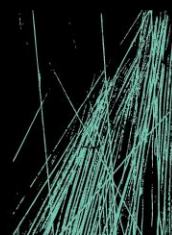




SSDA INFRASTRUCTURE MANAGEMENT PLAN

**SYDNEY CHILDREN'S HOSPITAL STAGE 1 / CHILDREN'S
COMPREHENSIVE CANCER CENTRE (SCH-1/CCCC)**

ELECTRICAL & COMMUNICATION SERVICES



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DOCUMENT CONTROL SHEET

Project Number	200152
Project Name	Sydney Children's Hospital Stage 1 / Children's Comprehensive Cancer Centre (SCH-1/CCCC)
Description	Report to support a State Significant Development Application (SSDA) for the proposed SCH-1/CCCC development
Key Contact	Miljan Tepic (PwC)

Prepared By

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1 PROJECT OVERVIEW

The purpose of this Report is to support the State Significant Development Application (SSD-10831778) for the Sydney Children's Hospital Stage 1 (SCH-1)/ Children's Comprehensive Cancer Centre (CCCC) at Randwick Hospitals Campus (the project).

The Randwick Health and Innovation Precinct (RHIP) is one of the most comprehensive health innovation districts in Australia. While health care at RHIP has been evolving for over 160 years, the last five years has seen a strengthening of collaboration amongst a wide range of organisations in the precinct, including with government, universities and community.

The project seeks to strengthen the precinct as a world-class centre for health, research and education, driving cutting edge, compassionate and holistic healthcare and wellness programs for the local community and other residents of NSW. The project will deliver brand new, state-of-the-art paediatric health, medical research and education facilities and will assist to transform paediatric services and a key step in realising the vision for the RHIP.

1.1 SITE LOCATION

The project is located on the corner of High Street and Hospital Road, Randwick bounded by the CBD and South East Light Rail Services along High Street, existing Prince of Wales Hospital across Hospital Road, and UNSW Kensington Campus across Botany Street. The figure below shows the project site plan.

Hospital Road upgrade works is subject to a separate Planning Approval Pathway and does not form part of the current development application.



Figure 1: Aerial Photo of Indicative Site (Nearmaps, 20/01/2021)

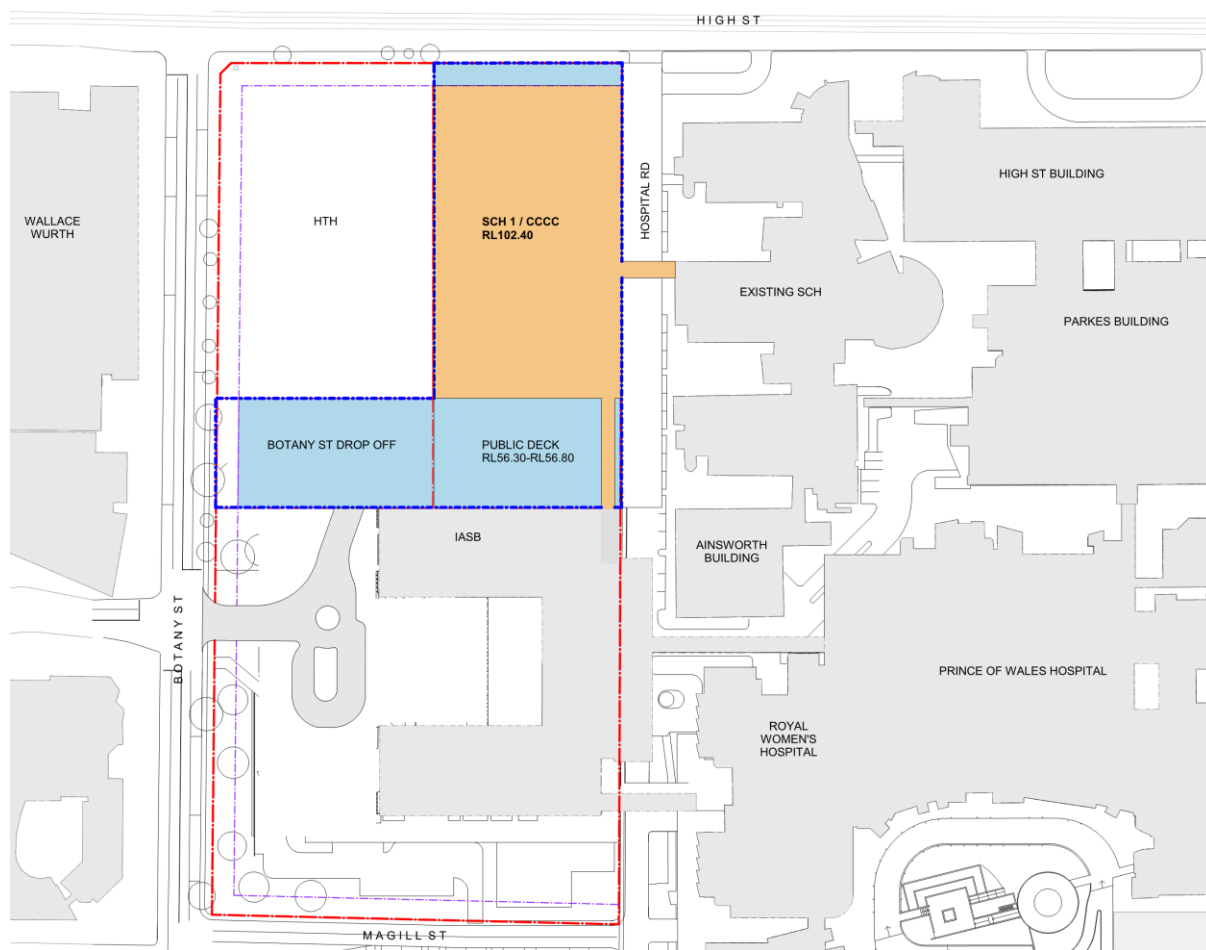


Figure 2: Indicative Site Plan Location

1.2 PROPOSED SITE DESCRIPTION

The project scope includes construction and operation of a new 9 storey building plus 2 basement levels and a plant room to provide:

- A new Emergency Department
- A new Intensive Care Unit
- Short Stay Unit
- Day and Inpatient CCCC oncology units
- Children's Comprehensive Cancer Centre
- Ambulance access, parking, back of house and loading dock services accessed via the lowered Hospital Road
- Integration with the Prince of Wales Acute Services Building and Integrated Acute Services Building, both currently under construction
- Integration with the proposed Health Translation Hub (HTH) which is a facility being developed by UNSW for education, training and research
- Public domain and associated landscaping
- Tree removal
- Utilities services and amplification works;
- Site preparation and Civil works

An indicative North / South section of the Project is provided below to show its relationship with the IASB development currently under construction.

