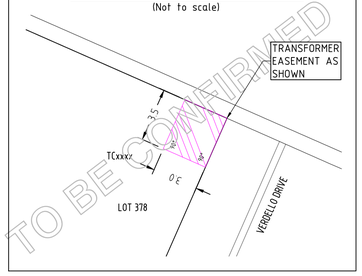
THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING SA POWER NETWORKS TECHNICAL STANDARDS

TS-085	Trenching and Conduit Standard for Underground Distribution Cable Networks
TS-099	Distribution and Sub-Transmission CAD Drafting Standards
TS-100	Electrical Design Standard for Underground Distribution Cable Networks
TS-101	Public Lighting - Design and Installation
TS-102	Easement Standard for Distribution Networks
TS-105	Testing for Underground & Overhead Distribution Powerlines up to and including 33kV Networks
TS-107	Overhead Line Design Standard for Transmission & Distribution Systems
TS-108	Technical Standard for Distribution Equipment and Transformer Rooms
TS-109	Earthing of the Distribution Network
NICC-400	Information for an Applicant Undertaking a Contestable Extension
NICC-404	Working in the Vicinity of SA Power Networks Infrastructure - Network Access Permit Process

Visit SA Power Networks web site for the current version of the Technical Standards

PROPOSED SA POWER NETWORKS TRANSFORMER LOCATION AND EASEMENT DETAILS

(Not to scale)



TO BE CONFIRMED

FOR CONDUIT BEND DETAIL REFER SA POWER NETWORKS TS-085 TABLE 7 to 9.

CAP AND BURY 2x100mm LV CONDUIT 1m PAST LOT 385/1386 BDY. INSTALL CONDUIT SPACERS AT STAGE BDY.

CAP/TERMINATE IN ABOVE GROUND ENCLOSURE PARALLEL 4x150mm² LV CABLE 1m PAST LOT 385/1386 BDY. FINAL LOCATION TO BE COORDINATED WITH FUTURE DRIVEWAYS/FOOTPATH AND APPROVED BY SUPERINTENDENT ON SITE.

Hundred of Munno Para
in the area named
ANGLE VALE
City Of Playford

ADMD TABLE		
	Total	Lot Numbers
4kVA	2	329, 296
6kVA	49	All Other.

FOR DETAILS OF TRANSFORMER CONNECTION, REFER TO SLD (SHEET 2) FOR LOCATIONS, REFER TO EASEMENT DETAILS.

CAP/TERMINATE IN ABOVE GROUND ENCLOSURE 3x300mm² HV CABLE 1m PAST LOT 281 BDY. FINAL LOCATION TO BE COORDINATED WITH FUTURE DRIVEWAYS/FOOTPATH AND APPROVED BY SUPERINTENDENT ON SITE.

CAP AND BURY 2x100mm HV CONDUIT 1m PAST LOT 281 BDY. INSTALL CONDUIT SPACERS AT STAGE BDY.

CAP AND BURY 4x100mm LV CONDUIT 1m PAST LOT 281 BDY. INSTALL CONDUIT SPACERS AT STAGE BDY.

TCxxxx 500kVA

CASTETTA CRESCENT

VERDELLO DRIVE

CAMPIANA ST

SAVERIO BLVD

FOR STAGE 6 DETAILS REFER TO DRAWING 500032241.

ALL EXISTING CABLES MUST BE LOCATED PRIOR TO ANY EXCAVATION CAN BEGIN IN THIS VICINITY. USE HYDRO EXCAVATION AS PER TS-85.

FOR CONTINUATION REFER SHEET 02

NAP3

PUSH PROPOSED LV CABLING THROUGH EXISTING CONDUITS.

COORDINATE FINAL P7 PIT LOCATION ON SITE WITH UNDERGROUND SERVICES, DRIVEWAY & FOOTPATH (TYPICAL)

PL FUSE REQ.

LV OPEN POINT

FOR STAGE 6 DETAILS REFER TO DRAWING 500032241.

