

ABOVE: RAA EV CHARGING NETWORK MAP



616x2000x214 (WxHxD)

7.2kW AC CHARGER[1off]



1300x2150x825mm (WxHxD)

TIER 1 ULTRA-RAPID DC CHARGER[1off]



280x1520x280 (WxHxD)

SATELLITE [2 off]

TIER 1 - SATELLITE CHARGER POST 1
CHADEMO/CSS2 PLUGS [1off]

TIER 1 - SATELLITE CHARGER POST 2&3
CSS2/CSS2 PLUGS [2off]

DRAWING LIST

- SHEET 1: Cover Sheet
- SHEET 2: Car Park Site Layout
- SHEET 3: Elevation
- SHEET 4: Typical DC site layout
- SHEET 5: Line Marking

REV	DESCRIPTION	BY	DATE	CHK	APPD
B	UPDATED NOTES, ETC	BD	11/12/2023	JM	BD
A	ISSUED FOR REVIEW	AK	24/07/23	AK	AK

NOTE:
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DIMENSIONS, AREA AND NUMBER OF LOTS SHOWN ARE APPROXIMATE ONLY AND MAY VARY. THE ELECTRICAL DESIGN SHOWN MAY BE SUBJECT TO VARIATION DEPENDING ON SITE CONDITION & COMPONENT AVAILABILITY DURING INSTALLATION.
RAA CLAIM COPYRIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED IN CONFIDENCE FOR ENGINEERING INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT THE DIRECT PERMISSION OF RAA.

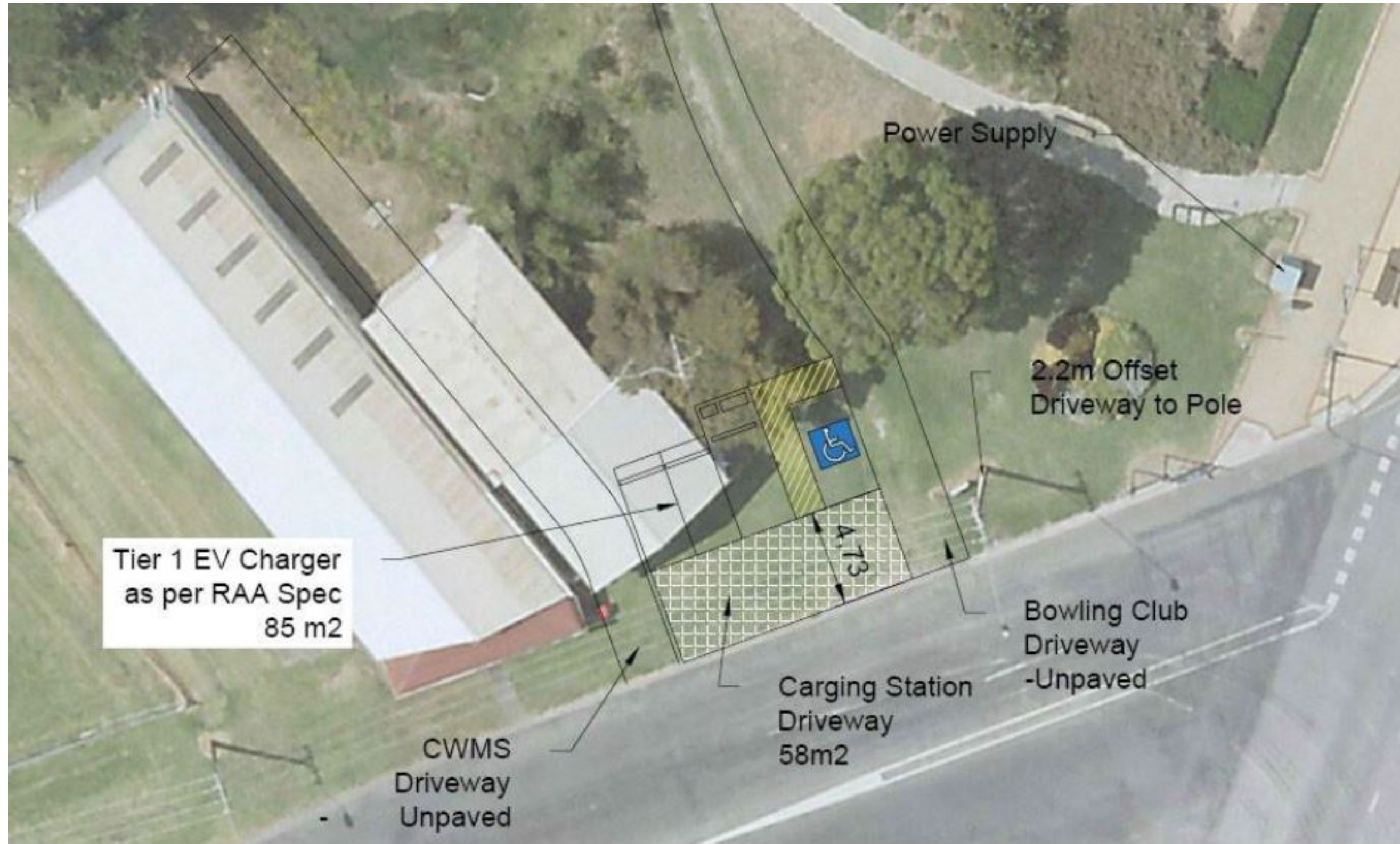
RAA Innovation Pty Ltd
101 Richmond Road, Mile End SA 5031
raa.com.au