1.3 SEARS REQUIREMENTS

This report responds to the following relevant items of the received Secretary's Environmental Assessment Requirements (SEARs) issued 2 December 2020 for the proposed State Significant Development Application (SSDA) SSD-10831778:

SEARs ITEM	COMMENT / REFERENCE
Item 15 – Utilities	<p>In consultation with relevant service providers:</p> <ol style="list-style-type: none">1. Assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.2. Identify any infrastructure upgrades required off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.3. Provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.

Table 1: SEARs Utility Requirements

The above requirements of the development have been assessed with the below overview provided for each item:

1. Assessment of existing utility infrastructure and assets has been undertaken in parallel to formal discussions with respective utilities. It is understood some adjustment and new installation to the existing external utility infrastructure are required including extension of existing Ausgrid HV feeders along Botany Street and High Street.
2. Contact has been made to respective utilities with formal responses provided initiating early works design considerations to assist with implementing upgrades in accordance with the current development program.
3. Infrastructure delivery and staging plans will be developed at a later design stage through further consultation with each utility company.

2 INTRODUCTION

This report summarises the existing utility infrastructure that will be affected by the proposed development works specifically addressing the following key elements:

1. The location of existing major Electrical and Telecommunication infrastructure surrounding the site;
2. The suitability and compliance of such identified services infrastructure to support the development; and
3. The key service infrastructure works required to supply the proposed development.

All analysis undertaken has been done so with an understanding that a high level of seamless integration with all precinct elements is necessary.

Information on existing infrastructure as detailed within this report has been obtained from Dial-Before-You-Dig (DBYD), Ausgrid GIS, site investigations, provided survey documents and discussions with utility companies, which include:

- Electrical Authority – Ausgrid
- Communication Authorities – AARNet, NBN, and Telstra

Any potential works on existing authority infrastructure services is subject to negotiation and approvals by each affected authority. Liaison with each authority has been undertaken as part of the concept design phase works for the site to date.

Refer to the Appendices of this report for utility responses and Design Information Packages.

3 ELECTRICAL SERVICES

3.1 EXISTING SERVICES

The current SCH-1/CCCC site does not have existing utility or private electrical connections as the site has been cleared as part of the adjacent IASB construction works.

Existing Ausgrid assets reticulate around the perimeter of the site, outside of the development boundary within public footpaths and roadways.

An overall electrical maximum demand for the Randwick Campus Redevelopment (RCR) was completed by others at the commencement of the IASB project. A total demand of approximately 13MVA was ascertained and appropriate applications made to Ausgrid during the IASB stage. The result of this Ausgrid application (Project SC11992) was that 2 off primary HV feeders and 1 off backup feeder, all from the Kingsford Zone Substation, were established to service the needs of the entire Development Precinct (IASB, SCH Stage 1/CCCC and HTH).

As part of the IASB infrastructure supply installation, the new Precinct dedicated HV feeders were installed and are currently in-situ at the site. This includes an extension of looped HV feeder cabling at a jointing bay at the corner of Botany Street and Magill Street together with provisional spare conduits along Botany Street extending to the High Street corner as per Figure 4 below, and to the proposed developments of the SCH-1/CCC and HTH sites.

