

CIVIL WORKS
 ENSURE CONDUITS TURNING UP AT PILLARS ARE BUNDLED CLOSELY FOR INSTALLATION OF PILLARS BASES AND COVERS. ENSURE CORRECT DEPTHS AND ALIGNMENTS OF ALL CONDUITS. PROVIDE ADDITIONAL POLYMERIC CABLE PROTECTION COVER TO ANY CONDUITS OUTSIDE OF STANDARD ALIGNMENT INCLUDING STREET LIGHT CONDUITS. ALSO PROVIDE ORANGE CAUTION TAPE TO ALL CONDUITS. CAUTION TAPE SHALL TURN UP WITH AND COVER CONDUIT BENDS INTO PILLAR BASES. CIVIL CONTRACTOR SHALL ALSO PROVIDE SAND AT EACH PILLAR LOCATION FOR INSTALLATION OF PILLAR BASE AND PILLAR BY ELECTRICAL CONTRACTOR.

STREET LIGHT LOCATIONS
 STREET LIGHTS SHALL BE LOCATED DIRECTLY OUT FROM LOT BOUNDARIES UNLESS SHOWN OTHERWISE. ANY VARIATIONS TO POLE LOCATIONS SHALL BE CONSIDERED PRIOR TO INSTALLATION AND MUST BE APPROVED BY ANDERSON CONSULTING ENGINEERS.

ELECTRICAL CONDUITS MUST BE INSPECTED BY ERGON APPROVED ELECTRICAL CONTRACTOR FOR ERGON COMPLIANCE. IT IS NOTED CONDUITS ARE PART OF ELECTRICAL INSTALLATION

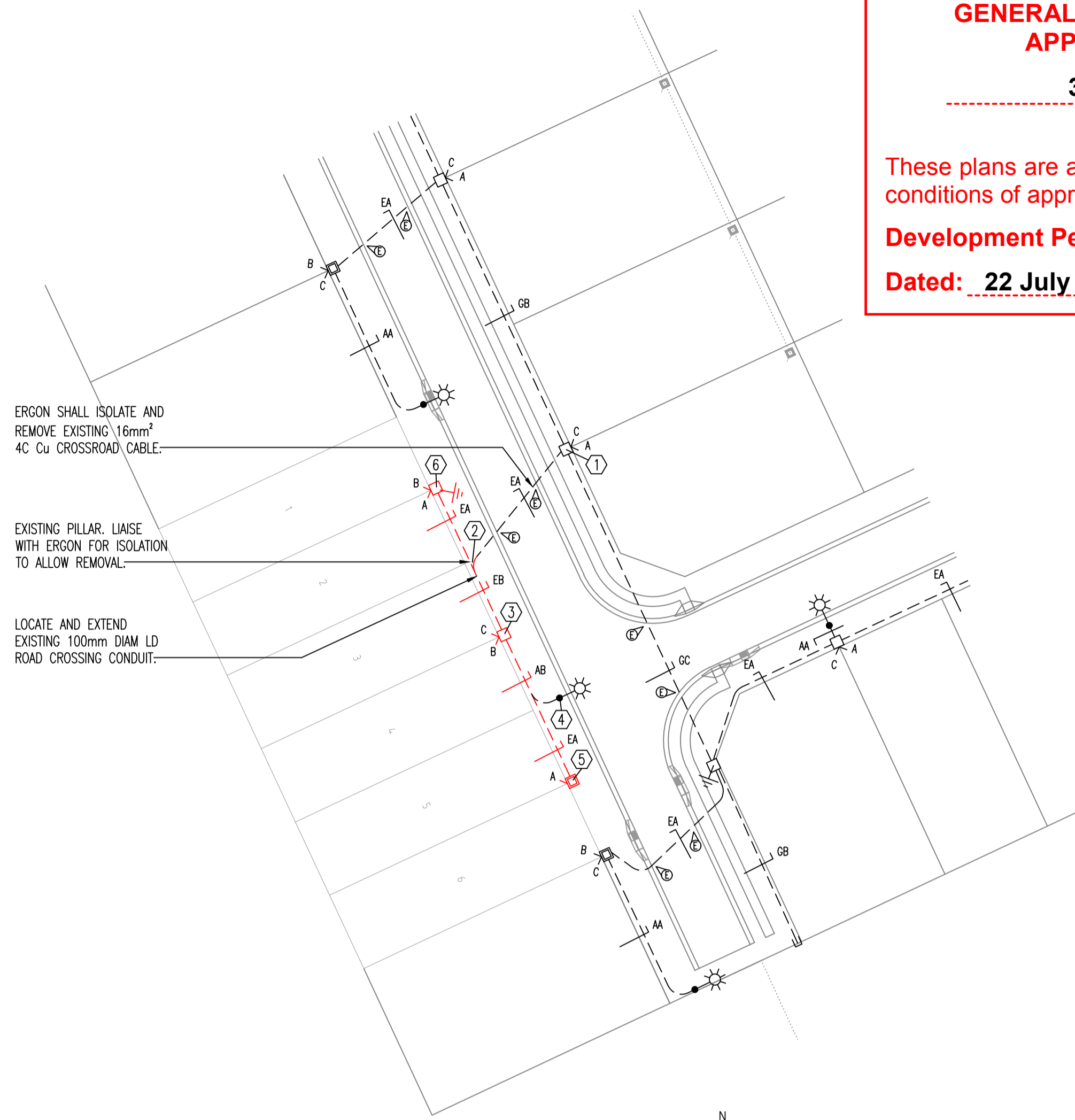
ON JOB COMPLETION MARK UP THIS PRINT CLEARLY WITH ALL FIELD CHANGES AND RETURN TO NETWORK DATA GROUP FOR YOUR REGION.