PROJECT NAME	RAA SA EV DC CHARGING PROJECT
SHEET TITLE	COVER SHEET
DRAWN BY	AK 24/07/2023
CHECKED	JT 10/03/2023
APPROVAL	JT 10/03/2023
SCALE	NTS

DRG. NO.	2010-DRG-142
DRAWING TITLE	RAA EV DC CHARGING
A1	SHEET 1

B	
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Site 121 - MENINGIE



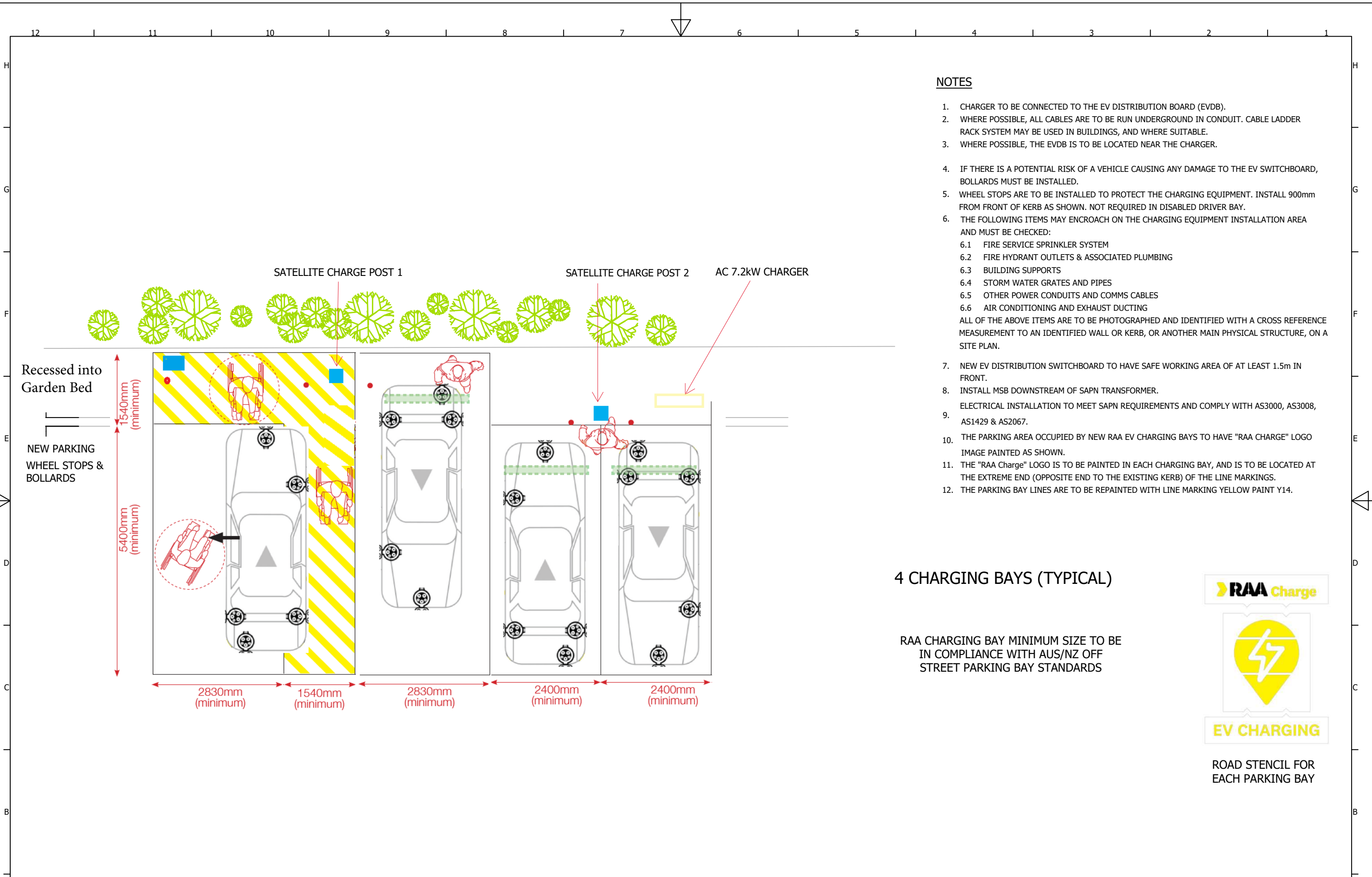
				NOTE: THE INTENTION OF THIS DOCUMENT IS TO PROVIDE ELECTRICAL CONCEPT REQUIREMENTS.		 RAA RAA Innovation Pty Ltd 101 Richmond Road, Mile End SA 5031 raa.com.au		PROJECT NAME RAA SA EV DC CHARGING PROJECT		DRG. NO. 2010-DRG-142	
B UPDATED NOTES, ETC				BD	11/12/23	JM	BD	SHEET TITLE SITE 121 - MENINGIE SITE LAYOUT		DRAWING TITLE RAA EV DC CHARGING	
A Issued for Review				AK	05/08/23			SCALE NTS		A1 SHEET 2 B	
REV	DESCRIPTION	BY	DATE	CHK	APPD	<small>RAA CLAIM COPYRIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED IN CONFIDENCE FOR ENGINEERING INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT THE DIRECT PERMISSION OF RAA.</small>					

