

AMENDMENTS

ASSOCIATED DRAWINGS

EMAIL: hlouw@nspm.com.au

CONTACT: HERMANUS LOUW

### NOTES

- 1 REFER DWG No. B14-13566 FOR DETAILS OF ITEMS LISTED IN LEGEND.
- 2 CONTRACTOR SHALL LOCATE EXISTING EARTH CABLING IN LOCATIONS SHOWN, JOINT NEW 1x1C 70 Sq mm Cu, BARE EARTH CABLING & EXTEND TO AND CONNECT TO NEW DIST. PILLARS P083ZU/P085ZU/P087ZU/P095ZU.
- 3 CONTRACTOR SHALL LOCATE SAND PITS AT LOCATIONS SHOWN & INSTALL NEW DIST. CABLING WITHIN EXISTING SPARE 1x100mm HD uPVC CONDUIT & THEN DIRECT BURIED (EXCEPT AT ROAD CROSSINGS) TO NEW DIST. PILLARS P083ZU/P085ZU/P087ZU/P095ZU.
- 4 CONTRACTOR SHALL LEAVE SUFFICIENT LENGTHS NEW LV DIST. CABLING COILED WITHIN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3353 & ARRANGE FOR POWER AND WATER TO PULL NEW LV DIST. CABLING THROUGH EXISTING SPARE 2x100mm SWEEP BENDS INTO EXISTING SUB 3353 LV SECTION & CONNECT/TERMINATE.
- 5 CONTRACTOR SHALL LEAVE SUFFICIENT LENGTHS NEW LV DIST. CABLING COILED WITHIN EXISTING SAND PIT IN FRONT OF EXISTING DIST. PILLARS P073ZU/P079ZU & ARRANGE FOR POWER AND WATER TO PULL NEW LV DIST. CABLING THROUGH EXISTING SPARE 2x100mm SWEEP BENDS INTO EXISTING DIST. PILLAR P073ZU/SPARE 1x100mm SWEEP BEND INTO EXISTING DIST. PILLAR P079ZU & CONNECT/TERMINATE.
- 6 LV CABLING SHALL BE RUN BELOW (DEEPER THAN STANDARD ELECTRICAL TRENCH DEPTH/COVER) SEWER AND/OR STORMWATER MAINS WITH A MINIMUM OF 300mm CLEARANCE AT CROSSOVER LOCATIONS. COORDINATE ON SITE WITH CIVIL CONTRACTOR.
- 7 MINIMUM 300mm HORIZONTAL SEPARATION REQUIRED BETWEEN EDGE OF NBN Co. CONDUIT/S & LV CABLING. TRENCH WIDTH MAYBE EXTENDED BY 200mm TOWARDS PROPERTY BOUNDARY TO ENSURE 300mm HORIZONTAL SEPARATION PROVIDED. WHERE 300mm SEPARATION NOT PROVIDED, LV CABLING SHALL BE INSTALLED IN 100mm HD upvc conduit. Also refer DWG No. B14-13561, Details B & C.

### **LEGEND**

- PACKAGE SUBSTATION (RATING AS SHOWN). 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION DOUBLE LINK PILLAR FUSED TYPE. 'E' INDICATES EXISTING/'F' INDICATES FUTURE. D/F LL
- DISTRIBUTION LINK PILLAR FUSED TYPE. D/F 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- D/F DISTRIBUTION PILLAR - FUSED TYPE.
  - ' INDICATES FUTURE.
- LV DISTRIBUTION CABLE 0.6/1kV 4 x 1C 240 Sq mm AL, XLPE/NJ/PVC DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING) & 1 x 1C 70 Sq mm Cu, BARE EARTH - DIRECT BURIED. ALSO REFER NOTE 3. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- LV SERVICE CABLE 0.6/1kV 2 x 1C 25 Sq mm Cu, XLPE/NJ/PVC DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING). ALSO REFER NOTE 3. 'E' INDICATES EXISTING.
- PARALLEL LV SERVICE CABLE 0.6/1kV 4x1C 25 Sq mm Cu, XLPE/NJ/PVC -DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING). ALSO REFER NOTE 3.
- $-\frac{30}{6}$  FUTURE 3 PHASE CONSUMER MAINS BY LOT OWNER.

PILLAR SCHEDULE						
PILLAR	630A STRIPPLE FUSE UNIT	160A STRIPPLE FUSE UNIT				
P083ZU	3	3				
P084ZU	2	2				
P085ZU	2	3				
P086ZU	2	3				
P087ZU	2	3				
P088ZU	2	2				
P089ZU	1	3				
P090ZU	2	2				
P091ZU	2	2				
P092ZU	2	2				
P093ZU	3	2				
P094ZU	3	3				
P095ZU	2	2				