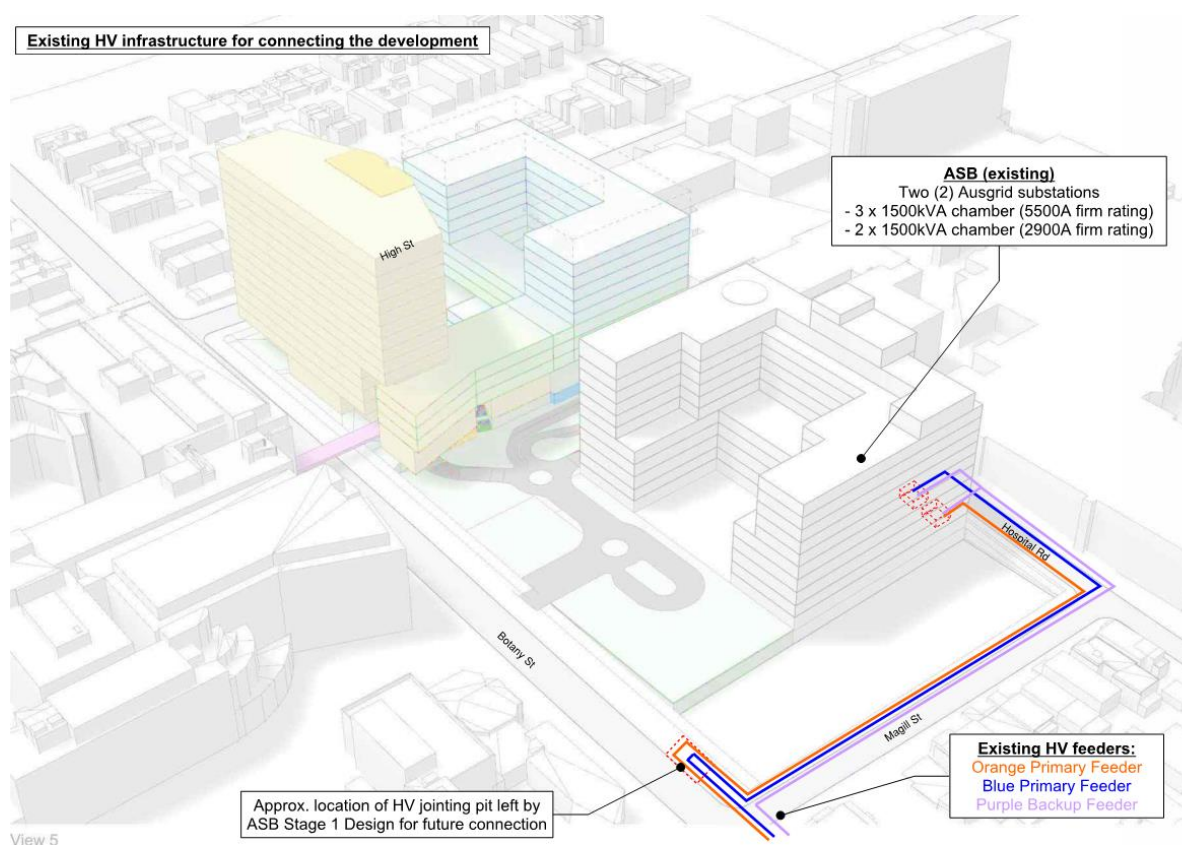


Figure 4: Existing HV Feeders to the Overall Precinct

3.2 PROPOSED SITE SERVICES

3.2.1 ELECTRICAL DEMAND LOADINGS

A site-specific maximum demand in accordance with the ESG was calculated to determine the anticipated demand for the proposed building with both an upper limit and lower limit considered to determine a suitable arrangement. From this it was determined the optimum demand for the site is anticipated to be approximately 4.2MVA. The building will operate as an LV customer, with 400V connections being made from newly proposed Ausgrid substations located within the building footprint dedicated to the SCH-1/CCCC development.

On the strength of the above, the constraints set by Ausgrid regarding their chamber substation firm ratings, and consideration towards futureproofing the installation, the following authority electrical infrastructure will be required for the SCH-1 / CCCC building:

SCH Stage 1 / CCCC (SOA V23)	Approx. Amp Rating	Approx. KVA Rating
Ausgrid 3 TX Custom Chamber	5500A firm	3.8MVA
Ausgrid 2 TX Custom Chamber	2900A firm	2MVA
Total Capacity	8400A firm	5.8MVA
Required Capacity	~4.2MVA	
Spare Capacity	~1.6MVA	

Table 2: Electrical Maximum Demand Summary

These substations are standard fixed sizes from Ausgrid and are the only available in discrete step sizes. These discrete step sizes are quite large, which yields the spare capacity noted above.

Furthermore, critical and life safety services shall be backed up by external generators.

The buildings power distribution system can be summarised as follows:

- Two Ausgrid basement chambers at the north east corner of the site
- Each substation shall be firm rated in accordance with NS109 with a rating of 5500A and 2900A
- Generators located internally on Level 2
- Equipped with 2 off 1100kVA generator sets
- Connected to 3 off LV Main Switchboard servicing the building (within two rooms)

3.2.2 HV FEEDER CONNECTIONS & RETICULATION

To provide electrical supply connections to the SCH-1/CCCC development, it is proposed the existing high voltage feeders established as part of the IASB works as identified earlier in this report are to be extended along the road reserve to new Ausgrid basement chamber substations proposed at the north eastern corner of the site.

HV feeder cabling shall reticulate in a standard underground Ausgrid duct arrangement with three new HV joints to be undertaken at the corner of Botany Street and Magill Street to the existing HV feeders. The route as depicted in Figure 5 below has been suggested due to the available spare ducts along Botany Road and High Street, as advised by Ausgrid for use, and its close proximity to the HTH site.

This route allows the HTH site to connect to these feeders on Botany Street as future works, assuming Ausgrid allow connection to the same HV feeders as SCH-1/CCCC development.

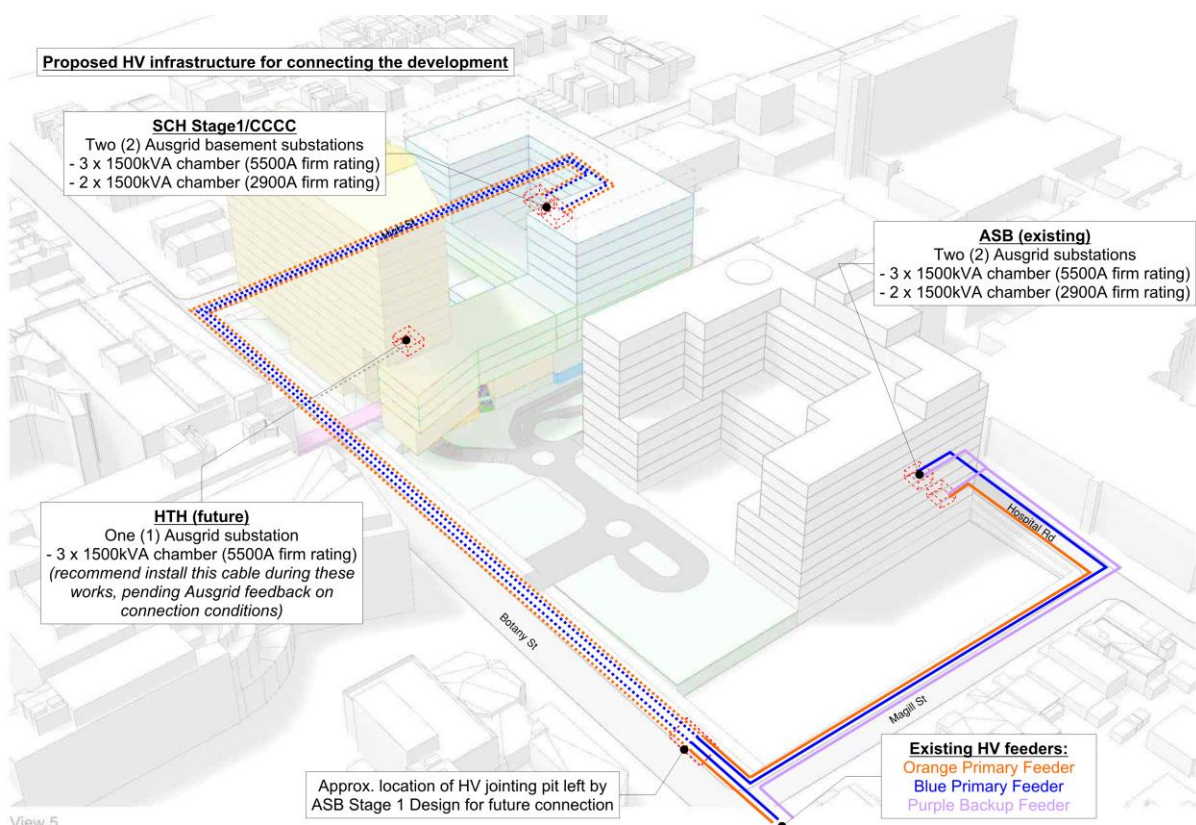


Figure 5: Proposed HV Feeder & Substation Works

A formal application to Ausgrid has been lodged and a Design Offer was received for the proposed SCH-1/CCCC substations. The offer was classed as complex, meaning Ausgrid directly determine the connection conditions on behalf of the development and provide a design information package for the Level 3 ASP designer. The offer has been actioned and Ausgrid have released a Design Information Package for the chambers. The Ausgrid project number for the chambers is AN-21465 and is attached to this report as *Appendix A*.