Site 121 - MENINGIE



				<small>NOTE: THE INTENTION OF THIS DOCUMENT IS TO PROVIDE ELECTRICAL CONCEPT REQUIREMENTS.</small>				<small>PROJECT NAME</small> RAA SA EV DC CHARGING PROJECT		<small>DRG. NO.</small> 2010-DRG-142	
<small>B</small> UPDATED NOTES, ETC				<small>BD</small> 11/12/23		<small>AK</small> 31/07/2023		<small>SHEET TITLE</small> SITE 121 - MENINGIE SITE ELEVATION		<small>DRAWING TITLE</small> RAA EV DC CHARGING	
<small>A</small> Issued for Review				<small>AK</small> 05/08/23		RAA Innovation Pty Ltd 101 Richmond Road, Mile End SA 5031 raa.com.au		<small>SCALE</small> NTS		<small>A1</small> SHEET 3	
<small>REV</small> DESCRIPTION				<small>BY</small>		<small>DATE</small>		<small>CHK</small>		<small>APPD</small>	

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- NOTES**
- CHARGER TO BE CONNECTED TO THE EV DISTRIBUTION BOARD (EVDB).
 - WHERE POSSIBLE, ALL CABLES ARE TO BE RUN UNDERGROUND IN CONDUIT. CABLE LADDER RACK SYSTEM MAY BE USED IN BUILDINGS, AND WHERE SUITABLE.
 - WHERE POSSIBLE, THE EVDB IS TO BE LOCATED NEAR THE CHARGER.
 - IF THERE IS A POTENTIAL RISK OF A VEHICLE CAUSING ANY DAMAGE TO THE EV SWITCHBOARD, BOLLARDS MUST BE INSTALLED.
 - WHEEL STOPS ARE TO BE INSTALLED TO PROTECT THE CHARGING EQUIPMENT. INSTALL 900mm FROM FRONT OF KERB AS SHOWN. NOT REQUIRED IN DISABLED DRIVER BAY.
 - THE FOLLOWING ITEMS MAY ENCROACH ON THE CHARGING EQUIPMENT INSTALLATION AREA AND MUST BE CHECKED:
 - FIRE SERVICE SPRINKLER SYSTEM
 - FIRE HYDRANT OUTLETS & ASSOCIATED PLUMBING
 - BUILDING SUPPORTS
 - STORM WATER GRATES AND PIPES
 - OTHER POWER CONDUITS AND COMMS CABLES
 - AIR CONDITIONING AND EXHAUST DUCTING
 ALL OF THE ABOVE ITEMS ARE TO BE PHOTOGRAPHED AND IDENTIFIED WITH A CROSS REFERENCE MEASUREMENT TO AN IDENTIFIED WALL OR KERB, OR ANOTHER MAIN PHYSICAL STRUCTURE, ON A SITE PLAN.
 - NEW EV DISTRIBUTION SWITCHBOARD TO HAVE SAFE WORKING AREA OF AT LEAST 1.5m IN FRONT.
 - INSTALL MSB DOWNSTREAM OF SAPN TRANSFORMER.
 - ELECTRICAL INSTALLATION TO MEET SAPN REQUIREMENTS AND COMPLY WITH AS3000, AS3008, AS1429 & AS2067.
 - THE PARKING AREA OCCUPIED BY NEW RAA EV CHARGING BAYS TO HAVE "RAA CHARGE" LOGO IMAGE PAINTED AS SHOWN.
 - THE "RAA Charge" LOGO IS TO BE PAINTED IN EACH CHARGING BAY, AND IS TO BE LOCATED AT THE EXTREME END (OPPOSITE END TO THE EXISTING KERB) OF THE LINE MARKINGS.
 - THE PARKING BAY LINES ARE TO BE REPAINTED WITH LINE MARKING YELLOW PAINT Y14.