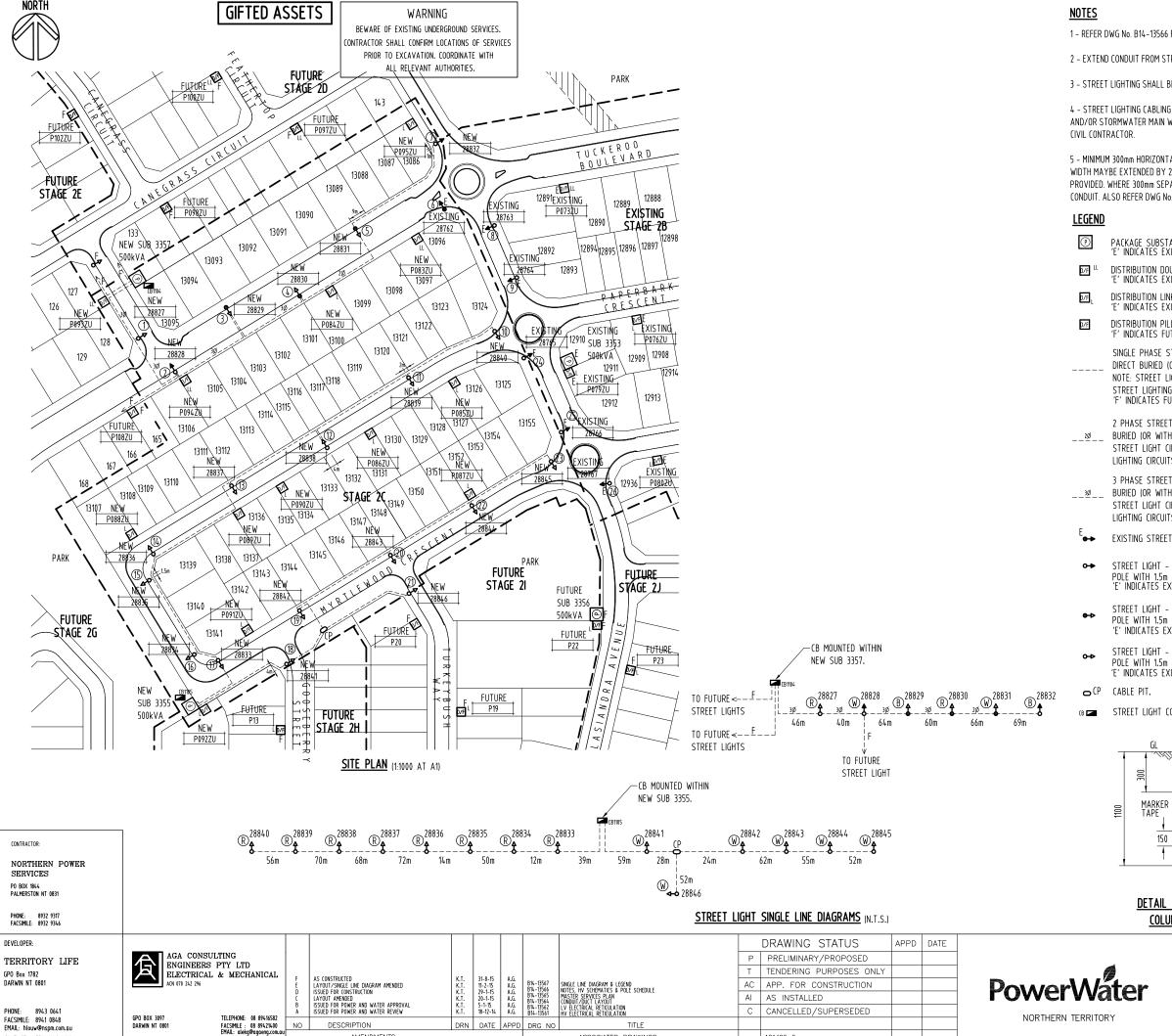
APPD DATE

AGA406-6

DES	A.GANGUR	POWER NE	tworks –	PALMERS	ston distributi	ON
DRN	K.TAVENER	SUBDIVISIO	N OF LOT	12087		
CKD	A.GANGUR	ZUCCOLI S	SUBDIVISION	- STAG	E 2 : STAGE 20	;
APPD		LV ELECTR	RICAL RETIC	ULATION		
SCALE	1:1000 AT A1					
ISSUED	31-8-15	л а D	RAWING	D1.4	17560	$\wedge$

