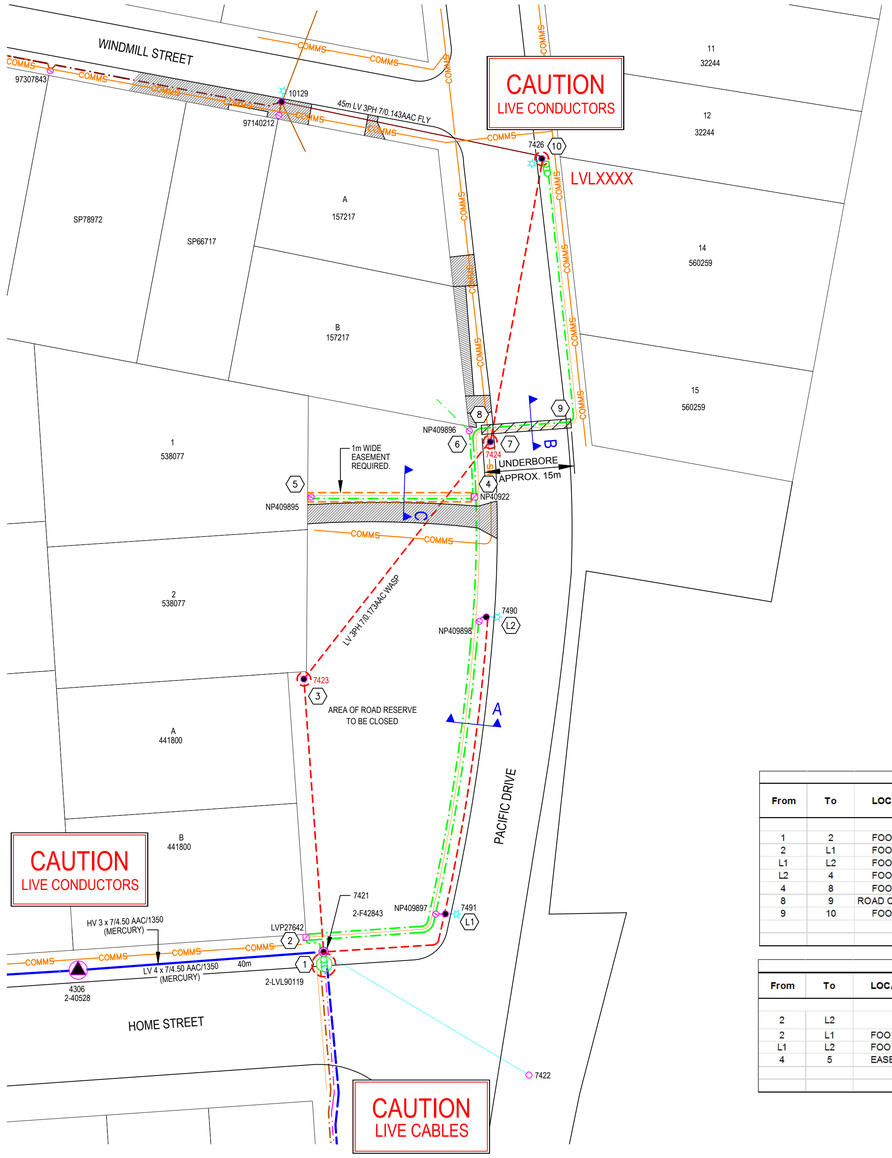
LEGEND

- POLE HV,LV
- POLE LV
- POLE BOLLARD
- POLE SUBSTATION
- NEW LV UNDERGROUND
- STREETLIGHT UNDERGROUND
- EXISTING HV UNDERGROUND
- EXISTING HV OVERHEAD
- EXISTING LV UNDERGROUND
- EXISTING LV OVERHEAD
- GUY - AERIAL
- CONDUIT
- EASEMENT
- LOCATION
- LV PILLAR
- LV PIT
- STREETLIGHT
- LV LINK (NORMALLY OPEN)
- DELETED CABLE / CONDUCTOR
- DELETED ASSETS
- TRENCH CROSS SECTION
- COMMS — OTHER SERVICES - GENERAL COMMS LINE



