Maximum – 500kpa
Operating Velocities through pipework.	Minimum – 1.5m/sec Maximum – 3m/sec

4.2.4 HOT WATER SERVICE

The hot water service for the new MTH/DTH shall be a gas fired centralised hot water reticulation plant with solar pre-heat serving all ablution fixtures within the development.

Hot water for kitchenettes and tea points throughout the MTH/DTH shall be generated via a ZIP 4-in-1 boiling, chilled and hot unit located beneath the sink, within the joinery cupboard.

4.2.5 GAS SERVICES

Jemena has outlined, in initial discussions, that additional connections for the site will not be approved and existing connections will need to be utilised; advice which is in line with their current guidelines. Jemena has outlined that to reuse the existing connection, a full audit is required of the existing system and the current gas fixtures.

Once a full audit has been undertaken, Jemena will be able to approve any meter/regulator upgrades for the new building and its potentially increased demand. It has been noted that this advice is only preliminary until a formal application is made.

The natural gas strategy for the MTH/DTH will largely depend on the results of the gas audit. For the purposes of this report, the natural gas supply will be extended off the existing supply, located approximately at Blocks E and P, to serve the MTH/DTH.

Assumptions

- There will be sufficient 'spare' capacity within the gas service, at the point of extension, to serve the new MTH/DTH, without upgrading of the existing infrastructure.

4.2.6 FIRE SERVICES

To serve the new MTH/DTH, it is proposed to upgrade the existing 100mm domestic cold water supply and connection at See Street, adjacent to Block Z, to a 150mm supply, and extend the pipework to serve both the fire systems (fire hydrant and fire sprinkler systems) and domestic cold water supply.

Assumptions

- Sydney Water will not permit further water connections

Design criteria

Application	Criteria
Operating pressures at fixture outlets.	Minimum - 250kpa Maximum – 1200kpa
Operating Velocities through pipework.	Maximum – 4m/sec
Minimum number of Hydrants to operate simultaneously	(2)
Minimum operating flow rate	20l/s

4.2.7 STAGING FOR BLOCK P

As the incoming services (natural gas, potable water and hydrant service) for Block P are located within the new school's lot, they will need to be relocated in the short term.

Assumptions

- Incoming services for Block P are to be reconnected to the new services serving the new MTH/DTH.

5 APPENDIX A: APPLICATION FOR CONNECTION (SUBSTATION S35438 REPLACEMENT WORKS)

New Connection Above 100 AMP

Reference Code : 0027533

New Connection

LOCATION

Retailer
Other (Enernoc)
Property Name
Tafe Nsw Meadowbank
Property Type
Building
Land Title Type
Strata
Street Number/RMB
19
Lot/DP Number
11/1232584
Location Address
See Street, Meadowbank, 2114
Land Zoning
Urban
Location Diagram

File name	Ausgrid filename reference	Size
TAFE Meadowbank Site Location.pdf	LocationAttachmentFilePath_1	0.292 MB

APPLICANT

Applicant Type
Asp On Behalf Of A Retail Customer Or Real Estate Developer
Full Name
Miss Jocelynn Foo
Email Address
jocelynn.foo@jhaengineers.com.au
ABN/ACN
48612666172
Company Name
Jha Consulting Engineers
Floor Number
23
Unit/Shop Number
Level 23
Street Number/RMB
101
Nearest Cross Street
Pacific Highway
Applicant Address
Miller Street North Sydney 2060
Phone Number

0294371000

Asp Number

3342

Asp Level

Level 3

CUSTOMER

Customer Type

Real Estate Developer

Full Name

Mr Cameron Huxley

Email Address

cameron.huxley1@tafensw.edu.au

Phone Number

0418210110

Company Name

Tafe Nsw

LOAD DETAILS

Proposed Point Of Common Coupling

Substation

Proposed Asset Identifier

S35438

Proposed Connection Point

Main Switchboard

Proposed Service Length

50

Proposed Service Type

Underground

Service Voltage

Low Voltage 230/400v

Service Size

Other (1400)

Proposed Maximum Demand

Number Of Phases:	Phase A:	Phase B:	Phase C:
3	1393	1393	1393

Proposed Maximum Demand Calculation

File name	Ausgrid filename reference	Size
190224_TAFE Meadowbank_Max Demand_(1.0) 20190816.pdf	WFAMaxDemandCalc_1	0.026 MB

Are You Intending To Connect Controlled Load At This Premises?