ALL DIM. IN mm AT NUMBER B14-13562 DRAFTING STANDARD TO A.S.1100 FILE No: NE590/12087

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DRN DATE APPD

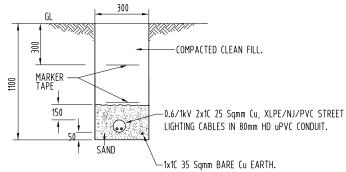
ASSOCIATED DRAWINGS

FACSIMILE: 8941 0848

EMAIL: hlouw@nspm.com.au

CONTACT: HERMANUS LOUV

- 1 REFER DWG No. B14-13566 FOR DETAILS OF ITEMS LISTED IN LEGEND.
- 2 EXTEND CONDUIT FROM STREET LIGHT ELBOW TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION.
- 3 STREET LIGHTING SHALL BE CONNECTED TO NEW SUB'S 3355 & 3357 (SUB'S INCORPORATES TIME CLOCK CONTROL PANEL)
- 4 STREET LIGHTING CABLING SHALL BE RUN BELOW (DEEPER THAN STANDARD ELECTRICAL TRENCH DEPTH/COVER) SEWER AND/OR STORMWATER MAIN WITH A MINIMUM OF 300mm CLEARANCE AT CROSSOVER LOCATIONS. COORDINATE ON SITE WITH
- 5 MINIMUM 300mm HORIZONTAL SEPARATION REQUIRED BETWEEN EDGE OF NBN Co. CONDUIT/S & LV CABLING. TRENCH WIDTH MAYBE EXTENDED BY 200mm TOWARDS PROPERTY BOUNDARY TO ENSURE 300mm HORIZONTAL SEPARATION PROVIDED. WHERE 300mm SEPARATION NOT PROVIDED, STREET LIGHTING CABLING SHALL BE INSTALLED IN 80mm HD uPVC CONDUIT. ALSO REFER DWG No. B14-13561, DETAILS B & C.
  - PACKAGE SUBSTATION (RATING AS SHOWN). 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION DOUBLE LINK PILLAR FUSED TYPE. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION LINK PILLAR FUSED TYPE. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION PILLAR FUSED TYPE.
- SINGLE PHASE STREET LIGHT CABLE 0.6/1kV 2x1C 25 Sq mm Cu, XLPE/NJ/PVC -DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSINGS/INTO STREET LIGHT POLE). NOTE: STREET LIGHT CIRCUITS INCLUDE 1x1C 35 Sq mm Cu BARE EARTH CONNECTED TO STREET LIGHTING CIRCUITS ON SUBSTATION. ALSO REFER NOTE 5.
- 2 PHASE STREET LIGHT CABLE 0.6/1kV 3x1C 25 Sq mm Cu, XLPE/NJ/PVC DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSINGS/INTO STREET LIGHT POLE). NOTE: STREET LIGHT CIRCUITS INCLUDE 1x1C 35 Sq mm Cu BARE EARTH CONNECTED TO STREET LIGHTING CIRCUITS ON SUBSTATION. ALSO REFER NOTE 5.
- 3 PHASE STREET LIGHT CABLE 0.6/1kV 4x1C 25 Sq mm Cu, XLPE/NJ/PVC DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSINGS/INTO STREET LIGHT POLE). NOTE: STREET LIGHT CIRCUITS INCLUDE 1x1C 35 Sq mm Cu BARE EARTH CONNECTED TO STREET LIGHTING CIRCUITS ON SUBSTATION. ALSO REFER NOTE 5.
- EXISTING STREET LIGHT 250W HPS LUMINAIRE MOUNTED ON 12m POLE.
- STREET LIGHT 250W HPS 'REXEL' OPTISPAN LUMINAIRE MOUNTED ON 9m POLE WITH 1.5m OUTREACH. SET BACK 1.1m FROM KERB.
- STREET LIGHT 150W HPS 'REXEL' OPTISPAN LUMINAIRE MOUNTED ON 9m POLE WITH 1.5m OUTREACH. SET BACK 1.1m FROM KERB. E' INDICATES EXISTING.
- STREET LIGHT 70W HPS 'REXEL' OPTIMA LUMINAIRE MOUNTED ON 6.5m POLE WITH 1.5m CURVED OUTREACH. SET BACK 1.1m FROM KERB. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- STREET LIGHT CONTROL PANEL (MOUNTED WITHIN SUB SHOWN).



DETAIL D - TYPICAL STREET LIGHTING CABLE (BETWEEN COLUMN & ELECTRICAL SERVICE TRENCH) DETAILN.T.S

ALL DIM. IN mm

DRAFTING STANDARD TO A.S.1100



DES	A.GANGUR	POWER	NETWORKS - PALMERSTON DISTRIBUTION
ORN	K.TAVENER	Subdiv	VISION OF LOT 12087
CKD	A.GANGUR	ZUCCOI	LI SUBDIVISION - STAGE 2 : STAGE 2C
PPD		STREET	LIGHTING RETICULATION
CALE	1:1000 AT A1		
SSUED	31-8-15	A1	DRAWING B14-13563
ALL DIM	I. IN mm	A	NUMBER   D14-13303   /

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DRN DATE APPD

ASSOCIATED DRAWINGS

AGA406-6

AMENDMENTS

EMAIL: hlouw@nspm.com.au

CONTACT: HERMANUS LOUW

#### NOTES

- 1 REFER DWG No. B14-13566 FOR DETAILS OF ITEMS LISTED IN LEGEND.
- 2 ALL SPARE CONDUITS SHALL INCLUDE DRAW WIRES/FITTED WITH END CAPS.
- 3 PROVIDE CONTINUOUS SWEEP BENDS IN ALL CHANGES IN CONDUIT ROUTE DIRECTIONS.
- 4 CONTRACTOR SHALL LOCATE EXISTING SAND PITS AT LOCATIONS SHOWN & INSTALL NEW HV CABLING WITHIN EXISTING SPARE 1x150mm HD uPVC CONDUIT BETWEEN EXISTING SAND PITS & THEN IN NEW 1x150mm HD uPVC CONDUIT TO NEW SUB 3355 & NEW SUB 3357.
- 5 CONTRACTOR SHALL LOCATE EXISTING SAND PITS AT LOCATIONS SHOWN & INSTALL NEW LV DIST. CABLING WITHIN EXISTING SPARE 1x100mm HD uPVC CONDUIT BETWEEN EXISTING SAND PITS & THEN DIRECT BURIED (EXCEPT IN NEW 1x100mm HD uPVC CONDUIT AT ROAD CROSSING) TO NEW DIST PILLARS P083ZU/P085ZU/P087ZU/P095ZU.
- 6 CONTRACTOR SHALL LOCATE EXISTING EARTH CABLING IN LOCATIONS SHOWN, JOINT NEW 1x1C 70 Sq mm Cu, BARE EARTH CABLING & EXTEND TO AND CONNECT TO NEW SUB's 3355/3357 & NEW DIST. PILLARS P083ZU/P085ZU/P087ZU/P095ZU.
- 7 CONTRACTOR SHALL SUPPLY & INSTALL 1x1C 70 Sq mm Cu, BARE EARTH & 1x1C 35 Sq mm Cu, BARE EARTH TO SAND PIT SHOWN & LEAVE 3m COILED IN SAND PIT FOR FUTURE STAGE CONNECTION
- 8 CONTRACTOR SHALL SUPPLY & INSTALL 2x100mm HD upvc sweep bend conduits to within New Sub 3355 LV section and extend to within New Sand PIT IN ROAD RESERVE IN FRONT OF NEW SUB 3355 - FOR FUTURE STAGE LV DIST. CABLING.
- 9 CONTRACTOR SHALL SUPPLY & INSTALL 4x100mm HD upvc sweep bend conduits to within New Sub 3357 LV section and extend to within New Sand PIT IN ROAD RESERVE IN FRONT OF NEW SUB 3357 - FOR FUTURE STAGE LV DIST. CABLING.
- 10 CONTRACTOR SHALL SUPPLY & INSTALL 2x80mm HD uPVC SWEEP BENDS TO WITHIN NEW SUB 3357 LV SECTION AND EXTEND TO WITHIN NEW SAND PIT IN ROAD RESERVE IN FRONT OF NEW SUB 3357 - FOR FUTURE STAGE STREET LIGHT CABLING.
- 11 CONTRACTOR SHALL SUPPLY & INSTALL 1x100mm HD upvc sweep bend conduit to within New dist. Pillar p094zu and extend to within New Sand Pit IN ROAD RESERVE IN FRONT OF NEW DIST. PILLAR P094ZU - FOR FUTURE STAGE LV DIST. CABLING.
- 12 CONTRACTOR SHALL SUPPLY & INSTALL 2x100mm HD upvc sweep bend conduits to within New Dist. Pillar po95zu and extend to within New Sand PIT IN ROAD RESERVE IN FRONT OF NEW DIST. PILLAR P095ZU - 1x100mm FOR FUTURE STAGE LV DIST. CABLING/1x100mm FOR FUTURE STAGE LV SERVICE CABLING.
- 13 CONTRACTOR SHALL SUPPLY & INSTALL 2x100mm HD upvc swffp bend conduits to within New dist. Pill ar po937U and extend to within New Sand PIT IN ROAD RESERVE IN FRONT OF NEW DIST. PILLAR P093ZU - 1x100mm FOR FUTURE STAGE LV DIST. CABLING/1x100mm FOR FUTURE STAGE LV SERVICE CABLING.
- 14 CONTRACTOR SHALL SUPPLY & INSTALL 1x100mm HD upvc sweep bend conduit to within New Dist. Pillar shown and extend into lot & Cap- for FUTURE LOT OWNER CONSUMER MAINS (EXTEND 1m BEYOND ELEC. EASEMENT).
- 15 EXTEND ALL CONDUITS AT ROAD CROSSINGS TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION.
- 16 CONDUITS SHALL BE INSTALLED IN A CONTINUOUS SWEEP CURVE.
- 17 MINIMUM 300mm HORIZONTAL SEPARATION REQUIRED BETWEEN EDGE OF NBN Co. CONDUIT/S & LV CABLING. TRENCH WIDTH MAYBE EXTENDED BY 200mm TOWARDS PROPERTY BOUNDARY TO ENSURE 300mm HORIZONTAL SEPARATION PROVIDED. WHERE 300mm SEPARATION NOT PROVIDED, LV CABLING SHALL BE INSTALLED IN 100mm HD upvc conduit/street lighting cabling in 80mm HD upvc conduit. Also refer DWG No. B14-13561, DETAILS B & C.