The Design Information Package provides confirmation the existing high voltage infrastructure in the vicinity of the site is adequate to support the SCH-1/CCCC development through the use of the existing IASB HV feeders and proposed connection point at the former of Botany Street and Magill Street.

3.2.3 AUSGRID SUBSTATION ARRANGEMENTS

The design team has considered a number of options for substation location and have developed a basement chamber substation option at the corner of High Street and Hospital Road.

The following are general spatial requirements/principles adopted for the proposed basement chamber substations:

- Two chamber rooms are to be established on Level B1 in the north east corner of the site
- All substation structural and architectural elements will require a fire rating of minimum FRL 180/180/180 and a blast rating of 2kPa
- Equipment and personnel access will be through dedicated hatches/shafts at Podium Level 00 to be access using a Franna Crane and Ausgrid vehicles
- A transformer handling area in front of the equipment hatches is to be provided to Ausgrid's requirements. Ausgrid generally use a Franna crane for moving large equipment in and out of the substation using these hatches and require a minimum 4.0m head height clearance
- Dedicated access doors will be required for each substation via dedicated stairwells (one for each chamber) providing access from Podium Level 00. These accessways are dedicated to the substation and are not to lead to any other portion of the building

- The substations will be naturally ventilated through dedicated ventilation shafts in the podium area at a minimum 3m above the ground. Each substation will have a dedicated intake shaft and exhaust shaft (4 vent shafts in total). Shaft discharges are to be spaced a minimum 6m apart. All building elements within 3m of a ventilation shaft's discharge are to be 3hr fire rated and all other building ventilation is to be at least 6m from a vent shaft's discharge.
- 24hr/7day week access is to be provided along Hospital Rd and the Podium for heavy vehicle movement to the substation hatches. The access way is to allow heavy vehicle movements from a public road to the substation area
- A dedicated CO2 injection system shall be installed for fire suppression to Ausgrid requirements. The injection point shall be in an accessible location from the Podium Level 00 area
- All works are to be in accordance with the site specific Ausgrid Design Information Package, Ausgrid Network Standards, and a certified Level 3 design

