



Building Services Utility Report

Brookvale Oval Centre of Excellence

HASSELL



Revision 02

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Revision Information

| | |
|-------------|--|
| Project | Brookvale Oval Redevelopment Centre of Excellence and Grandstand |
| Title | Building Services Utility Report |
| Client | Manly Warringah Sea Eagles |
| Prepared By | LCI Consultants (Aust) Pty Ltd Sydney Office Level 4, 73 Walker Street, North Sydney |
| Author | LCI |

Revision Schedule

| Revision | Date | Issue Name | Author | Authorised |
|----------|---------------------------|------------|--------|------------|
| 00 | 6 th Aug 2019 | Rev 00 | LCI | |
| 01 | 10 th Oct 2019 | For DA | MB | KM |
| 02 | 21 Oct 2019 | For DA | MB | KM |
| 03 | | | | |
| 04 | | | | |

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1 Introduction

The proposal seeks development consent for a Centre of Excellence, a state-of-the-art facility to be used by professional sportsmen and women in conjunction with the community, and 3,000 covered seats to deliver an improved experience for spectators attending the site. The proposal will support the operations of the Manly Warringah Sea Eagles (MWSE) and ensure its viability into the future. The Project represents a significant investment into rugby league in the region, and is being jointly funded by the Federal Government, New South Wales State Government, and the MWSE. Once completed, the Project will:

- Consolidate the Manly Warringah Sea Eagles (MWSE) training and administration bases at one location.
- Provide improved training facilities for all players (from community to elite levels) to develop their skills as well as for professional players to have access to high performance training facilities.
- Provide spectators with additional covered seating that delivers the highest quality viewing and entertainment experience possible at MWSE home games.
- The proposed Centre of Excellence will have a footprint of approximately 1,800sqm, and span over 2 levels.
- A cantilevered roof will extend over the seating area.

This utility report reviews impact on Authority services for separate DP Lot for the Brookvale Oval Centre of Excellence requirement:

2 Reference Design Documentation

This report has been prepared for the Brookvale Oval Centre of Excellence development project based on the preliminary

- Architectural Drawings
- Dial before You Dig
- As Built Drawings
- Site Investigation
- Preliminary enquiry response from Ausgrid

3 Building Utilities – Site Services

The following infrastructure services will be provided to the development:

- Electricity supply and reticulation
- Fire services
- Water and Gas services
- Sewer services

- Fire Services

4 Electrical Supply and Reticulation

LCI have lodged preliminary enquiry and received response back from Ausgrid detailing that the existing substations are unable to feed the new Centre of Excellence due to length of run (distance from the existing Ausgrid Substations supplying the oval and existing building to the new building) and voltage drop issues. Refer to Appendix A for Ausgrid response to the Preliminary Enquiry lodged.

It has been suggested by Ausgrid that alternative supply means such as the establishment of a new substation (currently a kiosk substation is proposed) is required to service the new building. The electrical supply would not be impacted by the DP lot arrangement. However, a Deed of Agreement by the landowner is required to be provided should the electricity supply from one DP lot is also to supply other DP lots.

Upon receipt of response for Preliminary Enquiry, an Application for Connection was lodged and we have further, received an offer to provide design related services from Ausgrid which has determined that the likely works required to supply the site is the establishment of a kiosk substation. Refer to Appendix B for the offer to provide design related services from Ausgrid.

5 Fire Services

Existing Infrastructure

Along Alfred Road and Pine Avenue there are existing 100mm Sydney Water town's mains (see Figure 1). A Sydney Water Pressure and Flow application has been submitted to determine the town's main capability. The available pressure and flow will determine whether the hydrant system for the new development will require a booster pump and/or tank.



Figure 1 - Sydney Water Infrastructure Map

The existing Brookvale Oval building consists of the following fire services systems:

- Fire hydrant system
 - A 100mm, 2-point fire hydrant booster appears to be connected to the Sydney water town's main along Alfred Road and is located at the Brookvale oval carpark entry. No backflow prevention device was observed upstream of the booster assembly.
 - Fire hydrants have been installed throughout the existing building. It appeared that the hydrant coverage may not be sufficient to the southern stand area. Several external hydrants were seen to be single outlet hydrants.
- Fire hose reels
 - Fire hose reels appear to be supplied by the domestic cold-water supply and are distributed throughout majority of the building. Fire hose reel coverage to the southern stand area may not be sufficient.

Enquiries with the certifier have indicated that connecting to the existing brigade booster and hydrant mains would require all of the existing hydrant system to be brought up to date with the current standard and NCC requirements.

5.1 - Brookvale Oval Centre of Excellence Separate DP Lot

The fire hydrant system for the new development as a separate system to the existing building. A new water supply from the existing 100mm Sydney Water town's main along Alfred Road or Pine Avenue will be required. The new connection will include the installation of a backflow prevention as per Sydney Water requirements prior to the new fire hydrant booster assembly. The new fire hydrant booster assembly will be installed in accordance with AS2419.1-2005 requirements. Further, additional signage will be required for the existing and new fire hydrant booster to clearly delineate the two hydrant systems.

As the existing building infrastructure is not utilised to serve the new development, no upgrade works to the existing building infrastructure will be required. However, there will be additional ongoing costs to service and test two hydrant booster assemblies and backflow prevention devices each year.

6 Hydraulic Services

6.1 Brookvale Oval Centre of Excellence Separate DP Lot

Potable Cold Water

The Authority Water Main along Alfred Rd is sized at 100mm. A Sydney Water Pressure and Flow application has been submitted to determine the town main capability. A potable cold-water system comprises of a connection to the Authority water main and extension to fixtures via Potable Cold-Water Meter and RPZ valve (Refer to Figure 5). It is our experience the existing Authority water main will be able to provide the hydraulic demands for the proposed development. We cannot confirm with Sydney Water if the potable water main can meet the hydraulic demands until we submit a Notice of Requirements (Section 73) application, this cannot be submitted until we received a development consent or complying development certificate. We note applications to Authorities may result in their requirements of asset upgrade and /or extension.

Natural Gas System

The Authority Gas Main along Alfred Rd is sized at 40mm at 210kPa. A gas system comprises of a connection to Authority gas main and extension to fixtures via an Authority (Jemena) gas meter (Refer to Figure 5). It is our experience the existing Authority gas main will be able to provide the hydraulic demands for the proposed development. The Authority (Jemena) will not confirm or review gas capability for the proposed development until a formal submission is submitted via their website for connection to the site. We note applications to Authorities may result in their requirements of asset upgrade and /or extension.