No

ADDITIONAL DEVELOPMENT DETAILS

HOUSE SERVICES

Number Of House Service Premises:	1
Proposed Maximum Demand Number Of Phases:	3
Phase A:	1393
Phase B:	1393
Phase C:	1393
Total Number Of Premises:	1

I Will Be Installing Equipment At The Premises That May Result In Non Linear / Fluctuating Loads

No

Construction Of The Premises Connection Assets Will Commence
23-Apr-2020
When Do You Wish To Electrify The Premises?
27-May-2020
Ausgrid Has Provided A Certified Design Number(Cdn) For A Network Augmentation Project Associated With The Premises
No
Asp 1 Has Been Appointed
No
Do You Have Development Consent (Da) For Your Proposal?
No
Do You Wish To Underground / Relocate Electricity Assets In Conjunction With This Connection Application?
Yes
Underground / Relocation Details
New Multi Trades Hub For Tafe Meadowbank Is Proposed To Be Built Over The Existing S35438 Substation (1000kva) Location. Existing S35438 Substation Is Proposed To Be Decommissioned And Removed After The New 1000kva Kiosk Substation Is Built. Refer To Attachment For Proposed New 1000kva Kiosk Substation Location.

Please attach any documents that are relevant to your connection for example Proposed Design, sketch of the building, Photos etc

File name	Ausgrid filename reference	Size
Proposed Substation Works.pdf	AdditionalAttachment_1	0.951 MB

EXPEDITED CONNECTION

Do you want to expedite your connection offer for all premises?

○ Yes ● No

Ausgrid will send you an offer that meets your supply requirements.

DECLARATION

Applicant Name
Miss Jocelynn Foo
Application Date
20-Aug-2019

Price Description	Price Including GST
Above 100 Amps Connection Offer - Technical Assessment required 1 x 452.80	AUD $452.80
Total Price	AUD $452.80

Terms and Conditions:

In submitting this application you are engaging Ausgrid to provide you with a connection offer. Once submitted the fee charged is consumed. Ausgrid will aim to provide you with a written response within 10 business days. If additional work and/or fees are required, we will contact you to advise prior to providing the response.

Where this application requests an expedited connection, I declare that I have read and understood the terms and conditions of the connection offer and agree that if the connection is expedited that a contract based on that offer will be formed with Ausgrid on the date that Ausgrid receives the application. Where this application is being made on behalf of a retail customer or real estate developer, I declare that I have obtained the authority of that person to make this application of their behalf, including where applicable, making a request for expedition of the connection application.

*I acknowledge the terms & conditions.

6 APPENDIX B: CONNECTION OFFER (SUBSTATION S35438 REPLACEMENT WORKS)

OFFER to provide DESIGN RELATED SERVICES

DESIGN RELATED SERVICES OFFER

Premises address: **TAFE NSW MEADOWBANK 19 SEE STREET MEADOWBANK 2114**

NMI - Number: **Webform Ref 27533**

MC Reference: **1900094708** **AP Reference: 800278047**

This offer is made on 29-08-2019

By *Ausgrid* of 570 George Street, Sydney NSW 2000.

To the *connection applicant* named in the *connection application* received on 20/08/2019 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:

- Installation of a new 1000kVA Kiosk Type Substation.
- Decommission and remove redundant 1000kVA Kiosk Type Substation S.35438.

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 to enter into a Contract for Design Related Services. 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 you once we receive your 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
Design Service Package 05	Service	1.00000		$0.00
Administration of Contestable Works - General - Design	Service	1.00000	$236.71	$236.71
Design Information - Standard	Hour	7.00000	$196.39	$1,374.73
Design Certification - Other - R3	Hour	20.00000	$196.39	$3,927.80
SUBTOTAL				$5,539.24
GST (10%)				$553.92
TOTAL				$6,093.16

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.

7 APPENDIX C: APPLICATION FOR CONNECTION (MULTI-TRADES AND DIGITAL TECHNOLOGY HUB BUILDING)

New Connection Above 100 AMP

Reference Code : 0029281

New Connection

LOCATION

Land Title Type
Strata
Street Number/RMB
19
Lot/DP Number
11/1232584
Location Address
See Street, Meadowbank, 2114
Land Zoning
Urban
Location Diagram

File name	Ausgrid filename reference	Size
TAFE Meadowbank Site Location.pdf	LocationAttachmentFilePath_1	0.244 MB

APPLICANT

Applicant Type
Asp On Behalf Of A Retail Customer Or Real Estate Developer
Full Name
Miss Jocelynn Foo
Email Address
jocelynn.foo@jhaengineers.com.au
ABN/ACN
48612666172
Company Name
Jha Consulting Engineers
Floor Number
23
Unit/Shop Number
Level 23
Street Number/RMB
101
Nearest Cross Street
Pacific Highway
Applicant Address
Miller Street North Sydney 2060
Phone Number
0294371000
Asp Number
3342
Asp Level
Level 3

