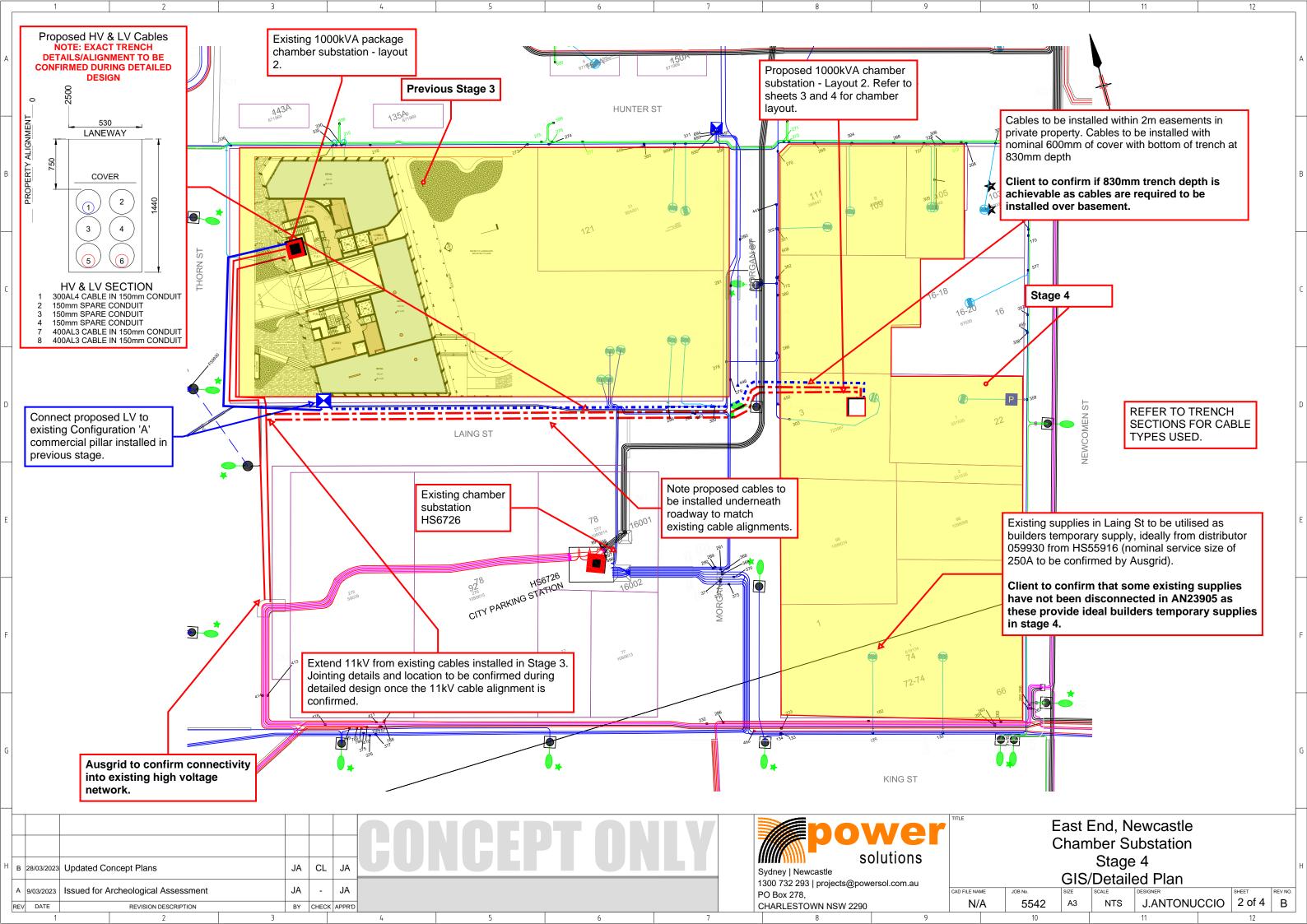
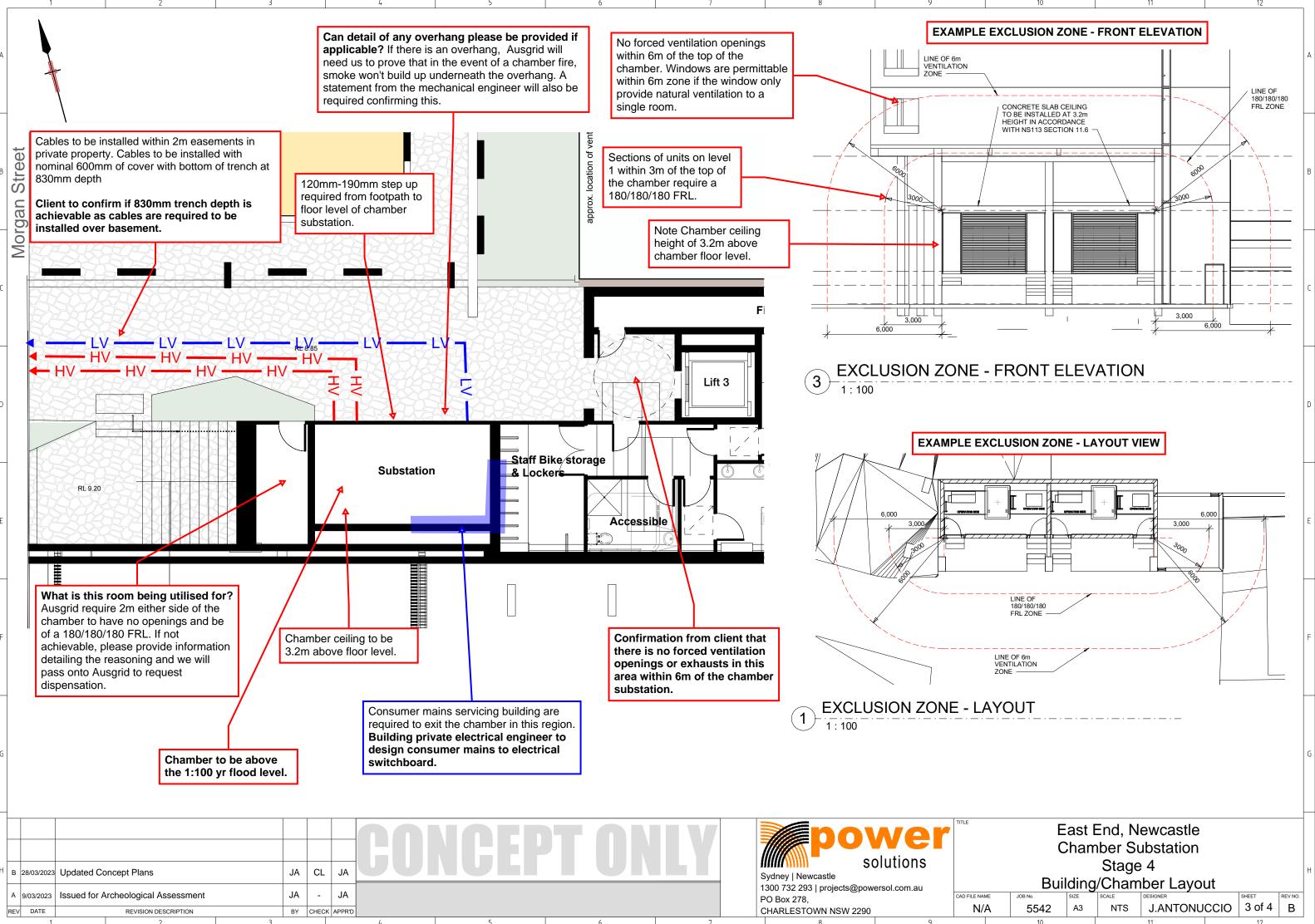
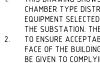