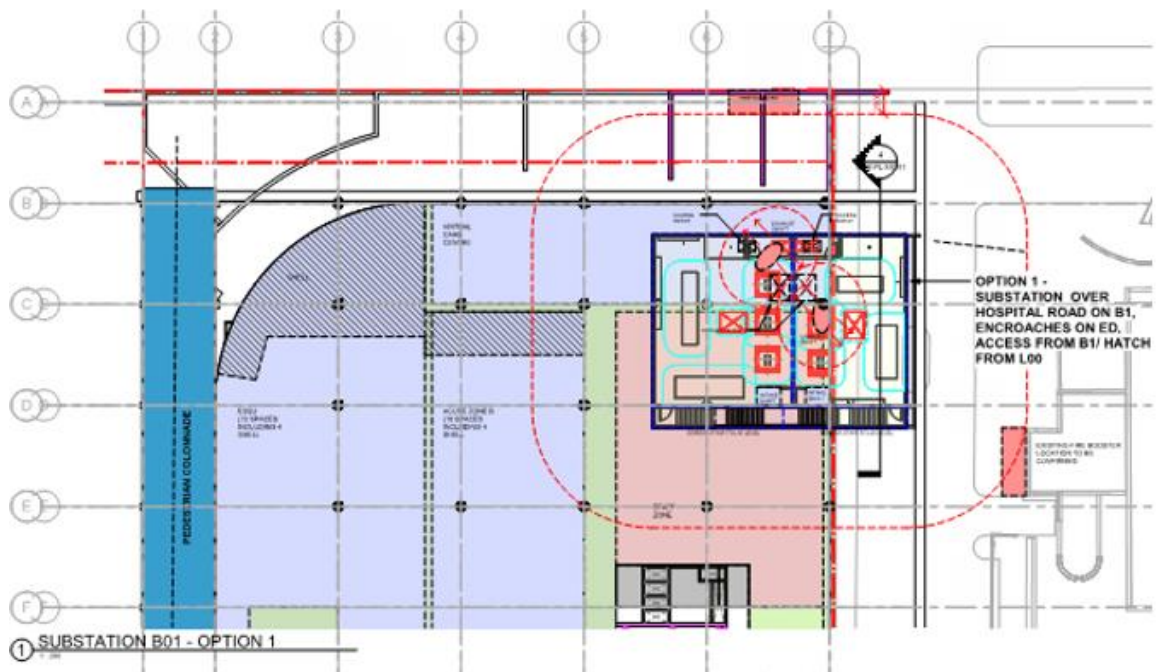


Figure 6: Proposed Basement Chamber Location Plans and Access Strategy

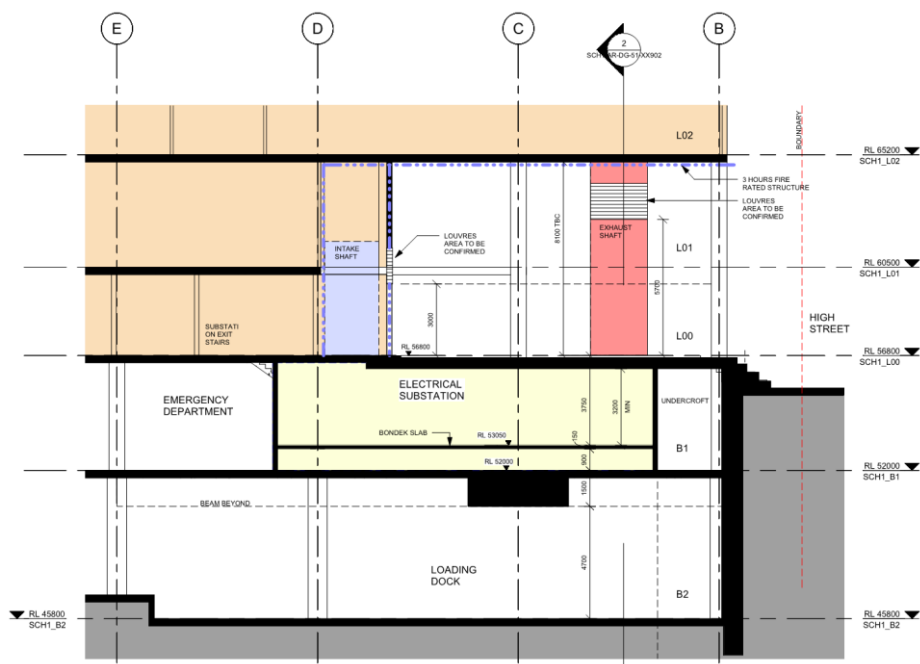


Figure 7: Proposed Basement Chamber Section

4 COMMUNICATION SERVICES

4.1 EXISTING SERVICES

The current SCH-1/CCCC site does not have existing utility or private communication connections as the site has been cleared as part of the adjacent IASB construction works.

Existing NBN, Optus, Telstra, UECOMM, and AARNet communication utility infrastructure currently reticulates along High Street and Botany Street in vicinity of the proposed SCH-1/CCCC site.

The proposed ICT arrangement for the SCH-1/CCCC building will be serviced from the utility street network via two diverse lead-in carrier feeds. Through concept design arrangements, the proposed carriers determined for the site are to be NBN and AARNet. Dial-Before-You-Dig (DBYD) extracts for each existing utility assets are provided below.

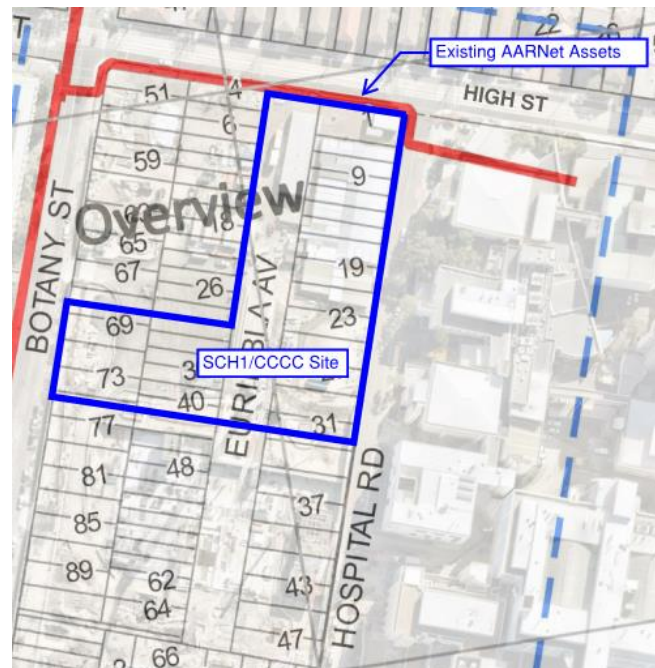


Figure 8: Existing AARNet Assets (DBYD)

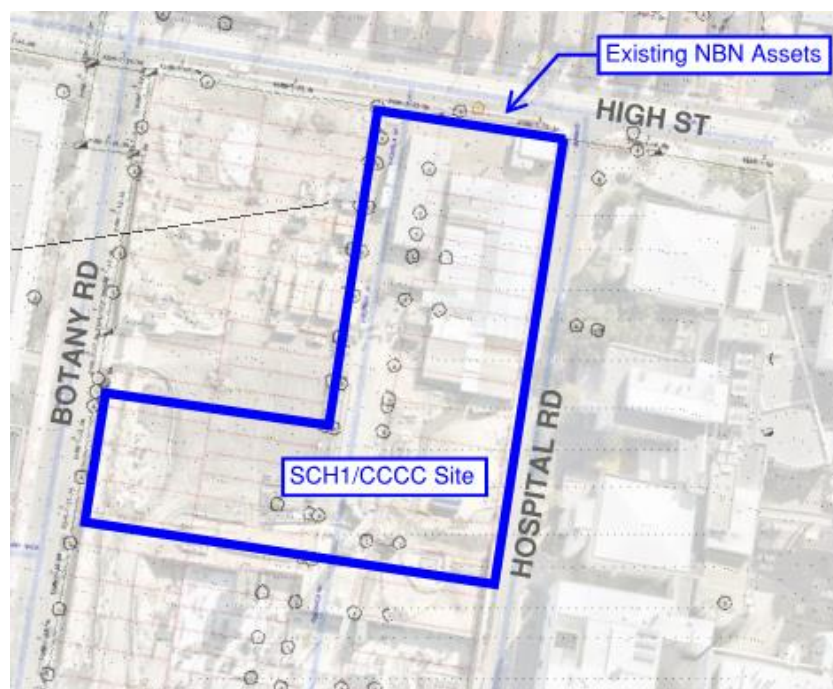


Figure 9: Existing NBN Assets (DBYD)

4.2 PROPOSED SITE SERVICES

The SCH-1/CCCC development will be independently serviced from the existing street utility networks via diverse lead-in carrier feeds. Consistent with the JHA ICT Schematic (Figure 10 below), the building's ICT backbone cabling will take the following configuration:

- Provision for two lead-in Carrier services via diverse paths (NBN and AARNet). Preliminary considerations suggest that one carrier will be sourced from High Street and the other sourced from Botany Street
- Independent Primary and Secondary Carrier Rooms / Campus Distributor (CD) / Floor Distributor (FD) are to be established on Level B2. Carrier Rooms will be physically separated by approximately 15m to provide diverse locations. Primary and secondary diverse incoming lead-ins from the street shall terminate into these rooms
- Floor Distributors (FD) strategically located on each floor and serving the structured cabling needs for each floor (typically 4 per floor on the podium levels and 2 per floor on the tower floors)
- To ensure connectivity, fibre backbone links will be included to the rest of the precinct