CHANGES:	YES	NO
COMPLETION DATE:		
NAME:		
POSITION:		
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DATE:		

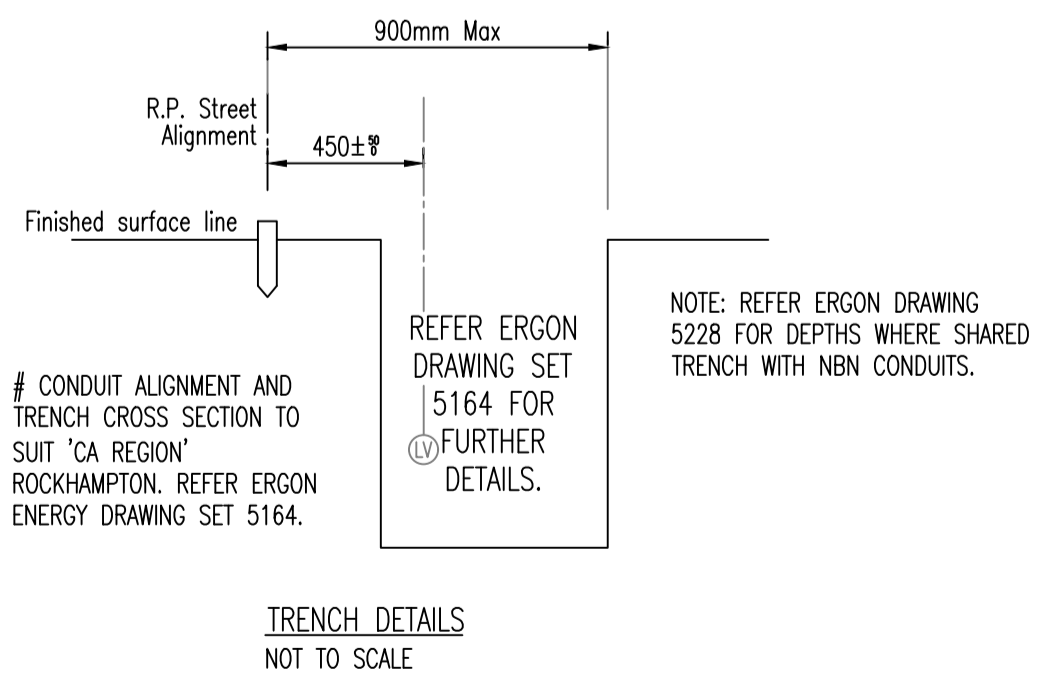
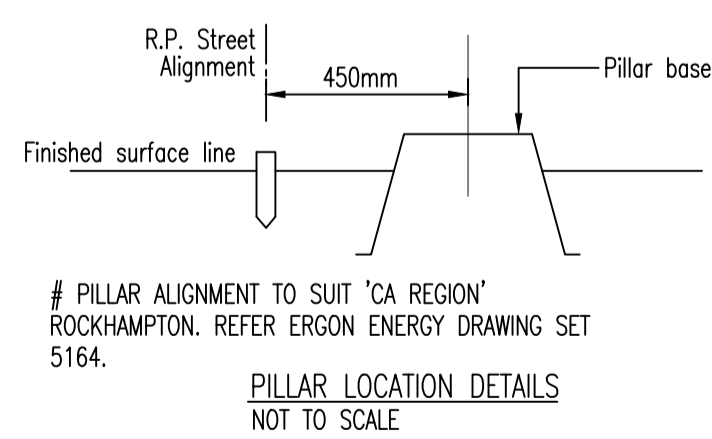
ANDERSON
 CONSULTING ENGINEERS
 GRANT ANDERSON
 RPEQ 4383