Sanitary Drainage & Vents

The Authority Sewer Main along Pine Ave is sized at 225mm. A sanitary drainage design comprises of a connection to Authority sewer main via boundary trap and reticulates approximately 150m to the Authority Sewer Main on Pine Ave (Figure 2 -Sanitary Design). It is our experience the existing Authority sewer main will be able to provide the hydraulic demands for the proposed development. We cannot confirm with Sydney Water sewer main can meet the hydraulic demands until we submit a Notice of Requirements (Section 73) application, this cannot be submitted until we received a development consent or complying development certificate. We required confirmation via site survey that verifies the Authority sewer main depth to confirm if sanitary drainage system can gravitate from the proposed development to the Authority sewer main. We note applications to Authorities may result in their requirements of asset upgrade and /or extension.

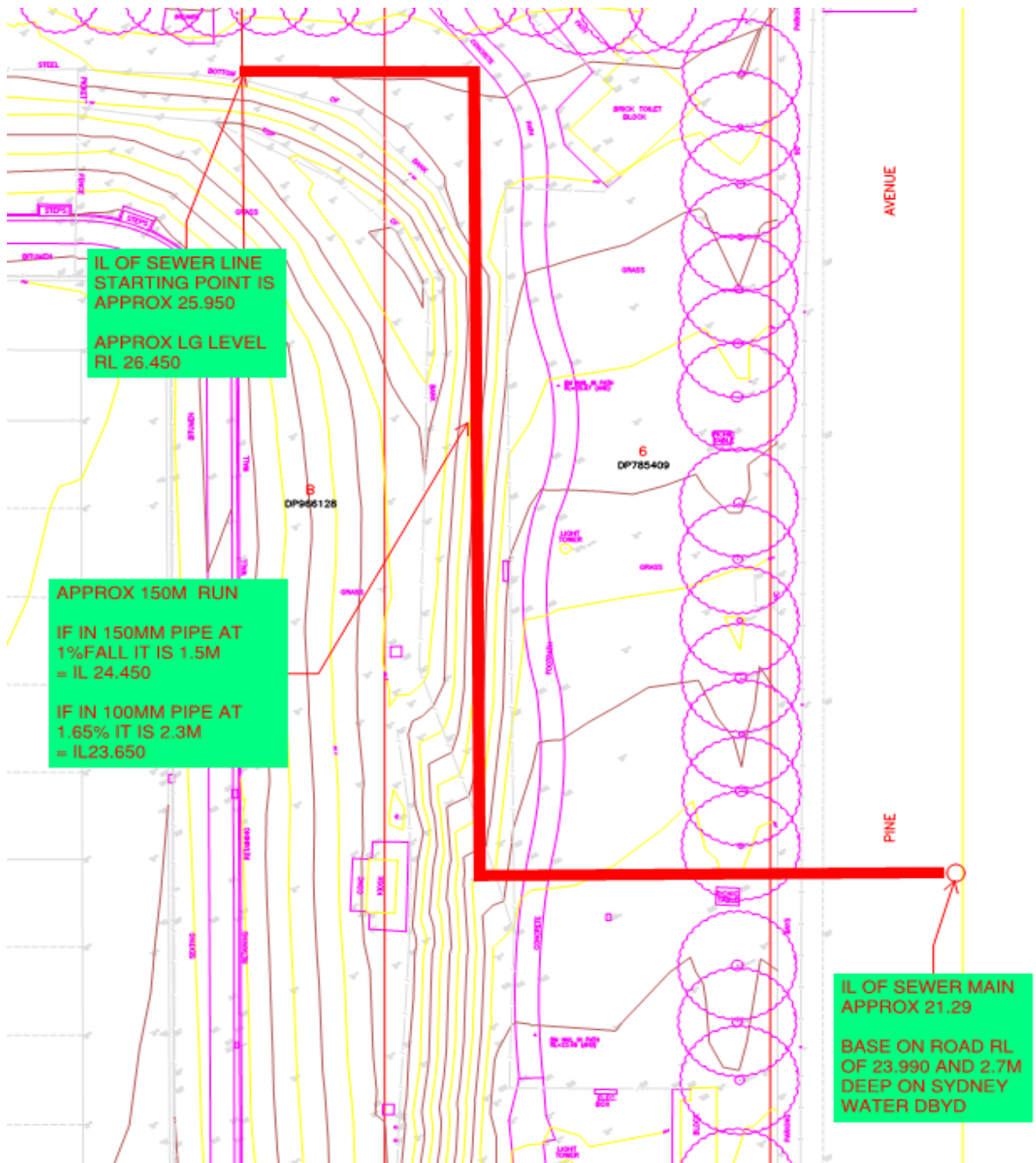


Figure 2 – Propose Sanitary Drainage Design



Figure 3 - Sydney Water DBYD

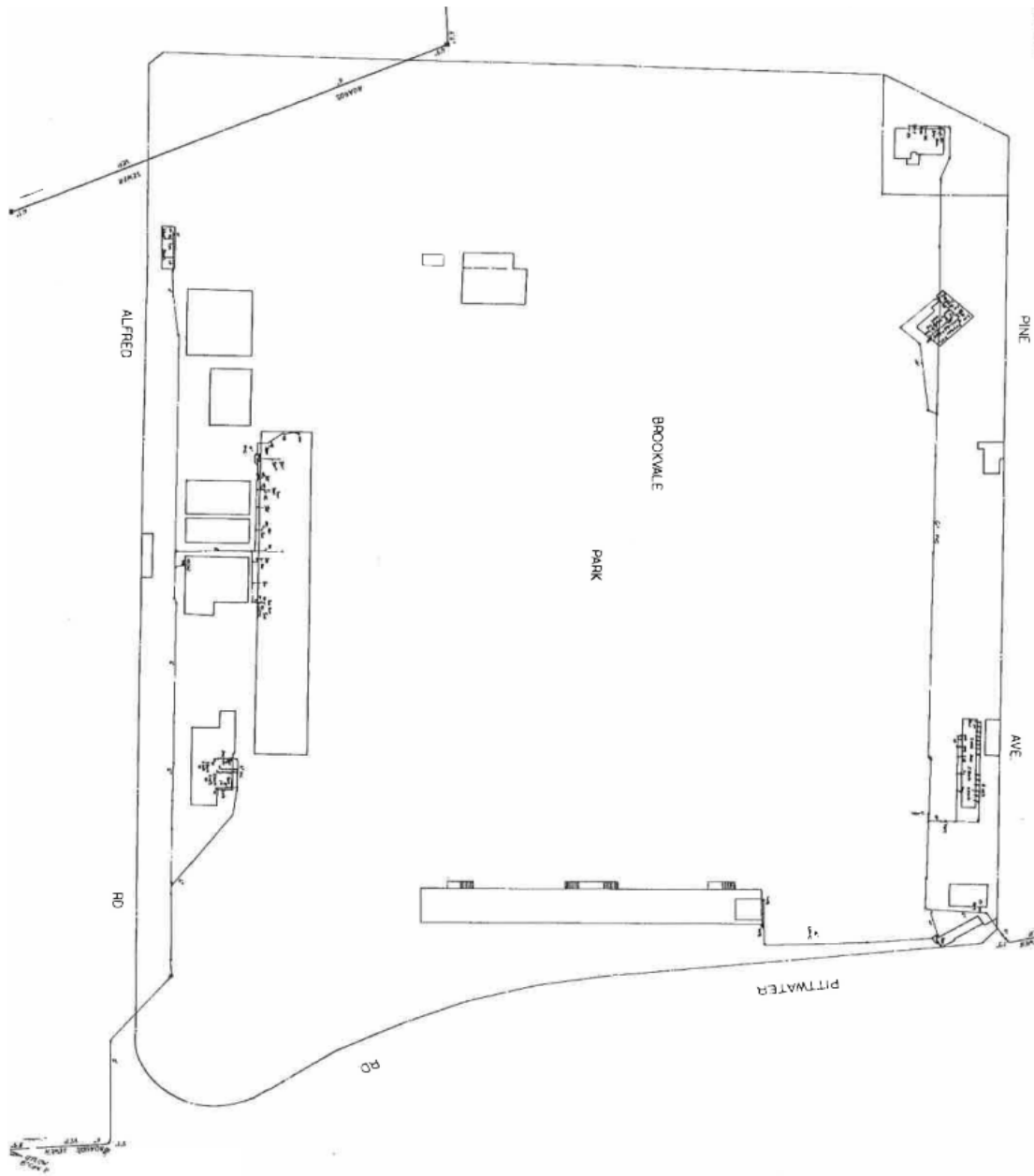


Figure 4 – Existing Sydney Water Sewer Services diagram

7 Appendix

7.1 Electrical Services – Preliminary Ausgrid Enquiry

30/07/2019

LCI Consultants
Attention: Ms Yiqing Kong
Level 4, 73
Walker Street North Sydney 2060

Email: alison.kong@lciconsultants.com.au



Address all relevant correspondence to:

Ausgrid Contestability Section
Building 3, 51-59 Bridge Road
Hornsby NSW 2077

E: Contestability@ausgrid.com.au

Reference Number: 700006133

Dear Yiqing,

Preliminary Enquiry: Lot 1 Dp 114027 Pittwater Rd Brookvale

I refer to your preliminary enquiry regarding the electricity connection at the above address and provide the following information.

- Substation S.48726 & S.46889 configurations and ratings can be found in the attached rating sheets.
- Both substations are located approximately 170m away from the proposed development. In accordance with Network Standards NS112 Clause 7.1.3, which states "The maximum underground direct distributor rating is nominally 800A. The actual maximum supply available will be determined by Ausgrid on a case-by-case basis. The route length for a 600A or 800A underground direct distributor should not exceed 30 metres.", the supply for the new development cannot meet this requirement. In addition to NS112 Clause 7.1.3, voltage drop is another issue that will result in alternative supply arrangement being considered, such as installation of a kiosk or a chamber substation for the proposed development.
- To proceed further in obtaining a new or altered electrical connection to the property a Connection Application will need to be submitted. The various application forms are available on our website at the following link: <https://www.ausgrid.com.au/Connections>