Consistent with the Schematic Design, the campus & building voice backbone cabling will take the following configuration:

- New telephony lead-in cabling shall be established to NBN Co. requirements
- A new telephone main distribution frame (MDF) will be established in one of the new CDs and reticulate multi - Cat 3 voice grade backbone cable to each of the ICT rooms throughout the Building.
- Each of the Floor Distributors will be linked to the MDF via 50 pair Cat 3 cable

AARNet and NBN diverse lead-in connections for the SCH-1/CCCC building will be via existing utility pits located along High Street and Botany Street. A new 1 x 100mm conduit (per carrier) is to be installed from existing utility footpath pits through to the proposed SCH-1/CCCC building perimeter wall. Fibre will be reticulated from each utility pit, through conduits and through the building on cable support systems including ladder tray or cable basket throughout the installation. Cable supports will be sized for the required cables plus spare capacity. It is noted reticulation paths will follow circulation areas and not be located over clinical spaces.

The Children's Comprehensive Cancer Centre (CCCC) will require a dedicated AARNET lead-in to allow for high-speed data transfers with off-site data centres. As such, one additional 1 x 100mm spare conduit and cable pathway would be used to provide the additional dedicated AARNET lead-in.

4.2.1 INTEGRATION WITH EXISTING SYDNEY CHILDRENS HOSPITAL

We note the existing Sydney Children's Hospital ICT links are supplied from the Prince of Wales Hospital (POWH) campus distributor via a fibre link. To connect the existing Sydney Children's Hospital ICT backbone to the new site, one (1) further high-speed fibre link is proposed to be established from the primary CD.

4.2.2 INTEGRATION WITH IASB

As per the requirements of the NSW Health ICT Cabling Standard, two diverse communications links from each SCH-1/CCCC CD is proposed to connect to the IASB CD. These redundant links will be high bandwidth as per the standard's requirement for linking campus distributors.

A fibre link from the IASB to the existing POWH campus distributor is to be installed under the IASB works. Considering further proposed backbone links shall directly tie the existing / Sydney Children's Hospital, and the POWH site is to be redeveloped in future, no further links between the POWH are proposed.

4.2.3 INTEGRATION WITH HTH STAGE

The HTH development is subject to a separate planning approval pathway. ICT integration between the SCH-/CCCC and the HTH sites is being considered from a high level.

NBN and AARNet utility consultation for the SCH-1/CCCC building ICT installation has not yet been undertaken to date. Utilities will be engaged to complete design requirements and coordination as part of the detailed design stage works.

APPENDIX A: AUSGRID DESIGN INFORMATION PACKAGE

Project Number: AN-21465

Establishment of two chamber substations

**Prince of Wales Hospital, High Street, Randwick NSW
2031**

Design Information

Site Specific Requirements - Complex

Date: 22.09.2020



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SITE SPECIFIC DESIGN INFORMATION REQUIREMENTS

The Design Information Site Specific Requirements Complex is complementary to, and must be read in conjunction with, the Design Information General Requirements, which can be found on the Ausgrid web site.

1. Ausgrid Project References

SAP Project Number	AN-21465
Prjtrak Number	TBA

2. Ausgrid Contact Details

Note that this information is not to be placed on the design.

Ausgrid Contact	MANUEL LOPEZ
Telephone No	9663 9327
Email Address	mlopez@ausgrid.com.au

3. Details of proposed Ausgrid Projects in the vicinity of Development

Ausgrid Projects DNP7280B (SM-24849) - Clovelly Zone to Kingsford Zone 11kV feeders & AN-11992 – Establishment of new 11kV feeders & two chamber substations at POW hospital are currently in construction phase. This design information is based on these projects being 100% complete.

4. Network Extension Connection Point

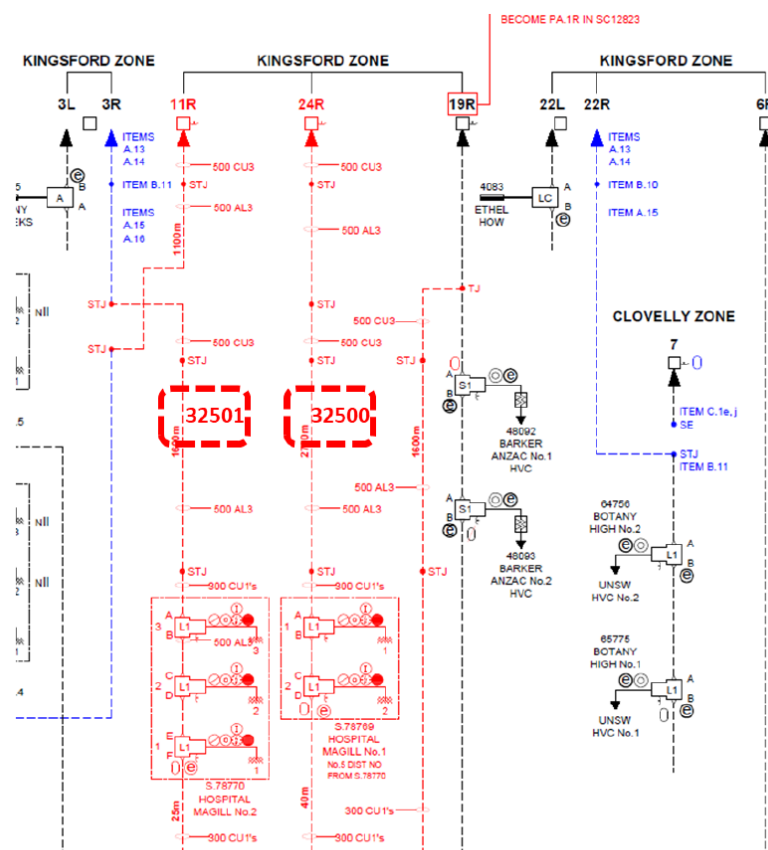
4.1. High Voltage Connection Point

Zone substation Kingsford Zone No.94 - 11kV feeder: Panel 3R

- Between Kingsford Zone Panel 3R and S.78770 Hospital Magill No.2 for S.32501 Hospital High No.3.

Zone substation Kingsford Zone No.94 - 11kV feeder: Panel 24R

- Between Kingsford Zone Panel 24R and S.78769 Hospital Magill No.1 for S.32500 Hospital High No.2.