## **LEGEND**

- PACKAGE SUBSTATION (RATING AS SHOWN). INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION DOUBLE LINK PILLAR FUSED TYPE. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- D/F DISTRIBUTION LINK PILLAR - FUSED TYPE. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION PILLAR FUSED TYPE 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- ELECTRICAL CONDUIT/DUCT. CONDUIT/DUCT TYPE AS FOLLOWS:
  - . HD uPVC FOR ALL HV CABLING.
  - HD upvc for LV dist./service/street light cabling for road crossings/reserve 'E' INDICATES EXISTING
- NUMBER INSIDE INDICATES CONDUIT/DUCT SIZE. NUMBER SHOWN/DRAWN INDICATES NUMBER OF CONDUITS REQUIRED.
  - 'E' INDICATES EXISTING
- SAND PIT 1000x1000x600D WITH A MINIMUM COVER OF 0.9m TO TOP OF CONDUITS. 'E' INDICATES EXISTING.
- SAND PIT 1500x1000x600D WITH A MINIMUM COVER OF 0.9m TO TOP OF CONDUITS. 'E' INDICATES EXISTING



DES	A.GANGUR	POWER	NETWORKS - PALMERSTON DISTRIBUTION	
DRN	K.TAVENER	SUBDIV	'ISION OF LOT 12087	
CKD	A.GANGUR	ZUCCOI	LI SUBDIVISION - STAGE 2 : STAGE 2C	
APPD		CONDU	IT/DUCT LAYOUT	
SCALE	1:1000 AT A1		•	
ISSUED	31-8-15	A1	DRAWING B14-13564 /	Ā
ALL DIM	I. IN mm	A I	NUMBER <b>DI4-13304</b>   /	F

FILE No: NE590/12087

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ALL DIM. IN mm

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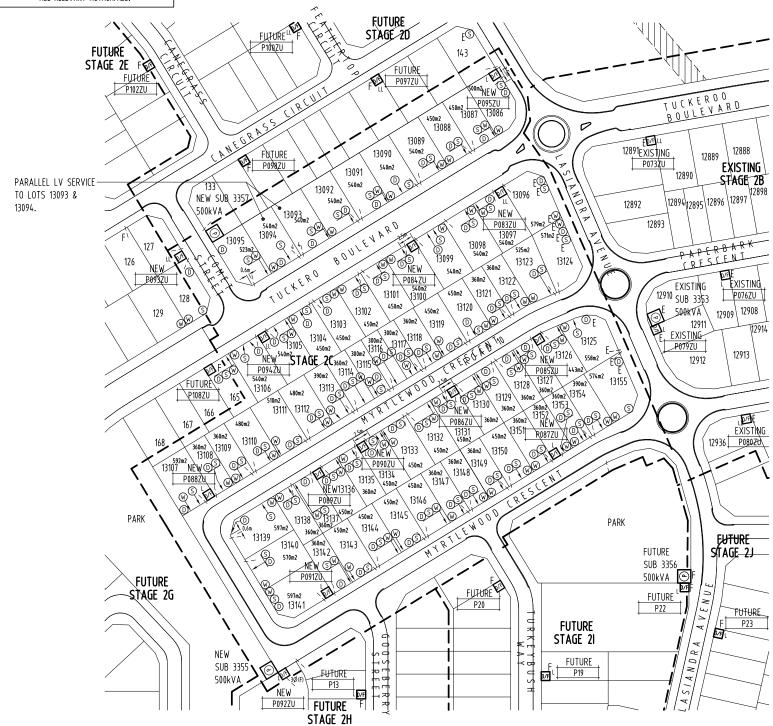


NORTHERN POWER SERVICES PO BOX 1844 PALMERSTON NT 0831

#### WARNING

BEWARE OF EXISTING UNDERGROUND SERVICES. CONTRACTOR SHALL CONFIRM LOCATIONS OF SERVICES PRIOR TO EXCAVATION. COORDINATE WITH ALL RELEVANT AUTHORITIES.