It should be noted that the above advice is based on Ausgrid's policies and network status as of today and are subject to change.

Connections to the Ausgrid network are governed by a set of laws and rules referred to as the National Energy Customer Framework (NECF). Included in the NECF is the National Electricity Rules (NER). Under these rules, a binding contract may only be formed after a connection application is lodged and Ausgrid has made a connection offer in response to that application. Accordingly, to make arrangements for the electricity connection of the development to the Ausgrid network you should lodge a completed connection application.

Should you require any further information please contact me.

Yours sincerely,

Shanming Zhou
Contestability Project Coordinator
Ausgrid

Page 1 of 2

700006133 - 20190730 - LT01C preliminary enquiry response

Direct Telephone Number: 9477 8357

Email: szhou@ausgrid.com.au

S046889 Alfred Gulliver - S046889**Func Location:** D.S.S046889**Comm Date:** 12.05.2011**Decom Date:****DC Type:** KL**LV Plan:** FF634**LC:** IND**Ambient Temp (°c):****Zone:** Brookvale 154**Network Group:** FDR 11 KV 15001P18**DiagSheet/Ref:** 1/E4**Address:** ALFRED RD**Suburb:** BROOKVALE**Post Code:** 2100**Municipality:** WARRINGAH**Area:** NMD**Rating Type:** Non-Firm**Substation Rating(All):** 1511**Busbar:** 01

LV BBar 1 S46889

COMM

Load Cycle: MPI **Phase Sequence:****Phasing:** BCA-cba **Balanced Supply:** Equal load on ends of busbar**Transformers at Busbar:** 01**MDI K Factor:** 1**Distributors at Busbar:** 01 02 03 04**Busbar Throughput Rating(All):** 1511 A**Limited by Summ O/C:** No Data

| DAY | DATE | TIME | ORIGIN | INST | MAX | REDBY |
|-----------|------------|----------|--------|------|------|--------|
| Tuesday | 08.01.2019 | 08:46:02 | A | 400- | 400- | T50671 |
| Tuesday | 18.12.2018 | 13:39:02 | A | 400- | 490 | T50671 |
| Wednesday | 20.12.2017 | 14:00:02 | A | Nil | 378 | T__LIS |
| Wednesday | 12.07.2017 | 18:30:02 | A | Nil | 385 | T__LIS |
| Monday | 06.02.2017 | 16:30:02 | A | Nil | 455 | T__LIS |
| Monday | 27.06.2016 | 19:30:02 | A | Nil | 434 | T__LIS |
| Friday | 20.11.2015 | 16:00:02 | A | Nil | 430 | T__LIS |
| Thursday | 16.07.2015 | 18:30:02 | A | Nil | 413 | T__LIS |
| Thursday | 20.11.2014 | 07:48:02 | A | 400- | 450 | T50671 |
| Wednesday | 21.05.2014 | 09:57:02 | A | 400- | 500 | T50671 |
| Thursday | 19.04.2012 | 13:29:02 | A | 220 | 295 | T50671 |
| Thursday | 19.01.2012 | 06:02:02 | A | 400- | 400- | T50671 |
| Wednesday | 11.01.2012 | 10:45:02 | A | 400- | 450 | T50671 |
| Saturday | 22.10.2011 | 10:39:02 | A | 400- | 700 | T50671 |