4 CHARGING BAYS (TYPICAL)

RAA CHARGING BAY MINIMUM SIZE TO BE IN COMPLIANCE WITH AUS/NZ OFF STREET PARKING BAY STANDARDS



ROAD STENCIL FOR EACH PARKING BAY

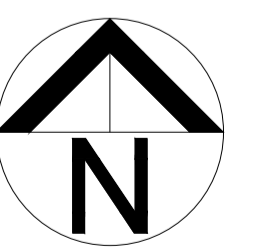
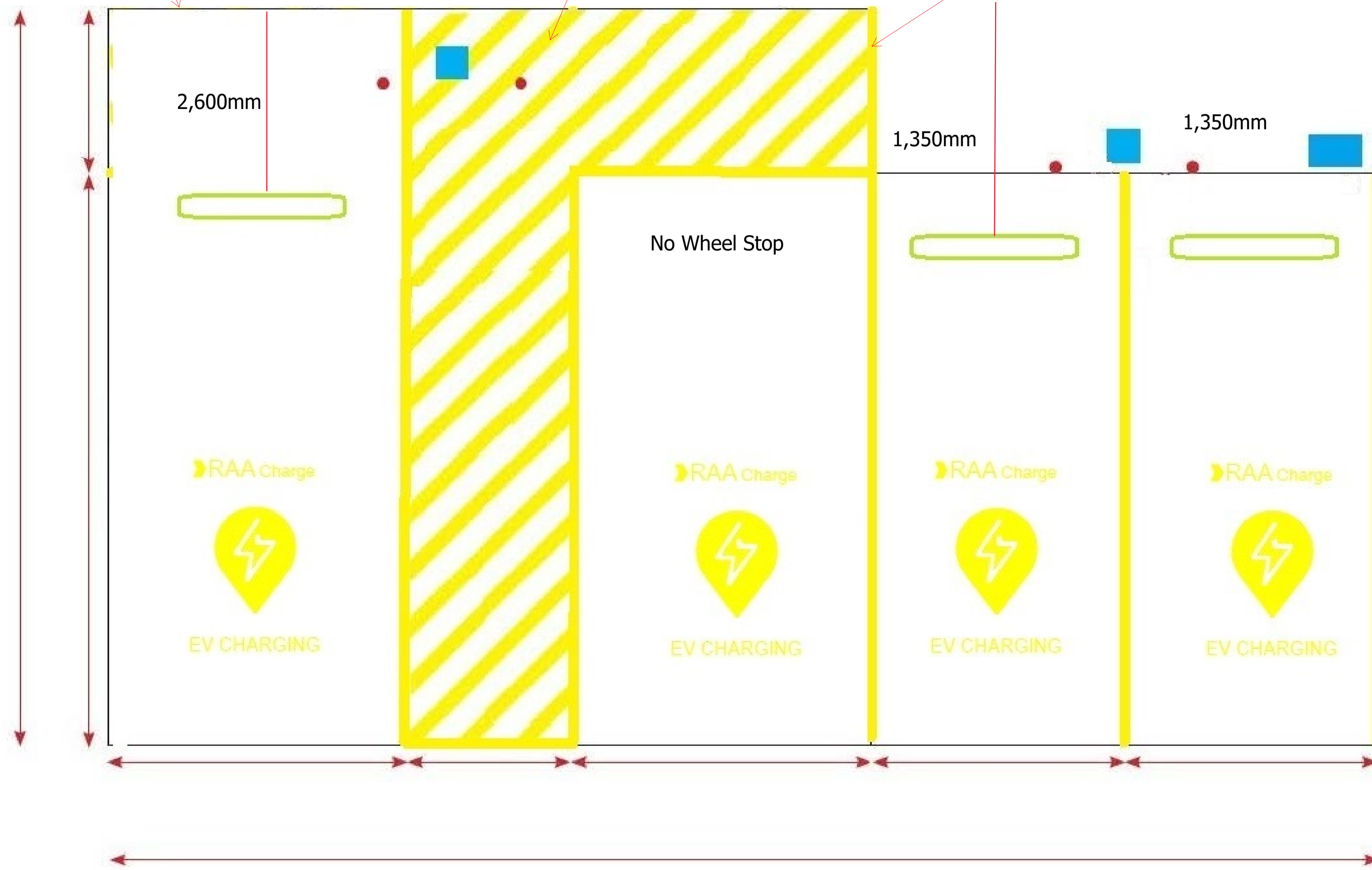
C		UPDATED NOTES, ETC	BD	11/12/23	JM	BD	NOTE: THE INTENTION OF THIS DOCUMENT IS TO PROVIDE ELECTRICAL CONCEPT REQUIREMENTS. DIMENSIONS, AREA AND NUMBER OF LOTS SHOWN ARE APPROXIMATE ONLY AND MAY VARY. THE ELECTRICAL DESIGN SHOWN MAY BE SUBJECT TO VARIATION DEPENDING ON SITE CONDITION & COMPONENT AVAILABILITY DURING INSTALLATION. RAA CLAIM COPYRIGHT IN THE MATERIAL DISCLOSED HEREON. THIS DRAWING IS ISSUED IN CONFIDENCE FOR ENGINEERING INFORMATION ONLY AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT THE DIRECT PERMISSION OF RAA.	