# GIFTED ASSETS



SITE PLAN (1:1000 AT A1)

### LEGEND

PACKAGE SUBSTATION (RATING AS SHOWN). 'E' INDICATES EXISTING/'F' INDICATES FUTURE.

DISTRIBUTION DOUBLE LINK PILLAR - FUSED TYPE. D/F LL E' INDICATES EXISTING/'F' INDICATES FUTURE.

DISTRIBUTION LINK PILLAR - FUSED TYPE. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.

DISTRIBUTION PILLAR - FUSED TYPE. D/F 'F' INDICATES FUTURE

---- LV SERVICE CABLE/CONNECTION.

 $--rac{3\phi(F)}{2}$  FUTURE 3 PHASE CONSUMER MAINS - BY LOT OWNER.

WATER CONNECTION. W

SEWER CONNECTION. **(S)** 

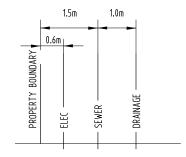
**(** DRAINAGE CONNECTION.

PARALLEL LV SERVICE CABLE - 0.6/1kV 4x1C 25 Sq mm Cu, XLPE/NJ/PVC -DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING), ALSO REFER NOTE 3.

 $--\frac{30 \, \text{F}}{-}$  FUTURE 3 PHASE CONSUMER MAINS - BY LOT OWNER.

#### NOTES

1 - REFER DWG No. B14-13566 FOR DETAILS OF ITEMS LISTED IN LEGEND (EXCLUDING WATER/SEWER/DRAINAGE CONNECTION).



DETAIL E - TYPICAL SERVICE CONNECTION WHERE ELEC/SEWER/DRAINAGE IN SAME LOT CORNER (N.T.S.)

PHONE: 8932 9317 FACSIMILE: 8932 9346												
DEVELOPER:											DRAWING STATUS	APPD DAT
TERRITORY LIFE	AGA CON	NSULTING CRS PTY LTD								Р	PRELIMINARY/PROPOSED	
GPO Box 1782		CAL & MECHANICAL								T	TENDERING PURPOSES ONLY	
DARWIN NT 0801	ACN 070 242 296	i	E	AS CONSTRUCTED ISSUED FOR CONSTRUCTION	K.T.	31-8-15 29-1-15	A.G.	B14-13567 B14-13566	SINGLE LINE DIAGRAM & LEGEND NOTES, HV SCHEMATICS & POLE SCHEDULE	AC	APP. FOR CONSTRUCTION	
			ĺ	LAYOUT AMENDED ISSUED FOR POWER AND WATER APPROVAL	K.T. K.T. K.T.	20-1-15	A.G.	B14-13567 B14-13566 B14-13564 B14-13563 B14-13562 B14-13561	CONDUIT/DUCT LAYOUT STREET LIGHTING RETICULATION LY ELECTRICAL RETICULATION HY ELECTRICAL RETICULATION	Al	AS INSTALLED	
PHONE: 8943 0641	CDO DOV 3007	TELEBRIONE 00 00/4/502	A	ISSUED FOR POWER AND WATER REVIEW	K.T.	5-1-15 18-12-14	A.G.	B14-13562 B14-13561	LV ELECTRICAL RETICULATION HV ELECTRICAL RETICULATION	С	CANCELLED/SUPERSEDED	
FACSIMILE: 8941 0848 EMAIL: hlouw@nspm.com.qu	GPO BOX 3097 Darwin NT 0801	TELEPHONE: 08 89416582 FACSIMILE : 08 89421400	NO	DESCRIPTION	DRN	DATE	APPD	DRG NO	TITLE			
CONTACT: HERMANUS LOUW		EMAIL: alekg@agaeng.com.au		AMENDMENTS					ASSOCIATED DRAWINGS		AGA406-6	



DES DRN CKD	A.GANGUR K.TAVENER A.GANGUR	SUBDIV	ISION OF LOT LI SUBDIVISION	- STAGE 2 : S		
APPD SCALE	1:1000 AT A1	MASTER	R SERVICES PL	AN		
	31-8-15 M. IN mm	A1	DRAWING NUMBER	B14-135	65	É

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DRAFTING STANDARD TO A.S.1100 FILE No: NE590/12087