East End, Newcastle Chamber Substation Stage 4								
Layout Plan								
JOB No.	SIZE	SCALE	DESIGNER		SHEET	REV NO.		
5542	A3	NTS	J.ANTONU	CCIO	1 of 4	В		
10 11 12								



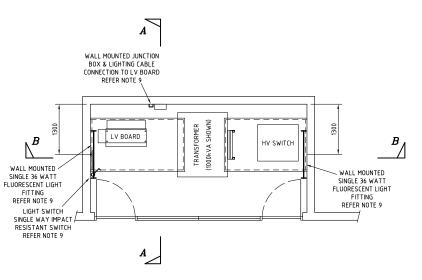






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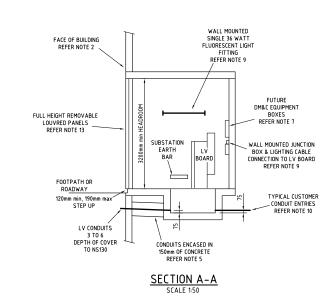
- THE LV BOARD
- TERMINATE IN THE BOX'S TERMINAL BLOCK. 10
- 11 TYPICAL ONLY
- 12.
- EQUAL WIDTH. 13.
- 14. PIT EDGES

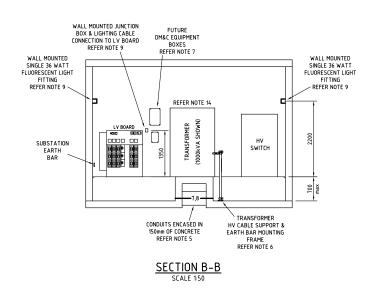


PLAN SHOWING LIGHT AND POWER LAYOUT SCALE 1:50

REFERENCE DRAWINGS EARTH ROD INSTALLATION 25121 REFER NOTE 1 DETAILS OF WEATHERPROOF LOUVRED DOORS 43140 CONSTRUCTION DETAILS - MISCELLANEOUS 48008 HV CABLE SUPPORT MOUNTING STAND 162655 REFER NOTE 6 REFER NOTE 4 HV PIT CONSTRUCTION AND SUPPORT STEELWORK 191085 INSTALLATION OF SIEMENS 8DJH RTR (RMI) 234377 INSTALLATION OF ABB SAFELINK 2 224420







A

LV PIT

. 200mm

CENTRES

PLAN SHOWING PIT & CONDUIT LAYOUT

SCALE 1:50

100mm x 75mm x 5mm UA BEAM SUPPORTING ANGLE FOR SWITCHGEAR SUPPORTING CHANNEL NOT TO BE IN THESE AREAS

120mm min, 190mm ma: STEP UP WITH - 40mm x 40mm x 6mm GALV MS ANGLE NOSIN REFER DWG 48008

00mm max DEE REFER NOTE 4

40mm x 40mm x 6mm GALV MS ANGLE FIXED TO WALL TO SUPPORT FLOOR PLATE

TYPICAL LOCATION OF

EARTH RODS REFER NOTE 11

HV CONDUITS 1 & 2 DEPTH OF COVER TO NS130

Б

RANGE OF ACCEPTABLE

CUSTOMER CONDUI ENTRIES

B

LV CONDUITS

DEPTH OF COVER TO NS130

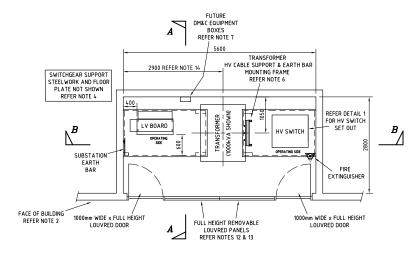
EXTRACT FROM AUSGRID

DRG224408_01r04

100mm x 75mm x 5mm _______ 150 UA BEAM SUPPORTING ANGLE FOR SWITCHGEAR SUPPORTING CHANNEL NOT TO BE IN THESE AREAS

40mm x 40mm x 6mm GALV MS ANGLE FIXED TO WALL TO SUPPORT FLOOR PLATE

2 x 38mm GI PIPES FOR EARTHING CABLES IF SUSPENDED FLOOR SLAB



PLAN SHOWING EQUIPMENT LAYOUT SCALE 1:50





ABB SAFELINK



SIEMENS 8DJH RTR

DFTAIL 1 H١

EQUIPMENT TABLE REFER NOTE 1							
NAME	ТҮРЕ	WEIGHT	STOCKCODE				
HV SWITCH	SIEMENS 8DJH RTR WITH INTEGRATED EFI	360kg	185192				
nv Swiich	ABB SAFELINK 2 WITH INTEGRATED EFI	280kg	184921				
TRANSFORMER	750kVA	3400kg	180357				
TRANSFURMER	1000kVA	4000kg	180358				
LV BOARD	SAIF CHAMBER TYPE	210kg	181790 TO 181793, 181834 & 181835				

DETAIL									ADD SAFLEINK Z WITTEINTEGRATED ETT	200Kg	104
	<u>HV SWITCH SET OUT</u>								750kVA	3400kg	180
			SCALE 1:50					TRANSFORMER	1000kVA	4000kg	1803
								LV BOARD	SAIF CHAMBER TYPE	210kg	1817
┦							1				
┝											
╞											
4	B 28	8/03/2023	Updated Concept Plans	JA	SG	JA					

	B 28/03/20	23 Updated C	pdated Concept Plans			SG	JA			
	A 9/03/202	Issued for Archeological Assessment			JA	-	JA			
R	EV DATE		REVISION DESCRIPTION		BY	CHECK	APPR'D			
		1	2 3					4	5	6

10 11	12
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THIS DRAWING SHOWS THE LAYOUT OF EQUIPMENT FOR A STANDARD SINGLE 750 OR 1000kVA TRANSFORMER SURFACE CHAMBER TYPE DISTRIBUTION SUBSTATION AND UTILISES THE EQUIPMENT SHOWN IN THE EQUIPMENT TABLE ONLY. FOUIPMENT SELECTED FROM THE OPTIONS SHOWN IN THE FOUIPMENT TABLE MUST BE SHOWN ON THE DESIGN PLAN FOR THE SUBSTATION. THE DRAWING MUST BE READ IN CONJUNCTION WITH NETWORK STANDARDS 113 AND 114.