LEGEND OF SYMBOLS

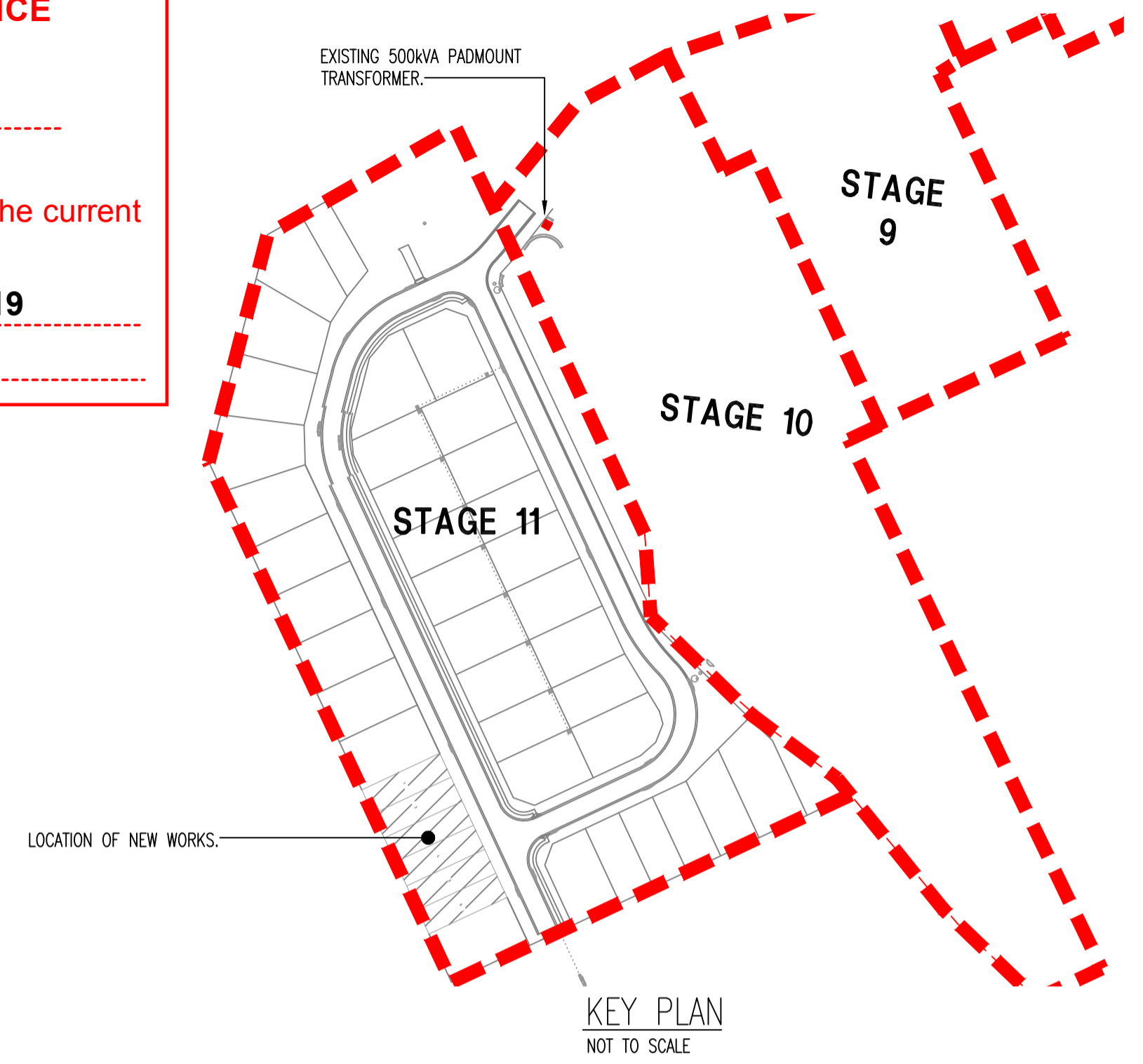
	PROPOSED U/G CONDUIT ROUTE		EXISTING SUBSTATION
	AS CONSTRUCTED U/G CONDUIT ROUTE		NEW STREET LIGHT COLUMN
	STATION NUMBER		AS CONSTRUCTED STREET LIGHT COLUMN
	PROPOSED PILLAR		EARTH
	PROPOSED CROSSROAD PILLAR		NEW STREET LIGHT, POLE AND FOOTING
	PROPOSED LINKING PILLAR		EXISTING STREET LIGHT
	AS CONSTRUCTED PILLAR		E MARKER LOCATIONS
	CONDUIT DUCTING ARRANGEMENT		