#### NOTES - WORKS BY DEVELOPERS CONTRACTOR

## GIFTED ASSETS

- 1 ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH CURRENT POWER AND WATER CONSTRUCTION METHODS REQUIREMENTS & STANDARDS AS DETAILED IN POWER AND WATER DESIGN AND CONSTRUCTION GUIDELINES, STREET LIGHTING/UNDERGROUND MANUALS & ACCESS TO APPARATUS RULES. ROAD OWNER IS RESPONSIBLE FOR APPROVING SPECIFIC STREET LIGHTING CATEGORY COMPLIANCE AND DESIGNATED STREET LIGHTING LOCATIONS. POWER AND WATER'S APPROVAL FOR STREET LIGHTING IS ONLY FOR COMPLIANCE WITH ELECTRICAL INSTALLATION AND AUTHORISED STANDARD STREET LIGHTING COMPONENTS AS PER POWER AND WATER STANDARD MANUALS.
- 2 ALL PURCHASED MATERIALS/EQUIPMENT TO CONSTRUCT ELECTRICAL RETICULATION SHALL BE IN ACCORDANCE WITH POWER AND WATER'S RELEVANT STANDARDS/TECHNICAL REQUIREMENTS AND FROM A POWER AND WATER AUTHORISED MANUFACTURER SPECIFICALLY FOR HIGH VOLTAGE AND LOW VOLTAGE DISTRIBUTION NETWORKS. ANY NON-STANDARD MATERIALS/EQUIPMENT USED WITHOUT OBTAINING PRIOR APPROVAL IN WRITING FROM POWER NETWORKS, ASSET MANAGEMENT QUALITY GROUP CAN BE REJECTED AND REPLACED BY THE APPROVED STANDARD ITEM BEFORE POWER AND WATER ACCEPTS THE HANDOVER OF ELECTRICAL ASSETS AND ISSUING POWER CLEARANCE FOR THE CONSTRUCTION/DEVELOPMENT. IF UNSURE, CONTACT POWER AND WATER POWER NETWORK ASSET MANAGEMENT QUALITY GROUP ON standardsengineers@powerwater.com.au.
- B CONTRACTOR SHALL CONTACT & SUBMIT AN UNDERGROUND INSTALLATION PROGRAM" TO POWER AND WATER'S PROGRAM DELIVERY VIA E-MAIL (programdelivery.pwc@powerwater.com.au) THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS. THE UNDERGROUND INSTALLATION IS SUBJECT TO APPROVAL BY PROGRAM DELIVERY 7 DAYS PRIOR TO WORK COMMENCING.
- 4 SUBSTATIONS SHALL BE MK2 (11kV/433V) TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S02-1-7-17 SHEETS 1 TO 5. SUBSTATIONS SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S02-2-6-31\_1, S02-2-6-31\_2, S02-2-6-31\_3, S02-2-6-33 & S02-2-5-10. "ARMCO" SAFETY BARRIERS ARE NOT REQUIRED. CONTRACTOR SHALL DELIVER/PICK UP TO/FROM POWER AND WATER BEN HAMMOND WORKSHOP AND ARRANGE FOR POWER AND WATER TO TEST NEW SUBSTATIONS/HV SWITCHGEAR & SUPPLY/INSTALL TARIFF METER FOR NEW SUBSTATIONS. CONTACT IS CHELSEA WALTER TELEPHONE No. 8985 7186. SUBSTATION SHALL BE POWDER COATED TO AS 3715 COLOR - 'HERITAGE GREEN'.
- 5 FUSED DISTRIBUTION PILLARS SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR AND LABELLED IN ACCORDANCE WITH POWER AND WATER REQUIREMENTS. LABELS SHALL BE PROVIDED BY CONTRACTOR. PILLARS SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S02-2-3-08 & INSTALLATION IN ACCORDANCE WITH POWER AND WATER STD DWG S02-2-3-12.
- 6 STREET LIGHTS SHALL BE SUPPLIED & INSTALLED BY CONTRACTOR IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S3-1-1-1, S3-1-1-6, S3-1-1-10, S3-1-2-1, S3-1-2-3, S3-1-2-6, S3-1-4-1 & S3-1-4-6. SWITCHPACK WITHIN EACH POLE SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG S3-1-5-7 & S3-1-5-12. STREET LIGHT CONTROL PANELS SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG S03-1-5-8. LABEL IN ACCORDANCE WITH POWER AND WATER REQUIREMENTS. COLUMNS SHALL BE GALVANISED.
- UNLESS OTHERWISE INDICATED, ALL SERVICE CABLES ARE LOCATED AS FOLLOWS:
- GENERAL: 300mm FROM FRONT BOUNDARY/600mm FROM SIDE BOUNDARY/600mm FROM FASEMENT
- CABLES ADJACENT TO PHLARS: 300mm FROM FRONT BOUNDARY/600mm FROM PHLAR FASEMENT
- CABLES ADJACENT TO SEWERAGE SERVICES, LOCATED 600mm FROM EASEMENT/SIDE BOUNDARY/300mm FROM FRONT
- 8 SERVICE ALLOCATIONS SHALL BE AS PER DWG No. B14-13561, DETAIL A AND SHALL BE INSTALLED IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-2-6-2 AND S2-2-6-3 (TRENCH DETAILS). ALSO REFER DWG No. B14-13561, DETAILS B & C.
- 9 ELECTRICITY EASEMENTS SHALL BE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-2-6-17. SUBSTATIONS: 4m x 3.5m,
- FUSED PILLARS: 1m x 1m FOR 3 & 5 SLOT FUSED PILLAR.

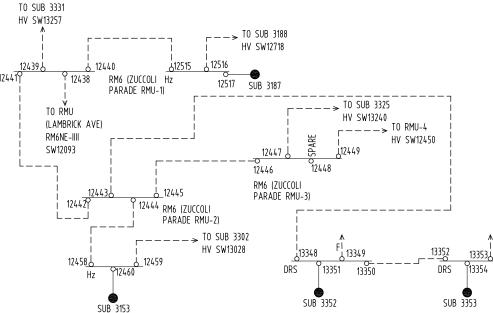
WHERE FRONT/SIDE OF SUBSTATION/PILLARS EASEMENTS DO NOT ALIGN WITH FRONT OF SIDE LOT BOUNDARIES ELECTRICITY EASEMENTS SHALL EXTEND TO FRONT OR SIDE LOT BOUNDARY. DEVELOPER SHALL SURVEY & REGISTER ELECTRICITY EASEMENTS REQUIRED IN FAVOUR OF POWER AND WATER (AT NO COST TO POWER AND WATER).