TO ENSURE ACCEPTABLE TRANSFORMER VENTILATION, THE SUBSTATION CHAMBER MUST BE LOCATED ON THE OUTSIDE FACE OF THE BUILDING, ADJACENT TO A SUITABLE ROADWAY AND NOT BEHIND FENCING. PARTICULAR ATTENTION MUST BE GIVEN TO COMPLYING WITH NETWORK STANDARD REQUIREMENTS ASSOCIATED WITH FIRE RATING AND VENTILATION SEPARATION OF THE BUILDING SURROUNDING THE SUBSTATION VENTILATION LOUVRES.

BOTH THE HV AND LV PITS AND THEIR ASSOCIATED STEELWORK ARE CONSTRUCTED TO THE DETAILS SHOWN ON DRAWING 191085 BUT TO THE DEPTHS SHOWN ON THIS DRAWING.

IF THE SUBSTATION FLOOR IS OF SUSPENDED CONSTRUCTION OR CONDUITS ARE CONTAINED IN A VOID UNDER THE SUBSTATION FLOOR, ALL CONDUITS ARE REQUIRED TO BE ENCASED IN 150mm OF CONCRETE FOR THEIR ENTIRE RUN. THE HV CABLE SUPPORT BRACKET IS TO BE CONSTRUCTED TO THE DETAILS FOR THE NON CT SUPPORT BRACKET SHOWN ON DRAWING 162655 BUT WITH THE LEGS EXTENDED TO THE PIT FLOOR AND THE FOOT DELETED. THE EXTENDED LEGS ARE TO THE FIXED TO THE PIT WALL WITH UNISTRUT SADDLES. SADDLES ARE TO BE 150mm BELOW THE FINISHED SUBSTATION FLOOR LEVEL AND 150mm ABOVE THE PIT FLOOR.

DM&C EQUIPMENT MAY BE FITTED TO THE SUBSTATION BY AUSGRID AFTER COMMISSIONING.

GENERAL POWER FOR THE CHAMBER IS PROVIDED BY A 240 VOLT SINGLE PHASE DOUBLE OUTLET WHICH IS PART OF

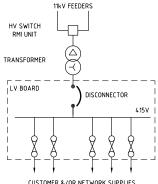
SINGLE 36 WATT FLUORESCENT BATTENS ARE TO BE FITTED IN THE POSITIONS SHOWN. THEY ARE TO BE POWERED FROM THE 240 VOLT OUTLET ON THE LV BOARD VIA AN IMPACT RESISTANT SINGLE WAY LIGHT SWITCH IN THE POSITION SHOWN. LIGHTING POWER IS TO BE WIRED VIA SOLID UPVC CONDUIT TO THE JUNCTION BOX SHOWN. THE JUNCTION BOX IS TO BE A CLIPSAL 265 SERIES OR SIMILAR AND IS TO BE PROVIDED WITH A SUITABLE CABLE TERMINAL BLOCK, A DOUBLE INSULATED 3 CORE CABLE IS TO BE PROVIDED FROM THE JUNCTION BOX TO THE POWER OUTLET ON THE LV BOARD. THE LV BOARD END OF THE CABLE IS TERMINATE IN A 3 PIN PLUG WHILST THE JUNCTION BOX END IS TO

TRANSFORMER LV AND CUSTOMER CABLES SHOULD BE ARRANGED SUCH THAT CROSSINGS ARE MINIMISED AND CABLE BENDING RADII IS NOT EXCEEDED . ALL USED AND UNUSED CUSTOMER'S CONDUITS ARE TO BE FIRE STOPPED AS INDICATED IN NETWORK STANDARD 177 AFTER THE INSTALLATION OF THE CUSTOMERS CABLES. THE EXACT LOCATION AND NUMBER OF CUSTOMER CONDUITS IS TO BE SHOWN ON PROJECT DESIGN PLANS.