Distributor: 01

PITWATER RD UG & WINBOURNE RD OH

Busbar: 01**Load Cycle:** COM**Status:** COMM**Control Type:** FU**Control/Fuse Size:** 400.0 A**Corrected Max:****Primary Usage:** Network Distributor

| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------------|----------|--------|-------|------|-------|------|-------|------|---------|
| Tue | 08.01.2019 | 08:46:01 | A | 132 | 189 | 82 | Nil | 84 | Nil | Nil |
| Tue | 18.12.2018 | 15:09:02 | A | Nil | Nil | Nil | 166 | Nil | 188 | Nil |
| Tue | 24.07.2018 | 10:00:02 | A | Nil | Nil | Nil | 262 | Nil | Nil | Nil |
| Tue | 06.02.2018 | 15:00:02 | A | Nil | Nil | Nil | 277 | Nil | Nil | Nil |
| Mon | 26.06.2017 | 09:30:02 | A | Nil | Nil | Nil | 238 | Nil | Nil | Nil |
| Fri | 03.02.2017 | 11:30:02 | A | Nil | Nil | Nil | 276 | Nil | Nil | Nil |
| Wed | 29.06.2016 | 10:30:02 | A | Nil | Nil | Nil | 214 | Nil | Nil | Nil |
| Wed | 18.11.2015 | 14:30:02 | A | Nil | Nil | Nil | 241 | Nil | Nil | Nil |
| Mon | 13.07.2015 | 09:30:02 | A | Nil | Nil | Nil | 242 | Nil | Nil | Nil |
| Wed | 21.05.2014 | 09:57:02 | A | Nil | Nil | 110 | 180 | Nil | Nil | Nil |

| | | | | | | | | | | |
|-----|------------|----------|---|-----|-----|-----|-----|-----|-----|-----|
| Thu | 19.04.2012 | 13:46:02 | A | Nil | Nil | 120 | 170 | Nil | Nil | Nil |
| Thu | 19.01.2012 | 06:02:01 | A | 93 | 175 | 72 | 142 | 97 | 222 | Nil |
| Sat | 22.10.2011 | 10:39:02 | A | Nil | Nil | 100 | 180 | Nil | Nil | Nil |

Distributor: 02 ALFRED RD

Busbar: 01 **Load Cycle:** DMW

Status: COMM

Control Type: FU **Control/Fuse Size:** 400.0 A **Corrected Max:**

Primary Usage: Network Distributor

| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------|------|--------|-------|------|-------|------|-------|------|---------|
|-----|------|------|--------|-------|------|-------|------|-------|------|---------|



S046889 Alfred Gulliver - S046889

| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------------|----------|--------|-------|------|-------|------|-------|------|---------|
| Tue | 08.01.2019 | 08:46:01 | A | 2 | 43 | 2 | Nil | 2 | Nil | Nil |
| Wed | 19.12.2018 | 18:04:02 | A | Nil | Nil | Nil | 34 | Nil | 52 | Nil |
| Sun | 24.06.2018 | 18:30:02 | A | Nil | Nil | Nil | 34 | Nil | Nil | Nil |
| Sun | 16.07.2017 | 22:00:02 | A | Nil | Nil | Nil | 29 | Nil | Nil | Nil |
| Sat | 11.02.2017 | 17:00:02 | A | Nil | Nil | Nil | 36 | Nil | Nil | Nil |
| Mon | 04.07.2016 | 20:30:02 | A | Nil | Nil | Nil | 31 | Nil | Nil | Nil |
| Tue | 23.02.2016 | 19:30:02 | A | Nil | Nil | Nil | 24 | Nil | Nil | Nil |
| Wed | 12.08.2015 | 19:30:02 | A | Nil | Nil | Nil | 34 | Nil | Nil | Nil |
| Wed | 21.05.2014 | 09:57:02 | A | Nil | Nil | 100 | 100 | Nil | Nil | Nil |
| Thu | 19.04.2012 | 13:46:02 | A | Nil | Nil | 100 | 100 | Nil | Nil | Nil |
| Thu | 19.01.2012 | 06:02:01 | A | 2 | 27 | 5 | 51 | 13 | 43 | Nil |
| Sat | 22.10.2011 | 10:39:02 | A | Nil | Nil | 100 | 100 | Nil | Nil | Nil |

Distributor: 03 GULLIVER ST
COMM

Busbar: 01 **Load Cycle:** DMW **Status:**

Control Type: FU **Control/Fuse Size:** 400.0 A **Corrected Max:** **Primary Usage:** Network Distributor

| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------------|----------|--------|-------|------|-------|------|-------|------|---------|
| Tue | 08.01.2019 | 08:46:01 | A | 66 | 233 | 48 | 237 | 61 | 185 | Nil |
| Mon | 18.06.2018 | 19:00:02 | A | Nil | Nil | Nil | 291 | Nil | Nil | Nil |
| Sun | 18.03.2018 | 18:30:02 | A | Nil | Nil | Nil | 292 | Nil | Nil | Nil |
| Tue | 06.06.2017 | 19:30:02 | A | Nil | Nil | Nil | 282 | Nil | Nil | Nil |
| Sun | 05.02.2017 | 17:30:02 | A | Nil | Nil | Nil | 275 | Nil | Nil | Nil |
| Mon | 27.06.2016 | 19:30:02 | A | Nil | Nil | Nil | 342 | Nil | Nil | Nil |
| Fri | 20.11.2015 | 18:30:02 | A | Nil | Nil | Nil | 265 | Nil | Nil | Nil |
| Wed | 08.07.2015 | 19:30:02 | A | Nil | Nil | Nil | 306 | Nil | Nil | Nil |
| Wed | 21.05.2014 | 09:57:02 | A | Nil | Nil | 100 | 350 | Nil | Nil | Nil |
| Thu | 19.04.2012 | 13:46:02 | A | Nil | Nil | 130 | 240 | Nil | Nil | Nil |
| Thu | 19.01.2012 | 06:02:01 | A | 119 | 193 | 105 | 174 | 70 | 151 | Nil |
| Sat | 22.10.2011 | 10:39:02 | A | Nil | Nil | 130 | 310 | Nil | Nil | Nil |