TO LS2 TC3886
TO LS1 TC65561
TO LS1 C3579

NAP1

NAP2

TC3887 500kVA

P7 35.9m

FOR DETAILS OF TRANSFORMER CONNECTION, REFER TO SLD SHEET 2 FOR LOCATIONS, REFER TO EASEMENT DETAILS DRAWING 500032241.

COORDINATE FINAL PL COLUMN LOCATION ON SITE WITH UNDERGROUND SERVICES, DRIVEWAY & FOOTPATH (TYPICAL)

CXXXX1

CXXXX2

CAP AND BURY 2x100mm LV CONDUIT 1m WITHIN FUTURE RESERVE BDY.

FOR DETAILS OF SWITCHING CUBICLE CONNECTIONS, REFER TO SLD (SHEET 2) FOR LOCATIONS, REFER TO EASEMENT DETAILS.

COORDINATE FINAL ROAD CROSSING LOCATION ON SITE WITH UNDERGROUND SERVICES (TYPICAL).

CAP/TERMINATE IN ABOVE GROUND ENCLOSURE 3x630mm² HV CABLE 1m PAST LOT 292 BDY. FINAL LOCATION TO BE COORDINATED WITH FUTURE DRIVEWAYS/FOOTPATH AND APPROVED BY SUPERINTENDENT ON SITE.

4m WIDE SAPN CABLE EASEMENT

CAP AND BURY 2x100mm LV & 2x40mm PL CONDUIT 1m PAST LOT 292 BDY.

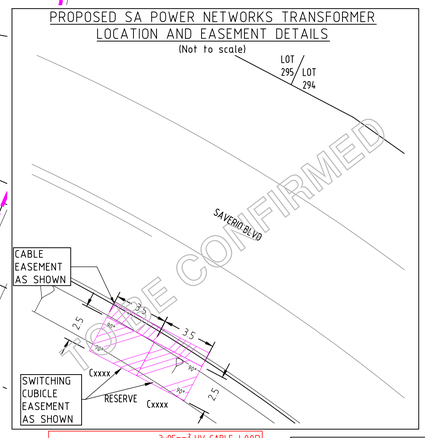
CAP/TERMINATE IN ABOVE GROUND ENCLOSURE 4x150mm² LV PARALLEL CABLE 1m PAST LOT 292 BDY. FINAL LOCATION TO BE COORDINATED WITH FUTURE DRIVEWAYS/FOOTPATH AND APPROVED BY SUPERINTENDENT ON SITE.

3x95mm² HV CABLE LOOP
xxxxxxxx.xx E
xxxxxxxx.xx N
USE COORDINATES AS REFERENCE ONLY. LOCATE ALL UNDERGROUND SERVICES PRIOR EXCAVATION

EXTEND 3x95mm² HV CABLE PAST LOT 292 BDY AND LOOP AROUND AS PROVISION FOR SUPPLYING FUTURE STAGE. INSTALL POLYMERIC COVER OVER LOOPED CABLES. DO NOT EXCEED BENDING RADIUS OF CABLES. FINAL LOCATION OF LOOP TO BE COORDINATED ON SITE WITH SUPERINTENDENT. RECORD EXACT GPS LOCATION OF CABLE LOOP FOR INCLUSION ON AS CONSTRUCTED DRAWINGS.

PROPOSED SA POWER NETWORKS TRANSFORMER LOCATION AND EASEMENT DETAILS

(Not to scale)