AN EARTHING DESIGN IS REQUIRED FOR EACH SITE. THE LOCATION OF EARTH RODS SHOWN ON THIS DRAWING ARE

THE AREA BETWEEN THE LOUVRED DOORS IS TO BE FILLED WITH TWO FULL HEIGHT REMOVABLE LOUVRED PANELS OF

LOUVRED DOORS AND REMOVABLE PANELS SHOULD NOT EXCEED 3500mm IN HEIGHT. ANY AREA ABOVE THE MAXIMUM 3500mm SHOULD BE FILLED WITH REMOVABLE LOUVRED PANELS. THE LOCATION OF THE TRANSFORMER IS TO BE ADJUSTED SO THAT THE WHEELS ARE EQUALLY SPACED FROM BOTH

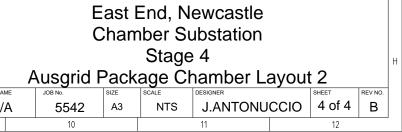


REFER TO RELEVANT NETWORK SUPPLIES & EQUIPMENT TABLE FOR ACCEPTABLE COMBINATIONS

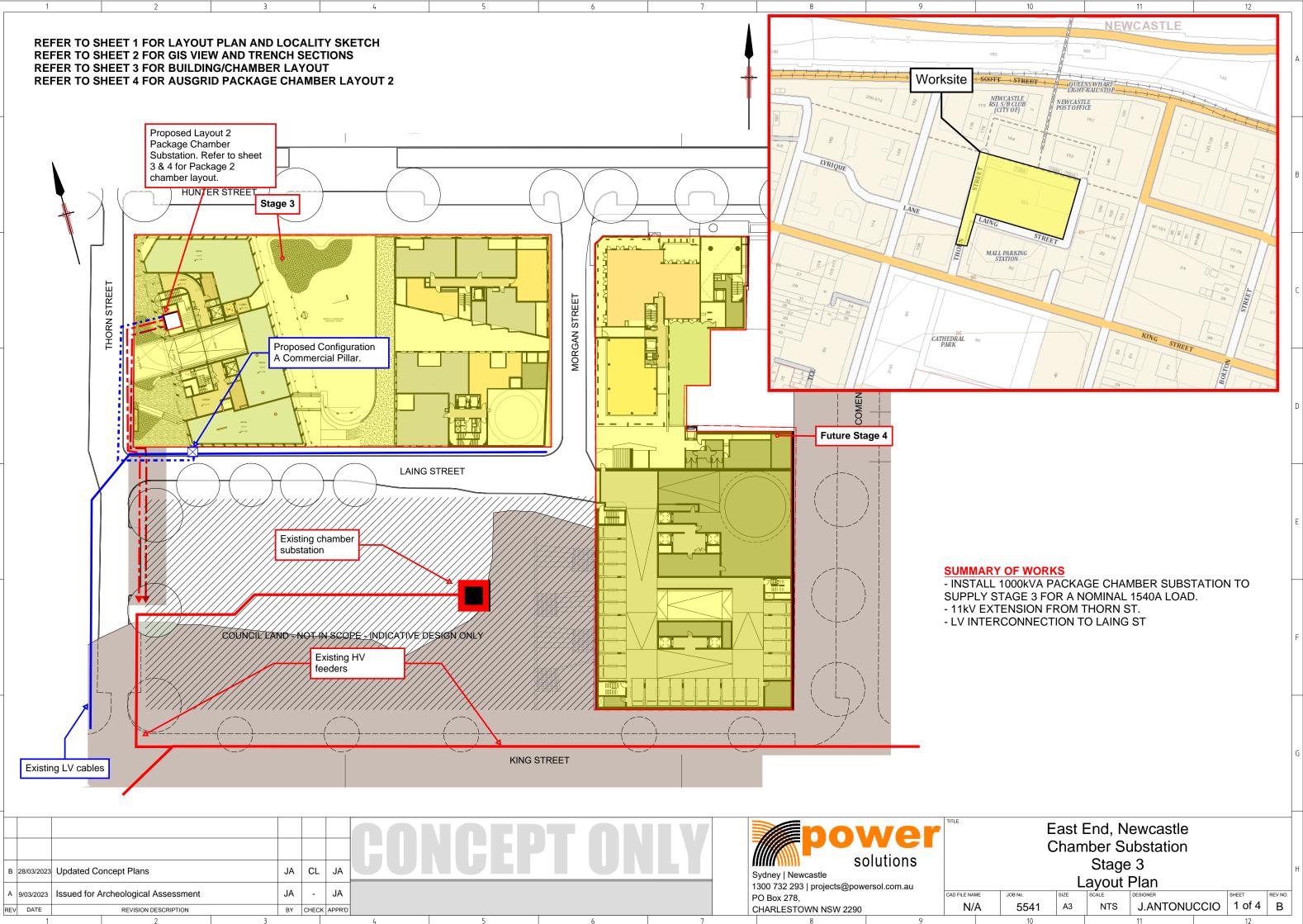
LINE DIAGRAM

NOT TO SCALE

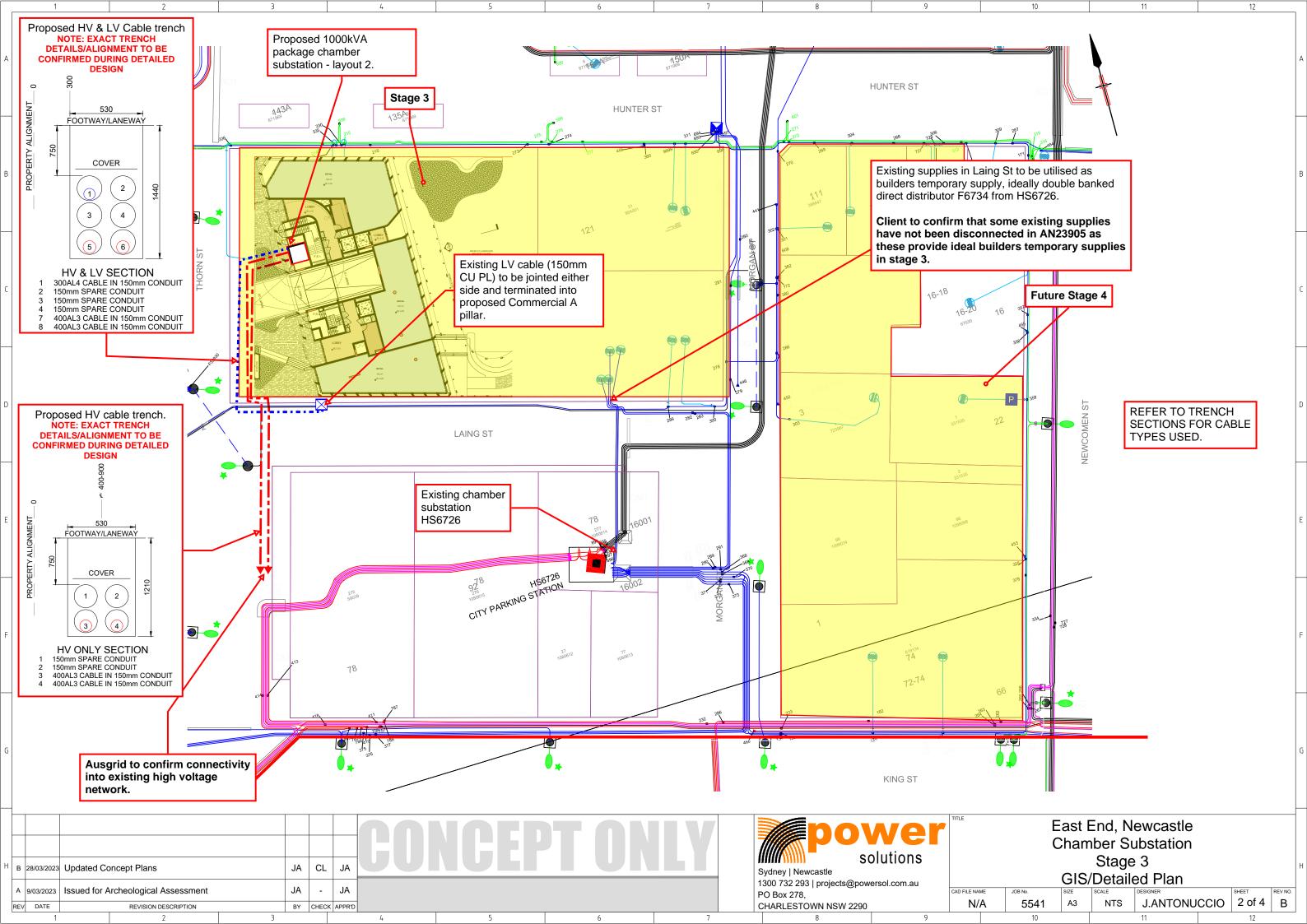
CONDUIT SCHEDULE										
NUMBER	DIAMETER	MATERIAL	RADIUS mm BEND	FUNCTION						
1-2	125	UPVC	1000	HV FEEDERS						
3-6	125	UPVC	1000	LV NETWORK DISTRIBUTORS						
7	100	UPVC	1000	EARTHING						
8	100	UPVC	1000	FUTURE DM&C						