Distributor: 04 W.D.N.O.
WDNO

Busbar: 01 **Load Cycle:** COM **Status:**

Control Type: FU **Control/Fuse Size:** 800.0 A **Corrected Max:** **Primary Usage:** Network Distributor



| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------------|----------|--------|-------|------|-------|------|-------|------|---------|
| Thu | 19.04.2012 | 13:46:02 | A | Nil | Nil | 200 | 260 | Nil | Nil | Nil |
| Thu | 19.01.2012 | 06:02:01 | A | 3 | 57 | 0 | 44 | 2 | 40 | Nil |
| Sat | 22.10.2011 | 10:39:02 | A | Nil | Nil | 200 | 500 | Nil | Nil | Nil |

Transformer: 01 Tx Pos 1 COMM

Busbar: 01 N/Plate: 1,000.0 kVA Vector: DYN1

| Set Tapped Voltage | | Principal Tap Position | Tap Position One | Tap Position Two |
|--------------------|---------------------|------------------------|--------------------|------------------|
| 10,505 V | 433 V | 4 | 7 | No data |
| Season | Operating Condition | Rating | Limited Asset Type | |
| All | Emergency | 1511 A | TRANSFORMER | |
| All | Normal | 1511 A | TRANSFORMER | |

Miscellaneous Comments:

Replacement - Upgrade/Renewal : New kiosk substation

S048726 ALFRED GULLIVER No.2 - S048726

Func Location: D.S.S048726

Comm Date: 02.04.2012

Decom Date:

DC Type: KL

LV Plan: FF634

LC: COM

Ambient Temp (°c):

Zone: Brookvale 154

Network Group: FDR 11 KV 15001P18

DiagSheet/Ref: 1/E5

Address: ALFRED RD

Suburb: BROOKVALE
NMD

Post Code: 2100

Municipality: WARRINGAH

Area:

Rating Type: Non-Firm

Substation Rating(All): 1511

Busbar: 01 LV BBar 1 S48726

COMM

Load Cycle: COM Phase Sequence:
ends of busbar

Phasing: ABC-cab Balanced Supply: Equal load on



Transformers at Busbar: 01

MDI K Factor: 1

Distributors at Busbar: 01 02 03

Busbar Throughput Rating(All): 1511 A

Limited by Summ O/C: No Data

| DAY | DATE | TIME | ORIGIN | INST | MAX | READY |
|-----------|------------|----------|--------|------|------|--------|
| Sunday | 31.03.2019 | 23:00:02 | A | 43 | 890 | T__DMC |
| Monday | 01.10.2018 | 07:00:02 | A | 31 | 31 | T__DMC |
| Saturday | 26.05.2018 | 23:00:02 | A | 61 | 859 | T__DMC |
| Saturday | 05.05.2018 | 07:00:02 | A | 84 | 84 | T__DMC |
| Wednesday | 21.03.2018 | 23:00:02 | A | 73 | 965 | T__DMC |
| Friday | 13.10.2017 | 07:00:02 | A | 42 | 42 | T__DMC |
| Thursday | 31.08.2017 | 23:00:02 | A | 56 | 877 | T__DMC |
| Wednesday | 31.05.2017 | 23:00:02 | A | 52 | 90 | T__DMC |
| Friday | 05.05.2017 | 07:00:02 | A | 71 | 71 | T__DMC |
| Tuesday | 28.02.2017 | 23:00:02 | A | 76 | 730 | T__DMC |
| Tuesday | 01.11.2016 | 07:00:02 | A | 31 | 31 | T__DMC |
| Wednesday | 31.08.2016 | 23:00:02 | A | 60 | 901 | T__DMC |
| Sunday | 31.07.2016 | 16:30:02 | A | Nil | 1001 | T__LIS |
| Monday | 29.02.2016 | 23:00:02 | A | 34 | 626 | T__DMC |
| Thursday | 04.02.2016 | 12:00:02 | A | Nil | 738 | T__LIS |
| Wednesday | 06.01.2016 | 07:00:02 | A | 14 | 14 | T__DMC |

Distributor: 01 BROOKVALE OVAL
COMM

Busbar: 01 Load Cycle: COM Status:

Control Type: FU Control/Fuse Size: 1600.0 A Corrected Max:

Primary Usage: Direct Distributor to Customer

| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------------|----------|--------|-------|------|-------|--------|-------|-------|---------|
| Sun | 31.03.2019 | 23:00:01 | A | 48 | 893 | 48 | 873 | 36 | 795 | Nil |
| Sun | 22.07.2018 | 16:30:02 | A | Nil | Nil | Nil | 1058 | Nil | Nil | Nil |
| Sat | 26.05.2018 | 23:00:01 | A | 61 | Nil | 43 | Nil | 46 | Nil | Nil |
| Sat | 05.05.2018 | 19:50:01 | A | Nil | 856 | Nil | 745 | Nil | 762 | Nil |
| Wed | 21.03.2018 | 23:00:01 | A | 68 | 955 | 54 | 851 | 68 | 808 | Nil |
| Thu | 31.08.2017 | 23:00:01 | A | 41 | Nil | 49 | Nil | 56 | Nil | Nil |
| Sun | 04.06.2017 | 14:00:01 | A | Nil | 878 | Nil | 844.25 | Nil | 806.5 | Nil |
| Wed | 31.05.2017 | 23:00:01 | A | 51 | 70 | 66 | 90 | 71 | Nil | Nil |
| Mon | 08.05.2017 | 04:30:03 | A | Nil | Nil | Nil | Nil | Nil | 71 | Nil |



| | | | | | | | | | | |
|-----|------------|----------|---|-----|-----|-----|--------|-----|-----|-----|
| Tue | 28.02.2017 | 23:00:01 | A | 46 | 728 | 73 | 704 | 66 | 699 | Nil |
| Wed | 31.08.2016 | 23:00:01 | A | 47 | Nil | 42 | Nil | 40 | Nil | Nil |
| Sun | 31.07.2016 | 16:40:03 | A | Nil | Nil | Nil | Nil | Nil | 783 | Nil |
| Fri | 04.03.2016 | 18:10:01 | A | Nil | 902 | Nil | 835.75 | Nil | Nil | Nil |
| Mon | 29.02.2016 | 23:00:01 | A | 17 | Nil | 28 | Nil | 24 | Nil | Nil |