OVERHEAD CONSTRUCTION SCHEDULE

Peg Number	Asset Label	Standard Drawing No.	Assembly No.	Construction Notes
1	7421			EXISTING 12.5m 6 kN WOOD POLEPOLE
				EXISTING LV 3PH TERM ARM
				REMOVE LV UGOH & CABLE FROM POLE AND DIVERT TO NEW PILLAR @ "2"
	LVL90119			L3 - REMOVE & RECOVER LV TERMINATION XARM
				RECOVER LV LINKS
		CEOM7204.17		INSTALL LV AERIAL TO LV UG TERMINATION, 240SQMM
		CEOM7204.11		LV CABLE FIXING
3	7423			REMOVE & RECOVER 9.5m 4kN POLE & STRUCTURES
				TRANSFER SERVICES TO UNDERGROUND L2 WORKS
7	7424			REMOVE & RECOVER 9.5m 4kN POLE & STRUCTURES
10	7426			REMOVE & RECOVER 11m 4kN POLE & STRUCTURES
				REMOVE & RECOVER STREETLIGHT AND BRACKET FOR REUSE
		CEOM7101.03	4	INSTALL 11M 8KN WOOD POLE
		CEOM7103.10	S	1.9M DEEP STABILISED FOOTING
		CEOM7101.64	3	INSTALL 1PH LV TERMINATION 2.2M FG50 COMPOSITE X'ARM.
	LVL11522	CEOM7301.07	3	INSTALL LV ABC SWITCH FUSE WITH LINK (4X150ABC)
				REATTACH STREETLIGHT & BRACKET TO ORIGINAL HEIGHT AGL & CONNECT
		CEOM7204.17		INSTALL LV AERIAL TO LV UG TERMINATION, 240SQMM
		CEOM7204.11		LV CABLE FIXING

OVERHEAD CONDUCTOR SCHEDULE

From	To	Conductor Details Voltage/Wires/Conductor	Route Length	Design Tension	Min Design GC @ Max Operating Temperature
1	3	REMOVE & RECOVER LV 4 WIRE 7/0.173 AAC	44		
3	7	REMOVE & RECOVER LV 4 WIRE 7/0.173 AAC	50		
7	10	REMOVE & RECOVER LV 4 WIRE 7/0.173 AAC	48		

UNDERGROUND CONSTRUCTION SCHEDULE

Peg Number	Asset Label	Standard Drawing No.	Assembly No.	Construction Notes
2	LVP 27462	CEOM7202.16		INSTALL COMMERCIAL & INDUSTRIAL PILLAR - TYPE 5 SWITCH
		CEOM7202.12	23	INSTALL 400A SWITCH FUSE DIN 2 3 OFF
		CEOM7202.12	20	INSTALL 160A SWITCH FUSE DIN 2 1 OFF
	LVL52631,LVL25174	CEOM7202.12	18	INSTALL 400A SOLID LINK 2 OFF
	LVF48922	CEOM7202.12	23	INSTALL 400A FUSE 1 SET
	LVF49419	CEOM7202.12	7	INSTALL 100A FUSE 1 SET
L1	NP409897	CEOM7201.25		INSTALL SERVICE PIT
L2	NP409898	CEOM7201.25		INSTALL SERVICE PIT
4	NP40922	CEOM7202.05		INSTALL CONNECTION PILLAR, TYPE 3 MEN
5	NP409895	CEOM7201.25		INSTALL SERVICE PIT
6	NP409896	CEOM7201.25		INSTALL SERVICE PIT

UNDERGROUND LV 240mm CABLE & 125mm CONDUIT SCHEDULE

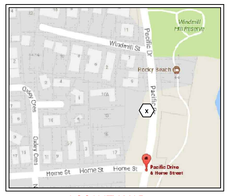
From	To	LOCATION	Cable Details	Cables in Section	Conduit Details	LV CONDUIT	SPARE	Conduits in Section	Conduit M	Route Length M
1	2	FOOTPATH	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1				0	0	5
2	L1	FOOTPATH	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1	INSTALL 125MM **LD** ORANGE CONDUIT	1	3	4	92	23
L1	L2	FOOTPATH	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1	INSTALL 125MM **LD** ORANGE CONDUIT	1	3	4	200	50
L2	4	FOOTPATH	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1	INSTALL 125MM **LD** ORANGE CONDUIT	1	3	4	80	20
4	8	FOOTPATH	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1	INSTALL 125MM **LD** ORANGE CONDUIT	1	3	4	44	11
8	9	ROAD CROSSING	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1	INSTALL 140MM **BORE PIPE**	1	3	4	60	15
9	10	FOOTPATH	INSTALL 415V 4 CORE 240sqmm AL. XLPE-PVC CABLE	1	INSTALL 125MM **LD** ORANGE CONDUIT	1	3	4	176	44
								Conduit Metres	652	
								Trench Metres	168	