TO BE CONFIRMED

LEGEND

- PROPOSED 3x630mm² 11kV XLPE CABLE (CK6039)
- EXISTING 630mm² 11kV CABLE
- PROPOSED 3x300mm² 11kV XLPE CABLE (CK6025)
- PROPOSED 3x95mm² 11kV XLPE CABLE (CK6006)
- EXISTING 95mm² 11kV CABLE
- PROPOSED 150mm² LV UBC XLPE CABLE (CK5310)
- EXISTING 150mm² LV CABLE
- PROPOSED PARALLEL 150mm² LV UBC XLPE CABLE (CK5310)
- PROPOSED PUBLIC LIGHTING CABLE 6mm² TWIN & 6mm² EARTH IN 40mm CONDUIT
- EXISTING PUBLIC LIGHTING CABLE
- PROPOSED 40mm HD ORANGE ELECTRICAL CONDUIT & DRAW ROPE FOR CONSUMERS MAIN TO AS/NZS 3000. DEPTH 800mm. REFER TYPICAL CST CROSS SECTION & STANDARD SA POWER NETWORKS SERVICE PIT LOCATION ARRANGEMENT.
- EXISTING CONSUMERS MAIN
- PROPOSED LV UNDERGROUND OPEN POINT
- PROPOSED SPARE CONDUITS
- EXISTING SPARE CONDUITS
- BOUNDARY OF DESIGN AREA
- PROPOSED TRAFFICABLE P7 UNFUSED LV JUNCTION PIT WITH GELPORTS. P7 PIT TO BE REINFORCED WITH 200mm CONCRETE SURROUND, N12 BAR TOP AND BOTTOM 480mm DEEP AS PER E1921 SHT 7.3
- TRAFFICABLE P7 UNFUSED LV JUNCTION. P7 PIT TO BE REINFORCED WITH 200mm CONCRETE SURROUND, N12 BAR TOP AND BOTTOM 480mm DEEP AS PER E1921 SHT 7.3.
- PROPOSED FUSED RADIAL PILLAR.
- PROPOSED FUSED LOOP PILLAR.
- PROPOSED FUSED-T/OFF PILLAR.
- EXISTING SERVICE PILLAR.
- PROPOSED HV CABLE JOINT
- PROPOSED PADMOUNT TRANSFORMER.
- EXISTING PADMOUNT TRANSFORMER.
- PROPOSED SWITCHING CUBICLE.
- BOUNDARY/PROPERTY LINE
- KERB LINE
- 17W STREETLED AEROSCREEN LED, 4000K, BLACK FINISH (EM4.022) MOUNTED ON BLACK 6.5m MODERN COLUMN WITH 1.5m DECORATIVE MODERN OUTREACH (WA4.017).
- 80W ROADLED MIDI AEROSCREEN, 4,000K, BLACK FINISH (EM4.117), MOUNTED ON BLACK 9.0m IMPACT ABSORBING COLUMN (WA4.113) WITH SINGLE 3.0m MODERN OUTREACH (WA4.531).
- EXISTING LED LUMINAIRE

PRELIMINARY ISSUE
NOT TO BE USED FOR CONSTRUCTION
18 MARCH 2022

SCALE 0 5 10 15 20 25 METRES 50

WGA
WALLBRIDGE GILBERT AZTEC

AS1158.1.1:2005 & AS1158.3.1:2020 LIGHTING DESIGN

ROAD	CATEGORY
• SAVERIO BLVD	V5
• ALL OTHER ROADS	PR5

DATE: 08/10/2021

NAME: L LUKANOV (TechIES)

SCOPE OF WORKS

CONTESTABLE WORKS

Electrical Contractor to:

- Undertake all new work within development.
- Provide completed TS-105 C1 & C2 forms.
- Provide 'As Constructed' drawings within 7 days of submitting certificate of compliance to SA Power Networks Network Management group at no charge.
- Provide documented results proving condition of the existing assets to NPO prior commencing works on any existing infrastructure:
  - megger and phase ID all cables
  - megger all screens and carry out core to screen/earth test for all HV cables
  - contact NPO for direction if any faults discovered.
- Obtain networks access permits for work near live network assets and excavate jointing bays to facilitate works.

NAP1

- Locate all existing underground cables prior to excavation.
- Coil sufficient 2 sets 3x95mm² HV and 3x630mm² HV cable in jointing bay adj lot 299 Saverio Blvd for straight jointing by SA Power Networks.
- Push 4x150mm² LV cable through existing conduit into existing service pillar lot 299 Saverio Blvd, cap for termination by SA Power Networks.