S048726 ALFRED GULLIVER No.2 - S048726

Distributor: 02 ALFRED Rd OH & S.46889
COMM

Busbar: 01 **Load Cycle:** MPD **Status:**

Control Type: FU **Control/Fuse Size:** 400.0 A **Corrected Max:** **Primary Usage:** Network Distributor

| DAY | DATE | TIME | ORIGIN | InstA | MaxA | InstB | MaxB | InstC | MaxC | Neutral |
|-----|------------|----------|--------|-------|------|-------|------|-------|------|---------|
| Sun | 31.03.2019 | 23:00:01 | A | 0 | Nil | 0 | Nil | 1 | Nil | Nil |
| Fri | 02.11.2018 | 12:50:01 | A | Nil | 1 | Nil | Nil | Nil | Nil | Nil |
| Mon | 01.10.2018 | 07:00:02 | A | Nil | Nil | Nil | 0 | Nil | 1 | Nil |
| Sat | 26.05.2018 | 23:00:01 | A | 0 | 1 | 0 | Nil | 0 | Nil | Nil |
| Sat | 05.05.2018 | 07:00:02 | A | Nil | Nil | Nil | 0 | Nil | 1 | Nil |
| Wed | 21.03.2018 | 23:00:01 | A | 0 | Nil | 0 | Nil | 0 | Nil | Nil |
| Sun | 29.10.2017 | 12:10:01 | A | Nil | 1 | Nil | Nil | Nil | Nil | Nil |
| Fri | 13.10.2017 | 08:00:02 | A | Nil | Nil | Nil | 0 | Nil | 1 | Nil |
| Thu | 31.08.2017 | 23:00:01 | A | 0 | Nil | 0 | Nil | 1 | Nil | Nil |
| Fri | 11.08.2017 | 15:30:01 | A | Nil | 1 | Nil | Nil | Nil | Nil | Nil |
| Wed | 31.05.2017 | 23:00:01 | A | 0 | Nil | 0 | Nil | 0 | Nil | Nil |
| Fri | 05.05.2017 | 07:00:01 | A | Nil | 0 | Nil | 0 | Nil | 1 | Nil |
| Fri | 05.05.2017 | 06:10:03 | A | Nil | Nil | Nil | Nil | Nil | 1 | Nil |
| Tue | 28.02.2017 | 23:00:01 | A | 0 | Nil | 0 | Nil | 0 | Nil | Nil |
| Fri | 02.12.2016 | 15:20:01 | A | Nil | 1 | Nil | Nil | Nil | Nil | Nil |
| Sat | 05.11.2016 | 16:30:03 | A | Nil | Nil | Nil | Nil | Nil | 1 | Nil |
| Tue | 01.11.2016 | 08:00:02 | A | Nil | Nil | Nil | 0 | Nil | Nil | Nil |
| Wed | 31.08.2016 | 23:00:01 | A | 0 | Nil | 0 | Nil | 0 | Nil | Nil |
| Mon | 29.02.2016 | 23:00:01 | A | 0 | Nil | 0 | Nil | 0 | Nil | Nil |

Distributor: 03 WDNO

Busbar: 01 **Load Cycle:** COM **Status:** COMM

Control Type: FU **Control/Fuse Size:** 400.0 A **Corrected Max:** **Primary Usage:** Network Distributor



Transformer: 01 Tx Pos 1 COMM

Busbar: 01 **N/Plate:** 1,000.0 kVA **Vector:** DYN1

| Set Tapped Voltage | | Principal Tap Position | Tap Position One | Tap Position Two |
|--------------------|---------------------|------------------------|--------------------|------------------|
| 11,000 V | 433 V | 4 | 4 | No data |
| Season | Operating Condition | Rating | Limited Asset Type | |
| All | Emergency | 1511 A | TRANSFORMER | |
| All | Normal | 1511 A | TRANSFORMER | |

Miscellaneous Comments:

New - Customer Project : New Customer Est S.48726 ALFRED
GULLIVER No.2 Project SC02042 XCY011444



7.2 Electrical Services – Preliminary Ausgrid Enquiry

OFFER to provide DESIGN RELATED SERVICES



DESIGN RELATED SERVICES OFFER

Premises address: BROOKVALE OVAL CENTRE OF EXCELLENCE, PITTWATER ROAD,
BROOKVALE 2100

NMI - Number: **Webform Ref 29154**

MC Reference: 1900095441 **AP Reference:** 800284411

This offer is made on 01/10/2019

By Ausgrid of 24 Campbell St, Haymarket NSW 2000.

To the **connection applicant** named in the *connection application* received on 24/09/2019 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 kiosk type substation.

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

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

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

Contract for Design Related Services

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

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

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

Acceptance Fees

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

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

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

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

WHAT TO DO NEXT

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

Enclosures:

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

Acceptance Fee Summary – attached

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

IF YOU WISH TO ACCEPT THIS OFFER

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

IF YOU WISH TO DECLINE THE OFFER

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

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

DESIGN RELATED SERVICES OFFER

ACCEPTANCE FEE SUMMARY

| Service Description | Unit | Quantity | Price per unit | Total Price |
|--|---------|----------|----------------|-------------|
| 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 | 13.00000 | \$196.39 | \$2,553.07 |
| SUBTOTAL | | | | \$4,164.51 |
| GST (10%) | | | | \$416.45 |
| TOTAL | | | | \$4,580.96 |

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.