RAA Innovation Pty Ltd 101 Richmond Road, Mile End SA 5031 raa.com.au	DWG THIRD ANGLE DRAWN BY: DM 28/02/2023 CHECKED: JT 10/03/2023 APPROVAL: JT 10/03/2023 SCALE: NTS	PROJECT NAME	RAA SA EV DC CHARGING PROJECT	DRG. NO.	2010-DRG-142	
B		DRG CHANGED TO SUIT DC CHARGER	BJD	4/4/23	JTJT	BJD				SHEET TITLE	TYPICAL DC TIER 1 CHARGING SITE INFORMATION ONLY	DRAWING TITLE	RAA EV DC SITE INSTALLATION ARRANGEMENTS	
A		ISSUED FOR TENDER PURPOSES	DM	15/03/23	JT	JT				SIZE	A1	SHEET 4	REV	C
REV	DESCRIPTION		BY	DATE	CHK	APPD								

Tier-1 Site
Line Marking Measurements
Bollard Spacings

OUTSIDE YELLOW LINES
WIDTH TO BE 100mm

Slip Resistant Paint required
in the cross-hatch zone

All continuous outside
yellow lines to be
100mm width



REV	DESCRIPTION	BY	DATE	CHK	APPD
C	UPDATED NOTES, ETC	BD	11/12/23	JM	BD
B	ISSUED FOR CONSTRUCTION	AK	22/06/23	AK	BD
A	ISSUE FOR APPROVAL	AK	19/06/23	AK	BD