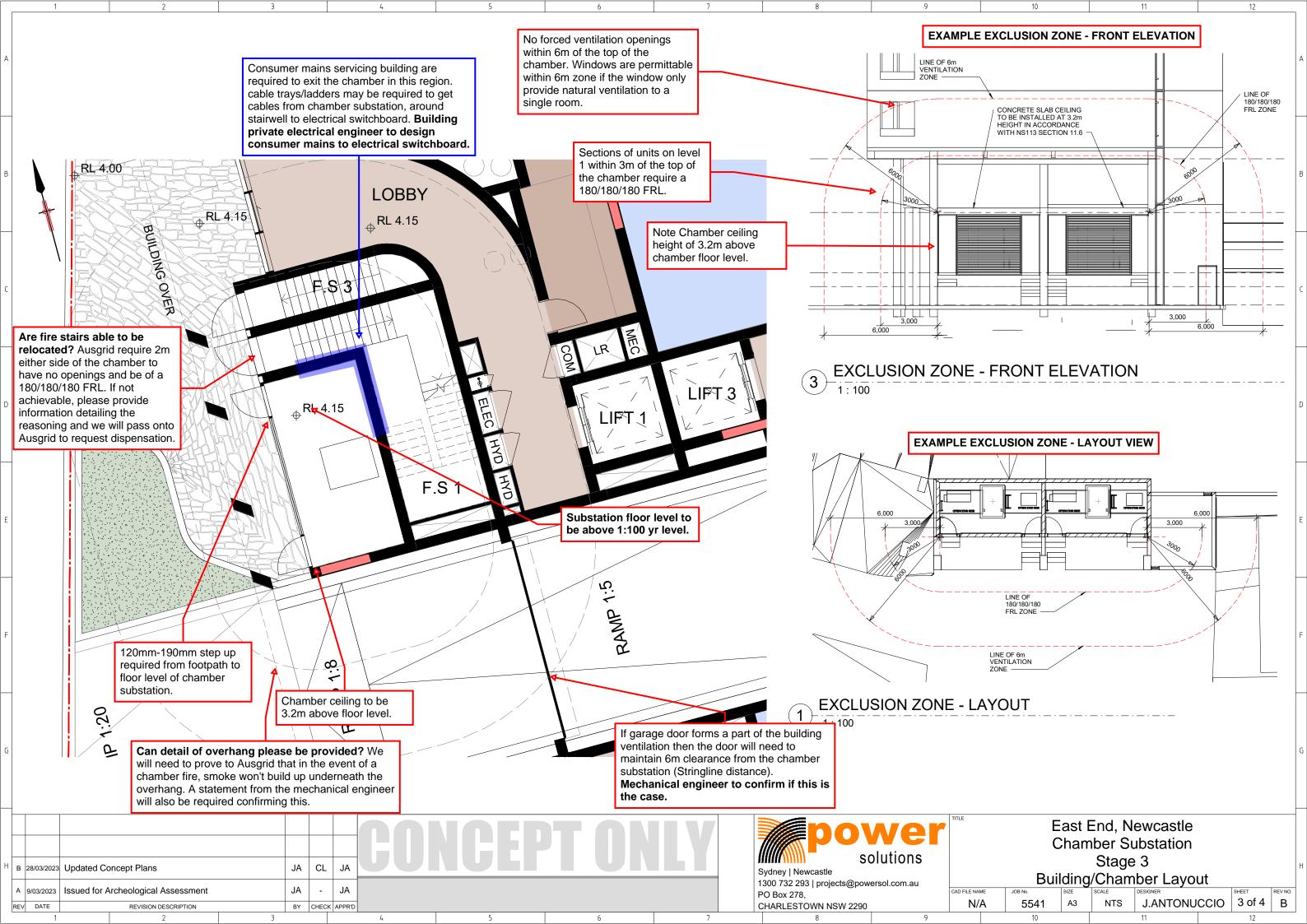




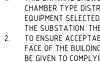


East End, Newcastle Chamber Substation Stage 3 Layout Plan							н		
JOB No.	SIZE	SCALE	DESIGNER		SHEET	REV NO.	1		
5541	A3	NTS	J.ANTONU	CCIO	1 of 4	В			
10			11		. 12				



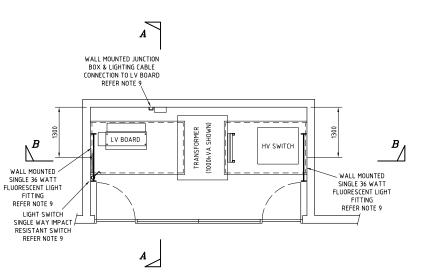






- ALL DIMENSIONS SHOWN ARE FINISHED SIZES.