7.3 Hydraulic Services Connections

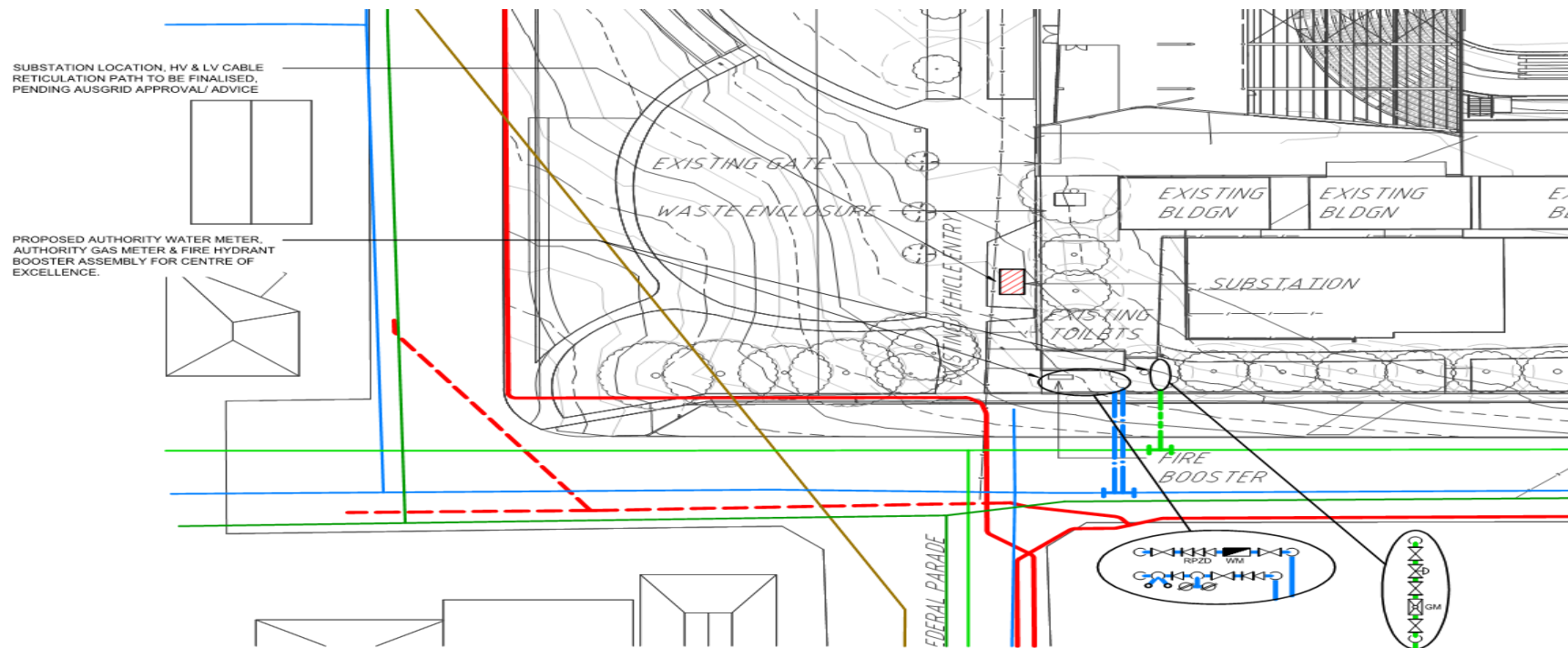


Figure 5 - Services Infrastructure Mark Up

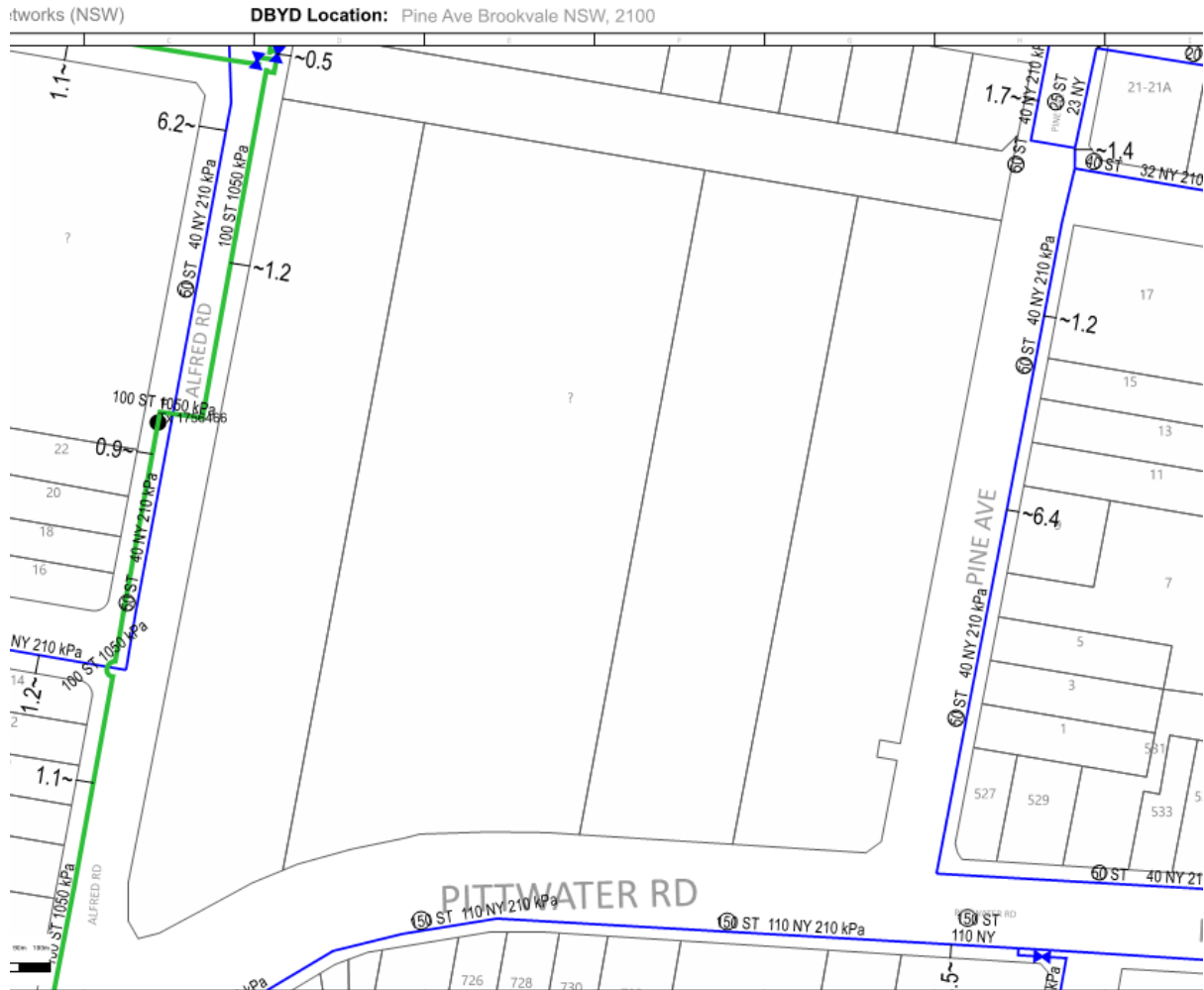


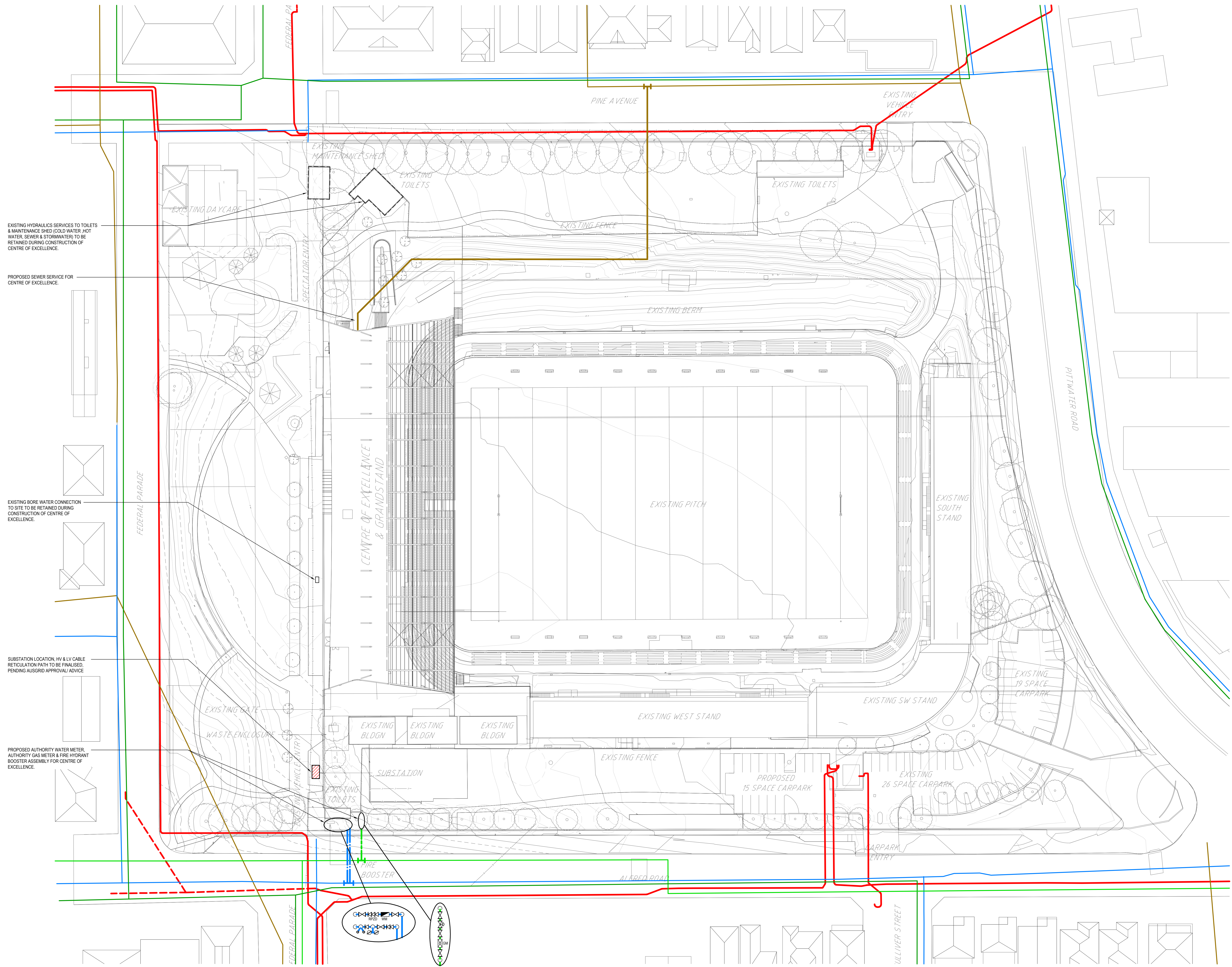
Figure 6 – Brookvale Oval Jemena Gas DBYD

LEGEND:

- HV CABLING - UNDERGROUND
- - - HV CABLING - OVERHEAD
- GAS HIGH PRESSURE - SECONDARY 1050kPa
- GAS DISTRIBUTION - 210kPa
- SEWER SERVICE
- WATER SERVICE

NOTES:

1. DRAWINGS ARE INDICATIVE ONLY.
2. EXISTING HV CABLING INFORMATION EXTRACTED FROM AUSGRID WEBSYSTEM.
3. EXISTING HYDRAULIC SERVICES INFORMATION EXTRACTED FROM SYDNEY WATER & JEMENA DRAWINGS.



EXISTING HYDRAULICS SERVICES TO TOILETS & MAINTENANCE SHED (COLD WATER, HOT WATER, SEWER & STORMWATER) TO BE RETAINED DURING CONSTRUCTION OF CENTRE OF EXCELLENCE.

PROPOSED SEWER SERVICE FOR CENTRE OF EXCELLENCE.

EXISTING BORE WATER CONNECTION TO SITE TO BE RETAINED DURING CONSTRUCTION OF CENTRE OF EXCELLENCE.