NAP2

- Locate all existing underground cables prior to excavation.
- Push 4x150mm² LV parallel cable through existing conduit into existing transformer TC3887 vault, cap for termination by SA Power Networks.

NAP3

- Locate all existing underground cables prior to excavation.
- Push 4x150mm² LV cable through existing conduit into existing service pillar lot 342 Campiana St, cap for termination by SA Power Networks.

NAP4

- Locate all existing underground cables prior to excavation.
- Push 4x150mm² LV parallel cable through existing conduit into existing transformer TC3886 vault, cap for termination by SA Power Networks.

Developer Civil Contractor to:

- Comply with requirements of NICC-404, TS105-C1 & C2 when working in the vicinity of the electricity network.
- Undertake civil on request by SA Power Networks.
- Use pre-fabricated conduit spacer systems at 2m intervals for up to 6m and finishing 200mm from the end of conduits at the stage boundary. (refer TS-085 section 7.5)

NON CONTESTABLE WORKS

SA Power Networks to:

- Cut existing 3x95mm² HV looped cable adj lot 299 Saverio Blvd.
- Supply and install 3x95mm² HV cable straight joint connecting existing cable from LS1 TC3887 and proposed cable to LS2 Cxxxx(1).
- Supply and install 3x95mm² HV cable straight joint connecting existing cable from LS2 TC3886 and proposed cable to LS3 Cxxxx(1).
- Supply and install 3x630mm² HV cable straight joint connecting existing cable from LS1 C3579 and proposed cable to LS4 Cxxxx(1).
- Terminate & connect 4x150mm² LV cable into S/P lot 299.
- Terminate & connect parallel 4x150mm² LV cable onto FSD1 TC3887.
- Terminate & connect 4x150mm² LV cable into S/P lot 342.
- Terminate & connect parallel 4x150mm² LV cable onto FSD2 TC3886.
- SA Power Networks to carry out testing, connection and energising of the development, including public lighting.

NOTES:

1. Developer responsible for trenching in accordance with SA Power Networks trenching & conduit standard TS-085. Construction to be in accordance with SA Power Networks technical standards and SA Power Networks 'E' drawings.
2. Cables to be laid in 1x100mm dia. LD (low duty) orange conduit at all road crossings unless otherwise stated. Road crossing conduits for radial (typeII) service pits are to extend to the boundary line of the property and be fully continuous. Other road crossings to extend 900mm beyond kerb.
3. The conduit for a radial low voltage road crossing installation needs to be continuous (fully conduited) as per E1904 Sheet 4, with conduit between pillars installed in such away that it will facilitate quick cable replacement. If this is achieved a spare conduit is not required.
4. Spare conduits for LV cables are to be inserted to approximately 25mm and capped within P7 pits. HV spares are to be diverted around pits, as per TS-085.
5. For NBN Developments, install the CST Road Crossing 90° to the allotment boundary.
6. Cables to have 1000mm minimum cover.
7. Cables through easements to be installed in conduit with spare and marker tape as per TS-085. Cable markers are to be installed in cable easement as per TS-085 Appendix A.
8. Any existing underground services shown on these drawings are indicative only, no claim is made that the existing services shown are accurate or complete. Other services may be present which shall be the contractor's responsibility to locate and depth prior to any construction works. Any cable system and equipment must be treated as energised unless otherwise confirmed by SA Power Networks.
9. Phasing of consumer connections as shown.
10. Public lighting to be all-night burning.
11. Number of allotments - 51 lots = 302kVA total (refer table)
12. Number of public lights - 11x17W + 3x80W LED (TFI Tariff).
13. Developer - Lanser Communities.
14. Consulting Engineer - Kellogg Brown & Root Pty Ltd.
15. Surveyor - Alexander Symonds Pty Ltd.
16. Due to the schematic nature of the drawing, the position of equipment shown is indicative only. Actual locations should be verified on site.
17. Retaining walls are required around transformer and switching cubicle easements where the final level changes by more than 300mm in the 2.0m adjacent the easement. The walls are to be built prior to installation of the transformer or switching cubicle and are to be located on the easement. Refer to TS-085, TS-100 and TS-102.
18. All walls, fences, ceilings and floors within 1.2m of the padmount transformer station shall have a 3 hour fire rating as determined by the Building Code of Australia.
19. SA Power Networks is responsible for the connection and energisation of the stage.
20. Contractor to ensure Hydro Vacuum Excavation maximum working pressure is limited to 2000psi as per TS-085. Any proposed excavation methods adjacent SA Power Networks infrastructure should be in accordance with NICC-404. Network Access Permits (NAP) required for works on and/or around SA Power Networks exclusion and/or restricted zones as per NICC-404 section 9.1 - figures 1.2 and 3.
21. Contractor to provide as constructed drawings to SA Power Networks for approval prior to practical completion. Changes can be made by design consultant for hourly rate charge or AutoCAD format drawings can be purchased from consultant for revision by contractor.
22. Construction by -
    'As Constructed' details provided by -
    WGA is not responsible for the accuracy of the 'As Constructed' details provided.