PART SITE PLAN
 SCALE 1:500



ROCKHAMPTON REGIONAL COUNCIL
 GENERALLY IN ACCORDANCE
 APPROVED PLANS
 31 July 2019
 DATE
 These plans are approved subject to the current conditions of approval associated with
 Development Permit No.: D/53-2019
 Dated: 22 July 2019



- GENERAL NOTES**
- PROVIDE TRENCHING FOR INSTALLATION OF UNDERGROUND CONDUITS, INSTALLATION OF ROAD LIGHT FOUNDATIONS AND SITE FINISH. INSTALL DRAW WIRES IN ALL CONDUITS FOR PULLING OF FUTURE CABLES.
 - THIS PLAN IS TO BE READ IN CONJUNCTION WITH ERGON ENERGY'S STANDARD DRAWINGS, MANUALS AND SPECIFICATIONS INCLUDING THE FOLLOWING:
 - DISTRIBUTION DESIGN MANUAL.
 - DISTRIBUTION FIELD MANUAL.
 - UNDERGROUND CONSTRUCTION MANUAL.
 - OVERHEAD CONSTRUCTION MANUAL.
 - LIGHTING CONSTRUCTION MANUAL.
 - STANDARD SPECIFICATIONS RSD01, RSC06, RSC07, RSC08, RSC10, RSM01, RSM02.
 - APPROVED MATERIALS TO BE PROVIDED AS PER RSC07 UDC CIVIL WORKS INCLUDE POLYMERIC CABLE PROTECTION COVER, ORANGE WARNING TAPE, CONDUIT/CABLE MARKERS, CONDUITS, ROAD LIGHTING FOUNDATIONS, AND DRAW CORDS. ALL MATERIALS INCLUDING THOSE LISTED IN UDC CIVIL WORKS SHALL BE ERGON ENERGY APPROVED AS PER RSM01 AND RSM02.
 - ELECTRICAL PRE-START MEETING, AUDITS, CABLE INSTALLATION, PILLAR INSTALLATION, CABLE TERMINATING AND JOINTING, ROAD LIGHTING, EQUIPMENT IDENTIFICATION AND NUMBERING, TESTING AND EARTHING SHALL BE AS PER RSC08 UDC ELECTRICAL WORKS AND REFERENCED DOCUMENTS.
 - INSTALLATION AND LOCATIONS OF EQUIPMENT TO BE AS PER ERGON ENERGY'S UNDERGROUND CONSTRUCTION MANUAL (INCLUDING SPECIFIC REGION REQUIREMENTS), AND THE LIGHTING CONSTRUCTION MANUAL.
 - DO NOT SCALE FROM DRAWINGS, SITE MEASURE PRIOR TO ORDERING ANY ITEMS. DIMENSIONS SHOWN ARE IN METERS UNLESS OTHERWISE NOTED.
 - ALL WORK SHALL COMPLY WITH AS3000, AS3008 AND THE ELECTRICITY SAFETY ACT.
 - 100mm DIAMETER UNDERGROUND CONDUIT IS FOR RETICULATION OF LV TO PILLARS. 40mm DIAMETER UNDERGROUND CONDUITS ARE FOR RETICULATION TO STREET LIGHTS AND INTO PROPERTIES. PVC END CAPS SHALL BE INSTALLED ON 40mm DIAMETER UNDERGROUND CONDUITS INTO PROPERTIES FOR FUTURE CONNECTION BY OTHERS.
 - SERVICE PHASES MUST BE BALANCED OVER THREE PHASES CONTINUOUSLY ALONG THE CIRCUIT TO EACH PROPERTY, AND STREET LIGHTS.
 - TRENCHES SHALL BE LEFT OPEN UNTIL COMMUNICATIONS CONTRACTOR HAS INSTALLED CONDUITS AND ASSOCIATED EQUIPMENT. COORDINATE INSTALLATION OF UNDERGROUND COMMUNICATION SERVICES.
 - CONDUIT DEPTHS, ALIGNMENTS & TRENCHING DETAIL REFER 'UNDERGROUND CONSTRUCTION MANUAL' TRENCHING DRAWING 5165. PROVIDE POLYMERIC CABLE PROTECTION COVER IN ACCORDANCE WITH 'UNDERGROUND CONSTRUCTION MANUAL' CONSTRUCTION PRACTICES DRAWING 5124.

UNDERGROUND SERVICES
 UNDERGROUND SERVICES SHOWN ARE INDICATIVE ONLY. CONSTRUCTION CONTRACTOR TO ENSURE THE NOMINATED SITE IS CLEAR OF ANY UNDERGROUND SERVICES PRIOR TO ANY EXCAVATION OR TRENCHING. (DIAL BEFORE YOU DIG. PH: 1100. FAX: 07 3394 4080)

ONSITE SERVICES CHECKS
 UNDERGROUND SERVICES SHOWN ON THIS PLAN IN THE VICINITY OF PROPOSED EXCAVATION ARE INDICATIVE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF DAMAGE TO ANY EXISTING UNDERGROUND ASSETS CAUSED BY HIS WORKS AND THE RE-ESTABLISHMENT OF ANY SURVEY MARKS DISLODGED. THE CONTRACTOR SHALL REQUEST ON SITE IDENTIFICATION AND LOCATION OF EXISTING UNDERGROUND SERVICES FROM THE QUEENSLAND DIAL BEFORE YOU DIG SERVICE. PH: 1100. FAX: 07 3394 4080. A MINIMUM OF TWO DAYS NOTICE IS NORMALLY REQUIRED.