UNDERGROUND CABLE LV 25MM, 50MM & CONDUIT 50MM SCHEDULE

From	To	LOCATION	Cable Details	Cables	Conduit Details	CONDUIT	SPARE	Conduits in Section	Conduit M	Route Length M
2	L2		REMOVE & RECOVER EXISTING STREETLIGHT CABLE & CONDUIT							75
2	L1	FOOTPATH	INSTALL LV 4 CORE 25sqmm COPPER XLPE-PVC CABLE	1	INSTALL 50MM **HD** ORANGE CONDUIT	1		1	23	23
L1	L2	FOOTPATH	INSTALL LV 4 CORE 25sqmm COPPER XLPE-PVC CABLE	1	INSTALL 50MM **HD** ORANGE CONDUIT	1		1	50	50
4	5	EASEMENT	INSTALL LV 4 CORE 50sqmm COPPER XLPE-PVC CABLE	1	INSTALL 50MM **HD** ORANGE CONDUIT	1	1	2	56	28
								Conduit Metres	129	
								Trench Metres	101	

STREETLIGHT CONSTRUCTION SCHEDULE

Location Number	Asset Label	Standard Drawing No.	Assembly No.	Construction Notes	Tariff
L1	7491	CEOM7206.27		INSTALL CONNECTION TO SERVICE PIT (CAT V LIGHTING)	
L2	7490	CEOM7206.27		INSTALL CONNECTION TO SERVICE PIT (CAT V LIGHTING)	



LOCALITY MAP

ESSENTIAL ENERGY FUNDING

ESSENTIAL ENERGY WILL NOT FUND THE SUPPLY OR INSTALLATION OF ANY PART OF THIS PROJECT.

SITE SPECIFIC NOTES:

1. THE POLE LOCATIONS SHOWN ON THIS PLAN REFLECT ESSENTIAL ENERGY GIS RECORDS (AND SITE OBSERVATIONS). THE POLE LOCATIONS SHOULD BE CONFIRMED ON SITE. THE LEVEL 1 ASP IS TO RECORD DISCREPANCIES ON THE AS INSTALLED MARK UP SO THAT RECORDS CAN BE ADJUSTED IF NECESSARY.
2. COUNCIL COMMENTS & THE EIA REVIEW OF ENVIRONMENTAL FACTORS MUST BE TAKEN INTO ACCOUNT BY THE LEVEL1 ASP IN CONJUNCTION WITH THIS PLAN. EIA 4.12 TRAFFIC. LEVEL 1 ASP IS TO REFER TO DESIGNER SAFETY REPORT AS PER CEOM7097-3.2
3. CABLE TAGS ARE TO BE FITTED TO ALL NEW CABLES AS PER CEOP8042 CLAUSE 4.7

GENERAL NOTES:

1. THE INTENDED PURPOSE OF THIS PLAN IS THAT OF A CONSTRUCTION DRAWING DEPICTING ELECTRICAL RETICULATION REQUIREMENTS. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.
2. DIMENSIONS, AREAS & LOT NUMBERS SHOWN ON PLAN ARE APPROXIMATE ONLY & MAY VARY. THE ELECTRICAL DESIGN SHOWN MAY BE SUBJECT TO VARIATION DEPENDING ON SITE CONDITIONS ENCOUNTERED DURING INSTALLATION WORKS. THIS WILL REQUIRE THE WRITTEN APPROVAL OF THE ELECTRICAL DESIGNER WHOSE ACCREDITATION NUMBER APPEARS ON THIS PLAN.
3. ALL PERSONNEL WORKING ON OR NEAR ESSENTIAL ENERGY ASSETS MUST BE CORRECTLY ACCREDITED AND AUTHORIZED.
4. CONTRACTOR:-
   - 4.1. TO CONFIRM LATEST PLAN REVISION PRIOR TO CONSTRUCTION.
   - 4.2. TO CONFIRM POLE, PIT & PILLAR LOCATIONS ACCORDING TO THIS PLAN PRIOR TO CONSTRUCTION.
   - 4.3. TO CONFIRM LOCATION OF ALL UNDERGROUND ASSETS INCLUDING ESSENTIAL ENERGY'S AND ALL OTHER UTILITIES PRIOR TO EXCAVATION.
   - 4.4. TO FIX ASSET NUMBERS TO PILLARS, PITS & POLES.
   - 4.5. TO CONFIRM CABLE AND CONDUIT LENGTHS PRIOR TO ORDERING.
   - 4.6. SHALL CO-ORDINATE WITH DEVELOPER TO ENSURE THAT SEDIMENT CONTROL & EROSION PREVENTION MEASURES ARE UNDERTAKEN.
5. ALL CONSTRUCTION & MATERIALS TO COMPLY WITH ESSENTIAL ENERGY CURRENT STANDARDS.
   - 5.1. ALL CONDUIT SIZES TO BE STRICTLY ADHERED TO AND INSTALLED ACCORDING TO ESSENTIAL ENERGY STANDARDS. LEVEL 1 ASP TO BE RESPONSIBLE FOR INSTALLATION OF ALL CONDUITS INCLUDING ROAD CROSSINGS BY DEVELOPER.
6. STREET LIGHTING TO BE LEFT OPERATIONAL AT COMPLETION OF PROJECT WORKS.
7. ALL RECOVERED & DECOMMISSIONED ESSENTIAL ENERGY ASSETS TO BE RETURNED TO NEAREST ESSENTIAL ENERGY DEPOT - PORT MACQUARIE CONTACT ANDREW CAMPBELL 02 65898304.
8. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS BEARING THE ESSENTIAL ENERGY CERTIFIED ENDORSEMENT.