EDGE OF COMMON SERVICE TRENCH (from boundary line)	1.0m
PUBLIC LIGHTING ALIGNMENT (from back of kerb)	1.0m

DESIGN INFORMATION

Termite resistant cable:	YES
Earthing:	CMEN
The Design ADMD / lot:	6kVA

NOTE:
Any changes to be made on site to the location of the common service trench, and/or electrical & street lighting equipment must first be verified by the electrical designer and the project manager/engineering consultant. Any changes to work within proposed SA Power Networks easements must also be verified by the project surveyor.

THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING 500032263 SHEET 2

WGA
WALLBRIDGE GILBERT AZTEC
60 Wyatt Street, Adelaide
South Australia 5000
Telephone 08 8223 7433
Email adelaide@wga.com.au
WGA Project No. WGA189172

SURVEYORS NAME:	Alexander Symonds
SURVEY DATE:	
CO-ORDINATE DATUM	
ZONE: MGA-54-GDA94	
GROUND SCALE:	
HORIZ:	
VERT:	
MAP REF:	6628-19-b
GRID REF:	284981.50 E, 6163059.90 N
	284462.90 E, 6152782.30 N
HBFRA	HIGH BUSHFIRE RISK AREA
FEEDER NO:	EL-17
FEEDER NAME:	CURTIS RD 11kV
SUBSTATION NO:	SSD-273
SUB NAME:	ANGLE VALE
ASSET OWNER:	SA POWER NETWORKS
PROJECT DEFINITION	NC-018796
NOTIFICATION TYPE	CN
PROJECT TYPE	RD

PRELIMINARY

REV	DETAILS OF REVISION	RVD	CKD	INSP	APD	DATE
C	PRELIMINARY ISSUE - LOT LAYOUT UPDATED	WGA	LL			18.03.22
B	PRELIMINARY ISSUE - REVISIONS AS CLOUDED	WGA	LL			22.02.22
A	PRELIMINARY ISSUE	WGA	LL			02.02.22

DRAWN	T TOFIGHI	20-12-21
CHECKED	L LUKANOV	21-01-22
INSPECTED		
APPROVED	N GOSDEN ELIZABETH 08 8282 1543	

Head Office:
1 Anzac Highway
Keswick South Australia 5035
Postal address:
GPO Box 77
Adelaide South Australia 5001
Corporate switchboard
08 8404 5667
(9:00am - 5:00pm
Monday to Friday)
ABN: 13 332 330 749

SA Power Networks

MIRAVALE NOTO - STAGE 7 UNDERGROUND RESIDENTIAL DEVELOPMENT DEV. No. 292/D068/17

SCALE		SHEET 1 OF 2	REV
1:500	A1	500032263	C