STREET LIGHTING NOTES

- OUTREACHS SHALL BE AT RIGHT ANGLES TO THE CARRIAGEWAY UNLESS SHOWN OTHERWISE.
- ALL LUMINAIRES SHALL BE FITTED WITH INDIVIDUAL PHOTOCELL AS SPECIFIED BY ERGON.
- OBTAIN PRIOR APPROVAL FROM OVERSEEING ORGANISATION (ERGON/RRC) BEFORE SWITCHING ON OR OFF, DISMANTLING, REPLACING OR REMOVING ANY LIGHTING UNITS.
- AFTER INSTALLATION AND ENERGISING OF NEW LUMINAIRES PROVIDE SPILL LIGHT/GLARE SHIELDS AS REQUIRED TO MINIMISE ANNOYANCE TO PROPERTIES.

STREET LIGHTING CERTIFICATION
 DESIGN METHOD: ILLUMINANCE BASED, AS/NZS 1158.3.1: 2005. UPGRADE ANGLE: 5°
 COMPUTER PROGRAM: PERFECT LITE. PUBLIC LIGHTING RATING: RATE 2.
 LIGHTING CATEGORY: P3 & P4 AS/NZS 1158.3.1: 2005.
 THE LIGHTING DESIGN IS BASED UPON THE FOLLOWING MAINTENANCE SCHEDULE:
 • LAMP REPLACEMENT AT 48 MONTH INTERVALS INCLUDING CLEANING AND INSPECTION OF LUMINAIRE.
 • LAMP REPLACEMENT TO MAINTAIN SERVICE AVAILABILITY AT MINIMUM 95%.
 • LUMINAIRES AND LAMPS TO BE REPLACED WITH EXACT EQUIVALENTS.

FOR APPROVAL

GENERAL NOTES:
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Date	Rev	Details	App

A1

ERGON WRN: 1493705
 Developer: Keppel Developments Pty Ltd

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 ACN 112 066 529 ABN 98 112 066 529

Project: **CRESTWOOD ESTATE NORMAN GARDENS.**
 3 INTO 6 LOT SUBDIVISION.
 GEOFF WILSON DRIVE.

Title: **ELECTRICAL SERVICES**
 NOTES, PART SITE PLAN.
 LEGEND OF SYMBOLS.

Drawn: RAP	Designed: JPM
Date: JULY 19	Approved: G.A.
Scale: 1:500	No. 1 of 2
Drawing No: 19134-E001	Rev: A

CONSTRUCTION SCHEDULE						
STN NO	SITE LABEL	ACTION	CONSTRUCTION CLASS	CONSTRUCTION CODE	DRAWING NUMBER	REMARKS
1	11136098	EXISTING	PILLAR-2WAY	LVPK2/6/240	5026	ERGN TO UPGRADE TO 3 WAY PILLAR
2	11136082	REMOVE	PILLAR-CROSSROADASL	LVPK/65/16CU	5041	ERGN TO REMOVE OR ISOLATE FOR REMOVAL OF EXISTING CROSSROAD PILLAR AND CONNECT NEW CONDUIT
3	-	INSTALL	PILLAR-2WAYKSL	LVPK2/65/240	5026	
4	11136111	EXISTING	COLUMN-MINOR	SLBPM/75/1/15/C1	1-6-4-2	REROUTE SUPPLY TO NEW PILLAR
5	-	INSTALL	PILLAR-CROSSROAD	LVPK/6/16CU	5041	
6	-	INSTALL	PILLAR-1WAY	LVPK1/6/240	5025	
6	-	INSTALL	PILLAR EARTH	EMIN/PIL	5085	

UNDERGROUND CABLE SCHEDULE - LV							
STN FROM	STN TO	ACTION	VOLTAGE	CONSTRUCTION CODE	ROUTE LENGTH (m)	CABLE LENGTH (m)	REMARKS
1	2	REMOVE	415V	LV-16CUCA/614	20.0	24.0	ISOLATION AND REMOVAL BY ERGN
1	3	INSTALL	415V	LV-240CA/673	29.5	33.5	
3	4	INSTALL	240V	LV-4CUNS/1671	14.0	18.0	
3	5	INSTALL	415V	LV-16CUCA/614	20.0	24.0	
3	6	INSTALL	415V	LV-240CA/673	20.0	24.0	

LIAISE WITH ERGN FOR FINAL CONNECTION TO EXISTING PILLARS, AND TERMINATION AT EXISTING TRANSFORMER ETC.