CUSTOMER

Customer Type
Real Estate Developer
Full Name
Mr Cameron Huxley
Email Address
cameron.huxley1@tafensw.edu.au
Phone Number
0418210110
Company Name
Tafe Nsw

LOAD DETAILS

Proposed Point Of Common Coupling
Substation
Proposed Asset Identifier
Unknown
Proposed Connection Point
Main Switchboard
Proposed Service Length
50
Proposed Service Type
Underground To Overhead Transition (Ugoh)
Service Voltage
Low Voltage 230/400v
Service Size
Other (2100)
Proposed Maximum Demand Number Of Phases: 3 Phase A: 2075 Phase B: 2075 Phase C: 2075
Proposed Maximum Demand Calculation

File name	Ausgrid filename reference	Size
190224_TAFE Meadowbank_Max Demand_(3.0) 20190822.pdf	WFAMaxDemandCalc_1	0.053 MB

Are You Intending To Connect Controlled Load At This Premises?
No

ADDITIONAL DEVELOPMENT DETAILS

HOUSE SERVICES

Number Of House Service Premises:	1
Proposed Maximum Demand Number Of Phases:	3
Phase A:	2075
Phase B:	2075
Phase C:	2075
Total Number Of Premises:	1

I Will Be Installing Equipment At The Premises That May Result In Non Linear / Fluctuating Loads
No

Construction Of The Premises Connection Assets Will Commence
29-Sep-2020
When Do You Wish To Electrify The Premises?
29-Nov-2020
Ausgrid Has Provided A Certified Design Number(Cdn) For A Network Augmentation Project Associated With The Premises

No

Asp 1 Has Been Appointed

No

Do You Have Development Consent (Da) For Your Proposal?

No

Do You Wish To Underground / Relocate Electricity Assets In Conjunction With This Connection Application?

No

Comments

A New Combined Multi-Trades And Digital Technology Hub Is Proposed To Be Built For Tafe Meadowbank. The Maximum Demand Is For The New Development Is Calculated To Be Approximately 2075 Amps. Two 1000kva Kiosks Substations Are Proposed To Be Built For The New Development. Refer To Attachment Below For The Proposed Two 1000kva Kiosks Substations Location.

Please attach any documents that are relevant to your connection for example Proposed Design, sketch of the building, Photos etc

File name	Ausgrid filename reference	Size
Proposed New Substations Location.pdf	AdditionalAttachment_1	0.966 MB

EXPEDITED CONNECTION

Do you want to expedite your connection offer for all premises?

○ Yes ● No

Ausgrid will send you an offer that meets your supply requirements.

DECLARATION

Applicant Name

Miss Jocelynn Foo

Application Date

28-Aug-2019

Price Description	Price Including GST
Above 100 Amps Connection Offer - Technical Assessment required 1 x 452.80	AUD $452.80
Total Price	AUD $452.80

Terms and Conditions:

In submitting this application you are engaging Ausgrid to provide you with a connection offer. Once submitted the fee charged is consumed. Ausgrid will aim to provide you with a written response within 10 business days. If additional work and/or fees are required, we will contact you to advise prior to providing the response.

Where this application requests an expedited connection, I declare that I have read and understood the terms and conditions of the connection offer and agree that if the connection is expedited that a contract based on that offer will be formed with Ausgrid on the date that Ausgrid receives the application. Where this application is being made on behalf of a retail customer or real estate developer, I declare that I have obtained the authority of that person to make this application of their behalf, including where applicable, making a request for expedition of the connection application.

*I acknowledge the terms & conditions. ☑

8 APPENDIX D: CONNECTION OFFER (MULTI-TRADES AND DIGITAL TECHNOLOGY HUB BUILDING)

OFFER to provide DESIGN RELATED SERVICES

DESIGN RELATED SERVICES OFFER

Premises address: **19 SEE STREET, MEADOWBANK 2114**

NMI - Number: **Webform Ref 29281**

MC Reference: **1900094898** **AP Reference: 800279579**

This offer is made on 07-09-2019

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

To the ***connection applicant*** named in the *connection application* received on 28/08/2019 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:

- Installation of 2 x Kiosk type substations.

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.

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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

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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
Design Service Package 04	Service	1.00000		$0.00
Administration of Contestable Works - General - Design	Service	1.00000	$236.71	$236.71
Design Information - Standard	Hour	7.00000	$196.39	$1,374.73
Design Certification - Other - R3	Hour	16.00000	$196.39	$3,142.24
SUBTOTAL				$4,753.68
GST (10%)				$475.37
TOTAL				$5,229.05

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.