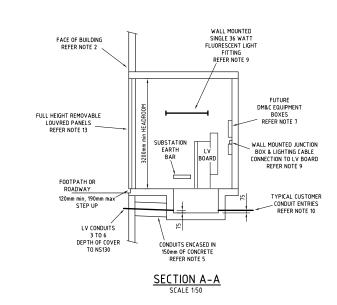
- THE LV BOARD
- TERMINATE IN THE BOX'S TERMINAL BLOCK. 10
- 11 TYPICAL ONLY
- 12.
- EQUAL WIDTH. 13.
- 14. PIT EDGES

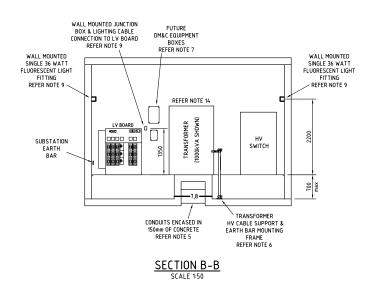


PLAN SHOWING LIGHT AND POWER LAYOUT SCALE 1:50

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A

LV PIT

. 200mm

EQUIPMENT TABLE REFER NOTE 1

WEIGHT

360kg 185192

184921 280ka

STOCKCODE

CENTRES

PLAN SHOWING PIT & CONDUIT LAYOUT

SCALE 1:50

100mm x 75mm x 5mm UA BEAM SUPPORTING ANGLE FOR SWITCHGEAR SUPPORTING CHANNEL NOT TO BE IN THESE AREAS

120mm min, 190mm ma: STEP UP WITH - 40mm x 40mm x 6mm GALV MS ANGLE NOSIN REFER DWG 48008

00mm max DEE REFER NOTE 4

40mm x 40mm x 6mm GALV MS ANGLE FIXED TO WALL TO SUPPORT FLOOR PLATE

TYPICAL LOCATION OF EARTH RODS REFER NOTE 11

HV CONDUITS 1 & 2 DEPTH OF COVER TO NS130

RANGE OF ACCEPTABLE

CUSTOMER CONDUI ENTRIES

B

LV CONDUITS

DEPTH OF COVER TO NS130

EXTRACT FROM AUSGRID

DRG224408_01r04

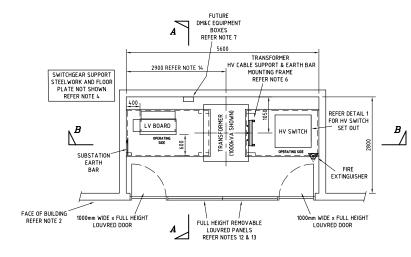
NAME

HV SWITCH

100mm x 75mm x 5mm _______ 150 UA BEAM SUPPORTING ANGLE FOR SWITCHGEAR SUPPORTING CHANNEL NOT TO BE IN THESE AREAS

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2 x 38mm GI PIPES FOR EARTHING CABLES IF SUSPENDED FLOOR SLAB



PLAN SHOWING EQUIPMENT LAYOUT SCALE 1:50



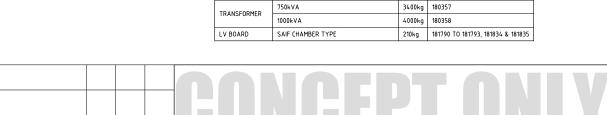
OPERATING

ABB SAFELINK



SIEMENS 8DJH RTR





TYPE

SIEMENS 8D IH RTR WITH INTEGRATED FE

ABB SAFELINK 2 WITH INTEGRATED EFI

JA CL JA B 28/03/2023 Updated Concept Plans JA JA A 9/03/2023 Issued for Archeological Assessment -REV DATE REVISION DESCRIPTION BY CHECK APPR'D

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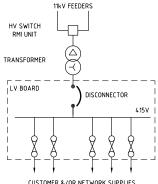
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LINE DIAGRAM

NOT TO SCALE

CONDUIT SCHEDULE										
NUMBER	DIAMETER	MATERIAL	RADIUS mm BEND	FUNCTION						
1-2	125	UPVC	1000	HV FEEDERS						
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7	100	UPVC	1000	EARTHING						
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