CONDUIT DUCTING SCHEDULE - LV						
STN FROM	STN TO	ACTION	CONSTRUCTION CODE	LENGTH (m)	BENDS	REMARKS
2	3	INSTALL	C100L	10.0	1x45°1200R, 1x45°1830R	CONNECT TO EXISTING CROSSROAD CONDUIT WHERE CROSSROAD PILLAR IS TO BE REMOVED.
3	5	INSTALL	C100L	20.0	2x90°450R	
3	6	INSTALL	C100L	20.0	2x45°1200R	

PROVIDE 90°300R 40mm DIAM HD SERVICE CONDUITS INTO THE PROPERTY BOUNDARIES FROM PILLARS (NOT LISTED IN CONDUIT DUCTING SCHEDULE ABOVE).
INSTALL ORANGE CAUTION TAPE AND POLYMERIC CABLE PROTECTION COVER AS SHOWN ON DRAWINGS IN UNDERGROUND CONSTRUCTION MANUAL.

CONDUIT AND CABLE LENGTHS ARE MEASURED USING AUTOCAD AND ROUNDED UP. THEREFORE LENGTHS ARE APPROXIMATE ONLY. EXACT LENGTHS SHOULD BE MEASURED ON SITE PRIOR TO COMMENCING WORK.

INSTALL HARD COVER PROTECTION OVER ALL CONDUITS OUTSIDE ERGN STANDARD ALIGNMENT.

ERGN COMMUNICATIONS CONDUIT SHOWN ON ERGN DUCTING ARRANGEMENT DRAWING IS NOT REQUIRED.

NOTE: PROVIDE LABELING DETAILS PROPOSED FOR REVIEW PRIOR TO ORDERING AND INSTALLATION. LABELS SHALL BE MADE FROM UV TREATED OUTDOOR PLASTIC (TRAFOLYTE) AND CORRECTLY FIXED TO SWITCH, FUSE, CABLES, ETC. CONFIRM ROAD NAMES PRIOR TO ORDERING OR MANUFACTURE. LABEL TEXT SIZE SHALL BE CLEAR AND AS LARGE AS PRACTICAL FOR LABEL SIZE TO SUIT TYPE/LOCATION.

ON JOB COMPLETION MARK UP THIS PRINT CLEARLY WITH ALL FIELD CHANGES AND RETURN TO NETWORK DATA GROUP FOR YOUR REGION.