- 10 LV & STREET LIGHT CABLES SUPPLIED AND INSTALLED BY CONTRACTOR SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-1-1-19 AND S2-1-1-20. HV CABLES SUPPLIED & INSTALLED BY CONTRACTOR SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG S2-1-1-25.
- 11 22 METRES OF SERVICE CABLE SHALL BE LEFT BURIED WITHIN EACH PROPERTY BOUNDARY SHOWN IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S \$2-2-1-3.
- 12 EXTEND CONDUIT FROM STREET LIGHT ELBOW TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION. ALSO EXTEND CONDUITS AT ROAD CROSSINGS TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION.
- 13 CONTRACTOR SHALL LIAISE WITH NBN Co. CONTRACTOR TO ENABLE CONDUITS AND COMMUNICATIONS PITS TO BE INSTALLED BY NBN (o. CONTRACTOR AT THE APPROPRIATE CONSTRUCTION STAGE (INCLUDING CONDUITS AT ROAD CROSSINGS). THE CONTRACTOR SHALL BACKFILL/COMPACT TRENCHES. UPON INSTALLATION OF ELECTRICAL SERVICES CABLING, TO A LEVEL IN ACCORDANCE WITH STANDARD POWER AND WATER DWG'S S2-2-6-2 TO ENABLE NBN Co. CONTRACTOR TO INSTALL COMMUNICATIONS CONDUITS AND PITS. THE CONTRACTOR SHALL THEN COMPLETE BACKFILL/COMPACTION OF TRENCHES.

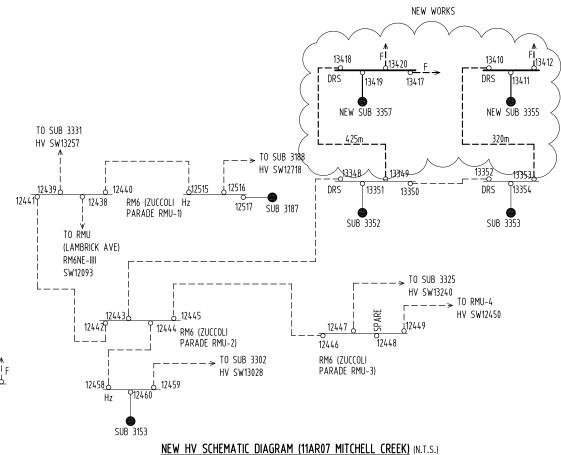
- 14 CONTRACTOR SHALL INSTALL ALL NUMBER PLATES (LABELS) REQUIRED BY POWER AND WATER IE SUBSTATIONS. PILLARS & STREET LIGHTS. NOTE - STREET LIGHT NUMBER PLATES, SUBSTATION NUMBER PLATES & HV SWITCHES NUMBER PLATES WILL BE PROVIDED BY POWER AND WATER TO CONTRACTOR. CONTRACTOR SHALL LABEL ALL CABLE DESTINATIONS IN ACCORDANCE WITH POWER AND WATER STANDARD DRAWING S02-1-8-25.
- 15 ALL WORKS REQUIRED ON EXISTING ENERGISED RETICULATION SHALL ONLY BE CARRIED OUT BY POWER AND WATER PERSONNEL. DEVELOPER/CONTRACTOR SHALL LIAISE WITH POWER AND WATER TO COORDINATE CONNECTION OF THE WORK INTO EXISTING UNDERGROUND RETICULATION. ALL COSTS ASSOCIATED SHALL BE PAID BY DEVELOPER.
- 16 DEVELOPER SHALL ENSURE THAT ONLY POWER AND WATER ACREDITED ELECTRICAL CONTRACTOR IS EMPLOYED TO CARRY OUT WORK ON THIS ELECTRICAL SYSTEM (CONTACT MANAGER NETWORK ENGINEERING - 8924 5191).
- 17 DEVELOPER SHALL LIAISE WITH POWER AND WATER TO OBTAIN "HANDOVER OF WORK BY DEVELOPER". CONTRACTOR SHALL SUBMIT TO POWER AND WATER ON COMPLETION OF WORK, SIGNED COPY OF "CONTRACTOR'S CERTIFICATE OF COMPLETION & HANDOVER - POWER NETWORK ASSETS" & SIGNED COPY OF "ELECTRICAL CERTIFICATE OF COMPLIANCE"
- 18 CABLE ROUTE LENGTHS NOMINATED ON SINGLE LINE DIAGRAM ARE FOR POWER AND WATER INFORMATION ONLY & SHALL NOT BE USED FOR TENDERING PURPOSES.
- 19 COORDINATE WITH CIVIL SERVICES FOR LOCATION OF WATER, SEWERAGE AND STORMWATER SERVICES.
- 20 CONTRACTOR SHALL PROVIDE "AS CONSTRUCTED" DRAWINGS IN ACCORDANCE WITH POWER AND WATER'S "POWER NETWORKS DEISGN AND CONSTRUCTION GUIDELINES", INCLUDING A COPY OF THE FINAL SURVEY PLAN. THE "AS CONSTRUCTED" DRAWINGS SHALL INCLUDE:
- 1 x A1 PAPER PRINT INDICATING "AS INSTALLED" (OF ALL DRAWINGS).
- 1 x A3 PAPER PRINT INDICATING "AS INSTALLED" (OF ALL DRAWINGS).
- 1 DIGITAL (CD) COPY OF ALL DRAWINGS (MICROSTATION .DGN FILES).