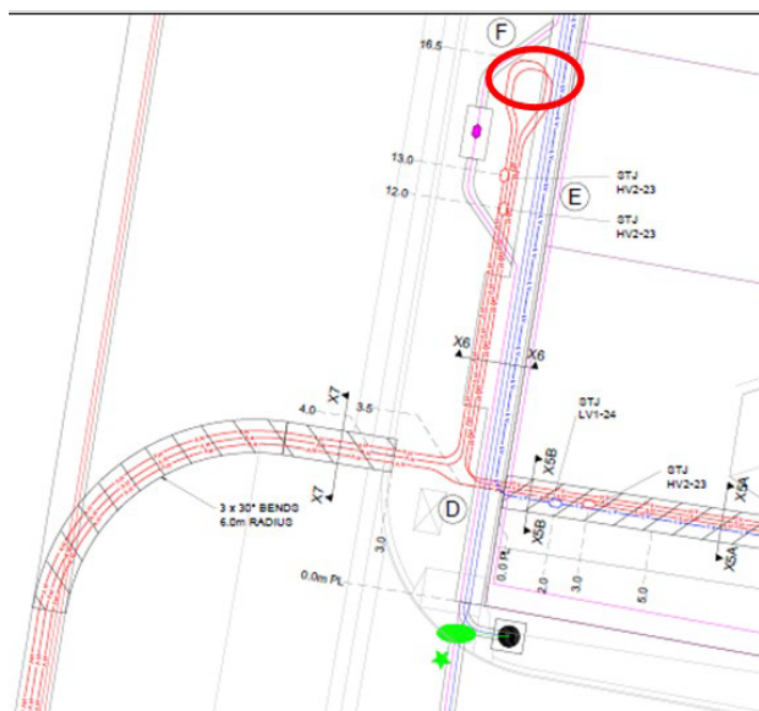
- LV Interconnection into the existing LV network from one proposed substation.
- LV interconnection between proposed substations.

Recorded details of the Ausgrid network, including cable codes, soil codes, etc, are shown in Ausgrid's WebGIS. The ASP/3 designer must login to the WebGIS to obtain relevant information. The ASP/3 designer should contact Ausgrid for any further clarification or if information appears to be missing. Note: Ausgrid's WebGIS information has not been verified against actual site assets. The ASP/3 designer is responsible for the accuracy of information on designs and it is strongly advised that the ASP/3 designer verifies WebGIS asset details on site prior to undertaking the design.

Alter the existing high voltage and/or low voltage network systems, in accordance with the schematic and/or graphical representation, for the required electrical works as shown on the attached and/or following drawing(s).

Connection to the HV feeders to occur at the loops left on Botany St. See below.

Extend both 3R and 24R to enable loop connection of the new substations, one substation on each feeder.



Install low voltage interconnection(s) from the proposed substation(s) to the existing low voltage Network reticulation.

7. Customer Point of Supply (Connection Point)

Provide two 3000amp three phase low voltage point of supplies at the low voltage switchgear terminals within each chamber substation enclosure.

8. Fault Level

11kV node: at the proposed substation S.32500 is anticipated to be 5.82kA.

- ~ Existing maximum three phase 11kV fault level at S.94 Kingsford Zone Substation Tx1 is **8.13kA**.

11kV node: at the proposed substation S.32501 is anticipated to be 5.99kA.

- ~ Existing maximum three phase 11kV fault level at S.94 Kingsford Zone Substation Tx1 is **8.16kA**.

9. Cable/Conductor Route and Type

9.1. Route Information

It is generally the responsibility of the ASP/3 designer to select an appropriate route. However, Ausgrid reserves the right to require variation(s) of any proposed cable route.

Ausgrid makes no warranty expressed or otherwise that any proposed route depicted in the design information by Ausgrid is suitable for the intended purpose.

9.2. Underground

11kV	11kV 500 AL3 TRXQ 35 CU(WS) ZYQ - refer to NS177 for details on cable termination requirements (ie the cable size for the transistion to single core cables). 11KV 300CU1 EPR 70 CU(WS) Z YQ / Triplex.
Low Voltage	LV 185CU1 x 4 XQZ

9.3. Conduits

Conduits available for use	4 150mm conduits along Botany St north of 11kV connection point towards High St.
Spare conduits to be laid as part of this project	one (1) spare 63mm conduit (for future optic fibre pilot cable use), is to be installed in association with all 11kV cable trenches. One spare 150mm HV conduit to be installed for each 11kV cable. One spare 150mm LV conduit is to be installed with any LV cable.

9.4. Protection

Protection	As per NS130.
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10. EQUIPMENT

10.1. Multiple Transformer Chamber Substation

Multiple Transformer Chamber Substation					
Substation Number	S.32500	Substation Name	Hospital High No.2		
Ultimate Capacity	3 x 1500kVA transformers		Initial Capacity	3 x 1500kVA transformers	
Rating (Firm)	5500		Load Cycle	A: Industrial	
Voltage Ratio	10670/433 tap 6		Vector Group	Dyn 1	
Description				Stock Code	Quantity

PowerTransformers	1500kVA oil filled	180359	3
HV Switchgear	Lucy Sabre Ring Main Isolator Circuit Breaker	178072	3
~ Unless detailed above the ASP/1 designer is to nominate the LV board arrangement. ~ Customer to procure the whole LV board (note: lead times are in the order of 24 weeks). ~ Materail cost of the LV board component(s) funded by Ausgrid is reimbursed after substation commissioning. ~ Any stock item not purchased from Ausgrid must conform with Ausgrid's current specifications.			