CHANGES: YES / NO

COMPLETION DATE: _____

NAME: _____

POSITION: _____

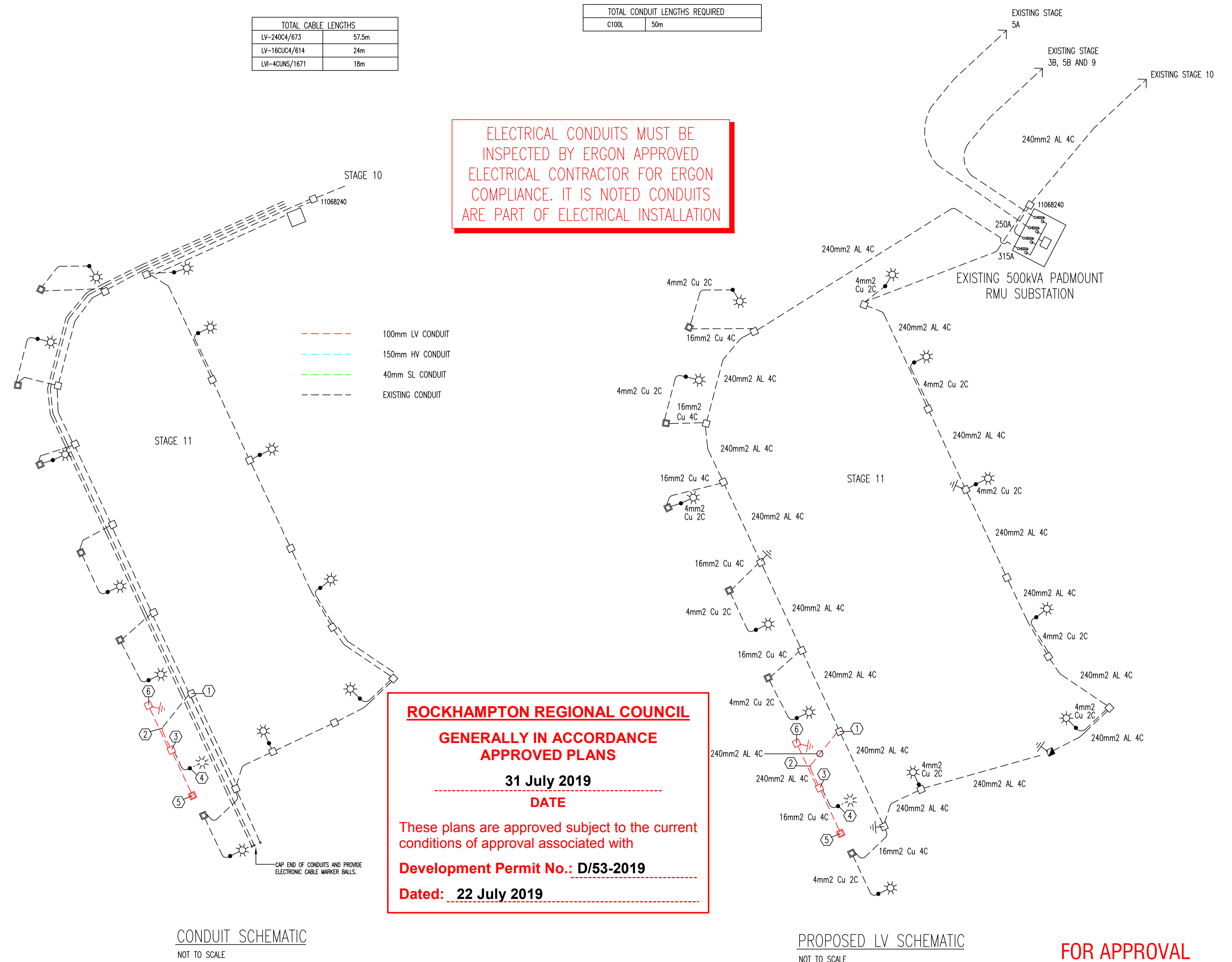
SIGNATURE: _____

DATE: _____

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CONSULTING ENGINEERS
GRANT ANDERSON
RPEQ 4383

TOTAL CABLE LENGTHS	
LV-240CA/673	57.5m
LV-16CUCA/614	24m
LV-4CUNS/1671	18m

TOTAL CONDUIT LENGTHS REQUIRED	
C100L	50m



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CONDUIT SCHEMATIC
NOT TO SCALE

PROPOSED LV SCHEMATIC
NOT TO SCALE

FOR APPROVAL

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Date	Rev	Details	App

ERGN WRN: 1493705
Developer: Keppel Developments Pty Ltd

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ACN 112 066 529 ABN 98 112 066 529

Project: **CRESTWOOD ESTATE NORMAN GARDENS**
3 INTO 6 LOT SUBDIVISION.
GEOFF WILSON DRIVE.

Title: **ELECTRICAL SERVICES SCHEDULES.**

Drawn: RAP	Designed: JPM
Date: JULY 19	Approved: G.A.
Scale: N.T.S.	No. 2 of 2
Drawing No: 19134-E002	
Rev: A	