#### NOTES - WORKS BY POWER AND WATER (AT DEVELOPERS COST)

- 1 CONTRACTOR SHALL ARRANGE FOR POWER AND WATER TO CARRY OUT THE FOLLOWING WORKS:
- PULL THROUGH NEW HV CABLING (FROM NEW SUB 3357, HV SW13418) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3352 & CONNECT/TERMINATE TO EXISTING SUB 3352, HV SW13349.
- PULL THROUGH NEW HV CABLING (FROM NEW SUB 3355, HV SW13410) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3353 & CONNECT/TERMINATE TO EXISTING SUB 3353. HV SW13353.
- PULL THROUGH NEW LV DIST. CABLING (FROM NEW DIST. PILLARS P083ZU/P085ZU) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3353 & CONNECT/TERMINATE TO EXISTING SUB 3353 2 OFF SPARE LV STRIPPLE FUSE UNITS.
- PULL THROUGH NEW LV DIST. CABLING (FROM NEW DIST. PILLARS P083ZU/P095ZU) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING DIST. PILLAR P073ZU & CONNECT/TERMINATE TO EXISTING DIST. PILLAR P073ZU.
- PULL THROUGH NEW LV DIST. CABLING (FROM NEW DIST. PILLAR P087ZU) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING DIST. PILLAR P079ZU & CONNECT/TERMINATE TO EXISTING DIST. PILLAR P079ZU.
- CARRY OUT FARTH TESTS
- SUPPLY & INSTALL TARRIF METER FOR NEW SUBSTATIONS, SUPPLY NUMBER PLATES (LABELS) FOR CONTRACTOR TO INSTALL.
- COMPLETE FINAL CONNECTION, TESTING & COMMISSIONING OF NEW SUBSTATIONS, DISTRIBUTION PILLARS, STREET LIGHTING &
- 2 DEVELOPER SHALL PAY ALL ASSOCIATED COSTS FOR POWER AND WATER TO CARRY OUT ABOVE WORKS.



	STREET LIGHTING POLE/LUMINAIRE SCHEDULE								
POLE No.	STREET LIGHT No.	SIZE	TYPE	OUTREACH	LUMINAIRE TYPE	REMARKS			
1	28827	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
2	28828	9m	RIGID	1.5m	250W HPS	NEW 'INGAL/EPS' POLE/OUTREACH WITH 'REXEL' OPTISPAN 250W HPS LUMINAIRE.			
3	28829	9m	RIGID	1.5m	150W HPS	NEW 'INGAL/EPS' POLE/OUTREACH WITH 'REXEL' OPTISPAN 150W HPS LUMINAIRE.			
4	28830	9m	RIGID	1.5m	150W HPS	NEW 'INGAL/EPS' POLE/OUTREACH WITH 'REXEL' OPTISPAN 150W HPS LUMINAIRE.			
5	28831	9m	RIGID	1.5m	150W HPS	NEW 'INGAL/EPS' POLE/OUTREACH WITH 'REXEL' OPTISPAN 150W HPS LUMINAIRE.			
6	28762	EXIST	EXIST	EXIST	EXIST	EXISTING STREET LIGHT TO REMAIN.			
7	28832	9m	RIGID	1.5m	250W HPS	NEW 'INGAL/EPS' POLE/OUTREACH WITH 'REXEL' OPTISPAN 250W HPS LUMINAIRE.			
8	28763	EXIST	EXIST	EXIST	EXIST	EXISTING STREET LIGHT TO REMAIN.			
9	28764	EXIST	EXIST	EXIST	EXIST	EXISTING STREET LIGHT TO REMAIN.			
10	28840	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
11	28839	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
12	28838	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
13	28837	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
14	28836	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
15	28835	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
16	28834	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
17	28833	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
18	28841	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
19	28842	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
20	28843	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
21	28846	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
22	28844	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
23	28845	6.5m	RIGID	1.5m	70W HPS	NEW 'INGAL/EPS' POLE/CURVED/OUTREACH WITH 'REXEL' OPTIMA 70W HPS LUMINAIRE.			
24	28765	EXIST	EXIST	EXIST	EXIST	EXISTING STREET LIGHT TO REMAIN.			
25	28766	EXIST	EXIST	EXIST	EXIST	EXISTING STREET LIGHT TO REMAIN.			
26	28767	EXIST	EXIST	EXIST	EXIST	EXISTING STREET LIGHT TO REMAIN.			



ALL DIM. IN mm

DRAFTING STANDARD TO A.S.1100

### EXISTING HV SCHEMATIC DIAGRAM (11AR07 MITCHELL CREEK)(N.T.S.)

# DEVELOPER TERRITORY LIFE GPO Box 1782 DARWIN NT 0801

FACSIMILE: 8941 0848 EMAIL: hlouw@nspm.com.au CONTACT: HERMANUS LOUV AGA CONSULTING ENGINEERS PTY LTD ELECTRICAL & MECHANICAI

TELEPHONE: 08 89416582 FACSIMILE: 08 89421400 EMAIL: alekg@agaeng.com

AS CONSTRUCTED SSUED FOR CONSTRUCTION A.G. A.G. A.G. A.G. A.G. DRN DATE APPD

DRAWING STATUS APPD DATE P PRELIMINARY/PROPOSED T TENDERING PURPOSES ONLY AC APP. FOR CONSTRUCTION AI AS INSTALLED CANCELLED/SUPERSEDED



DES	A.GANGUR	POWER NETWORKS - PALMERSTON DISTRIBUTION	
DRN	K.TAVENER	SUBDIVISION OF LOT 12087	
CKD	A.GANGUR	ZUCCOLI SUBDIVISION - STAGE 2 : STAGE 2C	
APPD		NOTES, HV SCHEMATICS & POLE SCHEDULE	
SCALE	N.T.S.		
ISSUED	29-9-15	DRAWING DAA 47500	7

A1 | NUMBER **B14-13566** AMD