SUBSTATION LOCATION, HV & LV CABLE RETICULATION PATH TO BE FINALISED, PENDING AUSGRID APPROVAL ADVICE.

PROPOSED AUTHORITY WATER METER, AUTHORITY GAS METER & FIRE HYDRANT BOOSTER ASSEMBLY FOR CENTRE OF EXCELLENCE.

| No. | Description | Date | By | CHK |
|-----|-----------------|----------|-----|-----|
| P5 | DA ISSUE | 21.10.19 | MJK | MB |
| P4 | FOR INFORMATION | 10.10.19 | MJK | MB |
| P3 | FOR INFORMATION | 10.10.19 | MJK | MB |
| P2 | FOR INFORMATION | 09.10.19 | MJK | MB |
| P1 | FOR INFORMATION | 08.10.19 | MJK | MB |

Services Consultant

LCI
LCI CONSULTANTS (AUSTRALIA) PTY LTD
LEVEL 4, 73 HALBER STREET, NORTH SYDNEY, NSW, 2060
ABN: 92 124 107 975

Project
BROOKVALE OVAL REDEVELOPMENT CENTRE OF EXCELLENCE & GRANDSTAND

Drawing Title
COMBINED SERVICES SITE PLAN

| | |
|-------------|--------------------|
| Status | PRELIMINARY |
| Scale @ A0 | 1:400 |
| Project No. | 19092 |
| Drawing No. | CS100 |
| Rev | P5 |

File: I:\projects\11\11_19092\11_19092_CS100.dwg
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