10.1.1. Multiple Transformer Chamber Substation Protection Equipment

Required Protection	Optical Arc Flash Detection Transformer Differential Transformer Over-Current & Earth Fault Customer Over-Current		
Description		Stock Code	Quantity
Protection Panels	Wall Mounted OAFD/Tx Protection Relay panel	182546	3
	OAFD Indicator Panel	182544	1
	Wall Mounted Protection Relay Panel - Single Customer Overcurrent	182545	2
Current Transformers Excluding components included in the "E" Type LV Board	400/5 Earth Fault Indicator CT (10P2.5F5)	177474	1
	100/5 HV Differential CT (10P25F20)	89722	9
	2450/1837/2.89 OAFD EF Check Epoxy CT	67173	3
Relays	Earth Fault Indicator 3 - 5 amps Relay	61853	1
	K3M Differential Fuse Relay	91058	3
	MICOM P115 Relay (24/48V AC/DC)	182547	3
	SEL751A Relay	182548	2
Miscellaneous	Marshalling Box - Polynova PC 360mm (H) x 360mm (W) x 205mm (D) Manufacturer:- B&R Enclosures Pty Ltd Catalogue No. PC363620	To be obtained from external supplier	1
Battery Items	Battery Rack Insulator	95323	20
	Battery Rack Acrylic Washer	65235	20
	Battery Rack Presspahn Washer	59543	20
	Battery Set 10 volt 8 Cell Alkaline	96602	8
	Battery Charger - 30V trickle type	75168	1
	30V DC battery test box	123703	1
	Battery Charger - 48V float type	182540	1
SCADA	SCADA Cabinet for OAFD Substations complete with RTU Assembly	182585	1
Note: any stock item not purchased from Ausgrid must conform with Ausgrid's current specifications.			

10.2. Multiple Transformer Chamber Substation

Substation Number	S.32501	Substation Name	Hospital High No.3
-------------------	----------------	-----------------	---------------------------

Ultimate Capacity	2 x 1500kVA transformers	Initial Capacity	2 x 1500kVA transformers
Rating (Firm)	2900	Load Cycle	A: Industrial
Voltage Ratio	10670/433 tap 6	Vector Group	Dyn 1
Description		Stock Code	Quantity
PowerTransformers	1500kVA oil filled	180359	2
HV Switchgear	Lucy Sabre Ring Main Isolator Circuit Breaker	178072	2
~ Unless detailed above the ASP/1 designer is to nominate the LV board arrangement. ~ Customer to procure the whole LV board (note: lead times are in the order of 24 weeks). ~ Materail cost of the LV board component(s) funded by Ausgrid is reimbursed after substation commissioning. ~ Any stock item not purchased from Ausgrid must conform with Ausgrid's current specifications.			

10.2.1. Multiple Transformer Chamber Substation Protection Equipment

Required Protection	Optical Arc Flash Detection Transformer Differential Transformer Over-Current & Earth Fault Customer Over-Current		
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Current Transformers	400/5 Earth Fault Indicator CT (10P2.5F5)	177474	1
Excluding components included in the "E" Type LV Board	100/5 HV Differential CT (10P25F20)	89722	6
	2450/1837/2.89 OAFD EF Check Epoxy CT	67173	2
Relays	Earth Fault Indicator 3 - 5 amps Relay	61853	1
	K3M Differential Fuse Relay	91058	2
	MICOM P115 Relay (24/48V AC/DC)	182547	2
	SEL751A Relay	182548	2
Miscellaneous	Marshalling Box - Polynova PC 360mm (H) x 360mm (W) x 205mm (D) Manufacturer:- B&R Enclosures Pty Ltd Catalogue No. PC363620	To be obtained from external supplier	1
Battery Items	Battery Rack Insulator	95323	20
	Battery Rack Acrylic Washer	65235	20
	Battery Rack Presspahn Washer	59543	20
	Battery Set 10 volt 8 Cell Alkaline	96602	8
	Battery Charger - 30V trickle type	75168	1
	30V DC battery test box	123703	1
	Battery Charger - 48V float type	182540	1
SCADA	SCADA Cabinet for OAFD Substations complete with RTU Assembly	182585	1

Note: any stock item not purchased from Ausgrid must conform with Ausgrid's current specifications.

11. Asset Number Allocation

During the design stage the ASP/3 designer will need to request from Ausgrid any additional asset numbers.

12. Apportionment of Costs

The information this section contains is based on assumptions of the likely design solution. Certification of a design that does not conform to such assumptions may require Ausgrid to reassess the apportionment of costs and funding of the project, including re-assessment of any quotations issued prior to Design Certification.

12.1. Funding

At this stage Ausgrid will fund the following works for the development and anything not listed is funded by the customer. Where applicable, the amount(s) to be paid by Ausgrid will be detailed on the Schedule to the Certified Design.

- There is no funding from Ausgrid on this project.

13. Design Information Attachments

The following documentation is readily available and can be found on our website www.ausgrid.com.au

- Design Information – General Terms and Conditions document.
- Ausgrid's external CAD design template.
- Design Certification Check Sheet.
- Asset Number Request Spreadsheet.
- Asset Valuation Spreadsheet (AVS).
- Street Lighting Acceptance Form(s).
- Network Earthing Information Sheet.

The following can only be obtained from the Ausgrid WebGIS portal.

- A translated GIS extract of the proposed work area in DWG format (includes soil codes).
- Relevant additional asset information including cable codes.
- Relevant system diagram(s). **NOTE – Loads and ratings shown on system diagrams is for internal Ausgrid use only.**
- Environmental Analysis report.

The ASP/3 designer intending to undertake the design must obtain and use the electronic format of the relevant design information attachments (refer to NS104).

14. Notations to be placed on Design

In addition to the standard notations on the attached CAD design template add the following notations.

- The ASP/1 is required to comply with the correct procedure(s) for working with and/or near asbestos material (refer to Ausgrid NUS 211 – Working with Asbestos Products).

15. Remarks / Other Comments

The ASP/3 designer needs to contact Ausgrid early in the design phase should any of the proposed works require an alteration and/or extension to the Ausgrid fibre optic network. Ausgrid will then advise the ASP/3 designer of the scope of fibre optic network works that needs to be undertaken by Ausgrid and the works that will need to be done by the ASP/1. Generally Ausgrid only undertakes the final terminations and commissioning of the fibre optic network installation, however, the fibre optic network design and funding review is undertaken on a case by case basis.

Code Ref Point - 020

Any LV underground to overhead transition points that connect directly to a chamber substation (ie the first LV network connection on the LV distributor cable) requires the installation of pole mounted LV links.

Low voltage pillars (new or altered) within Commercial areas must comply with NS224 unless a written variation is agreed with Ausgrid.

Please consult your Contestable Project Coordinator for approval prior to the use of 11kV high voltage stub tee joints (HV3-43) on this project.

16. Design Information Revision History

22.09.2020	Initial issue using template version v180321