DIAL BEFORE YOU DIG www.1100.com.au

CAUTION!
PLEASE REFER DBYD JOB: 12625257
UG ASSETS IN VICINITY, ALL SERVICES TO BE LOCATED PRIOR TO ANY EXCAVATION WORKS.
WARNING
'DIAL BEFORE YOU DIG' SITE LOCATIONS ARE ONLY VALID FOR 30 DAYS AFTER : 13/07/2017
IF THIS TIME FRAME HAS ELAPSED PLEASE APPLY FOR NEW INFORMATION.
THIS MAY TAKE UP TO 10 DAYS.

TRENCH LEGEND

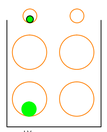
- LV SUPPLY CABLE - 25mm
- LV DISTRIBUTOR - 240mm
- HV CABLE
- 100mm COMMS CONDUIT- TELSTRA/NBN
- 125mm LD PVC ELECTRICAL CONDUIT
- 50mm PVC STREELIGHT CONDUIT
- 125mm HD PVC ELECTRICAL CONDUIT
- 63mm BORE PIPE
- 140mm BORE PIPE
- #LV SPARE LV CONDUIT
- #HV SPARE HV CONDUIT

TYPICAL TRENCH SECTIONS

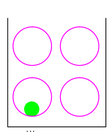
TRENCHING NOTES
THESE SECTIONS / NOTES ARE PROVIDED AS A GUIDE ONLY. THE SCHEDULES DETAIL THE CABLE & CONDUITS TO BE LAID. DETAILS OF DEPTHS, OFFSETS, SPACINGS, BACKFILL MATERIAL SHALL BE DETERMINED BY REFERENCING OF CURRENT ESSENTIAL ENERGY STANDARDS ONLINE.

- FOOTPATH- HV SHALL HAVE MINIMUM OF 750mm COVER
- FOOTPATH- LV SHALL HAVE MINIMUM OF 650mm COVER
- CONDUITS TO HAVE MINIMUM 50mm SEPARATION VERTICALLY & HORIZONTALLY
- CABLE COVER TO BE 150mm ABOVE CONDUIT
- HV & LV CABLES TO HAVE SEPARATION OF 100mm MIN.
- MINIMUM SEPARATION BETWEEN TELECOMMUNICATIONS &LV = 100mm, HV = 300mm
- COMMS COVER- 450 IN FOOTPATH, 600 IN ROAD XING
- ELECTRICITY CONDUITS TO HAVE MINIMUM 750mm COVER- ROAD CROSSING
- ESSENTIAL ENERGY PIPES TO BE MIN 75mm UNDER OR 50mm OVER STORMWATER DRAINS SUBJECT TO MINIMUM COVER REQUIREMENTS

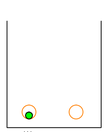
TRENCH SECTION A



TRENCH SECTION B



TRENCH SECTION C



No.	AMENDMENT	BY	DATE
02	PRELIMINARY ISSUE	DON	17/11/17
01	PRELIMINARY ISSUE	DON	11/10/17
A	APPROVAL ISSUE-ASSET NUMBERS	DON	17/02/18

	NAME	DATE
SURVEYED:		
DESIGNED:	LM	11/10/17
DRAWN:	DH	11/10/17
CHECKED:	DON	11/10/17

SCALE 1:500 | Sheet size A1

Preferred Energy Services — electrical consultants
preferred.energy@bigpond.com
DESIGNERS ACCREDITATION No: 3479

Midstate Power
Level 1 Service Provider
PO Box 4073 Forster NSW 2428
PO Box 364 Tamworth NSW 2340
PO Box 409 Wauchope NSW 2446
e: Brad@midstatepower.com.au
m: 0411 831 735

PROJECT
LAND DYNAMICS AUSTRALIA
ROAD CLOSURE & ACQUISITION
17 PACIFIC DRIVE PORT MACQUARIE NSW 2444
ELECTRICAL RETICULATION

EE Project No. 114317
DRAWING No. 114317FPLAN | REV. A
JOB No. NIL | Sheet No. 1 | No. of Sheets 2