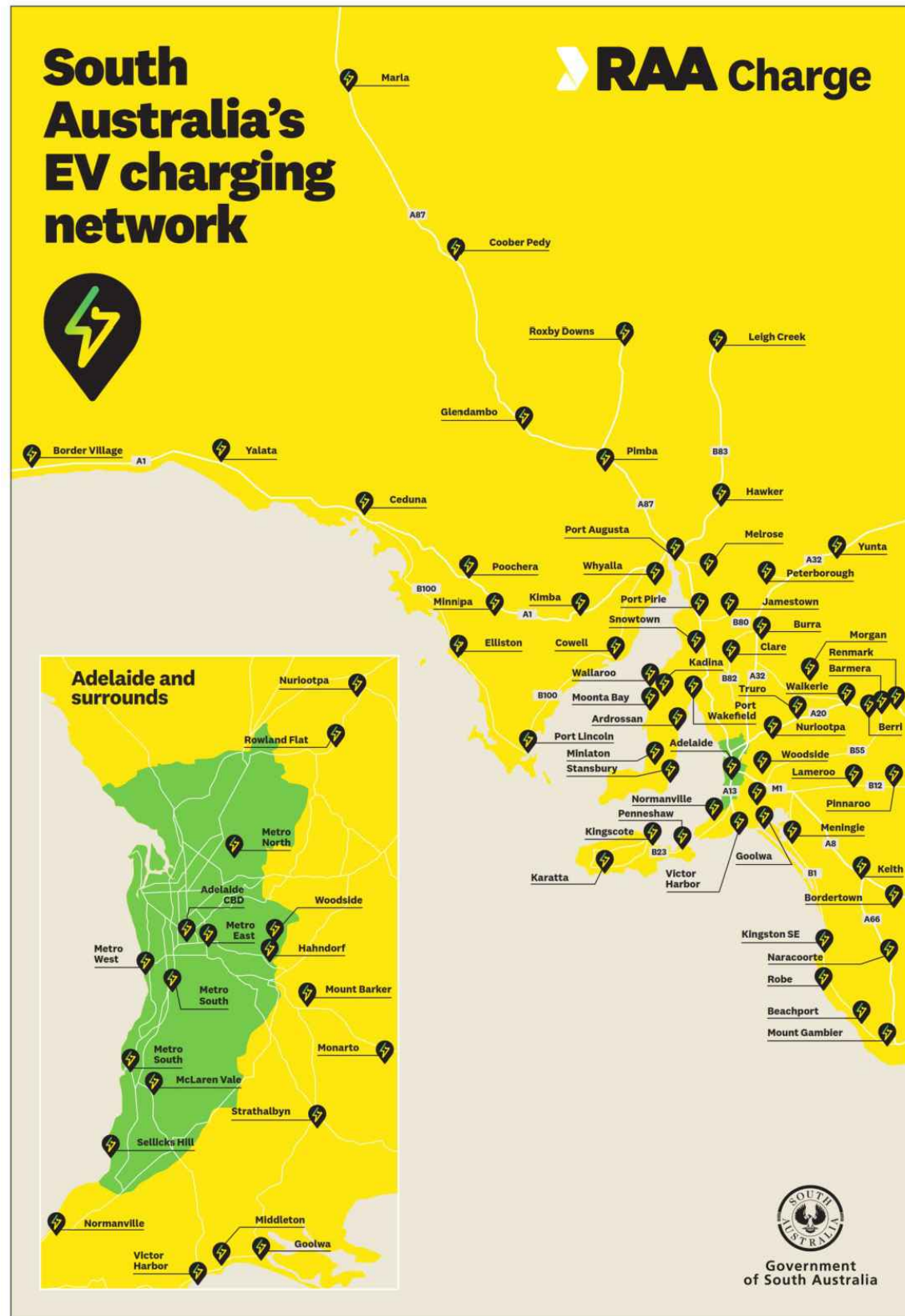
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DWG	THIRD ANGLE
DRAWN BY:	AK 19/06/2023
CHECKED:	AK 19/06/2023
APPROVAL:	BD 19/06/2023
SCALE:	1:200

PROJECT NAME	RAA SA EV DC CHARGING NETWORK
SHEET TITLE	LINE MARKING TEMPLATE TIER 1 SITES

DRG. NO.	2010-DRG-142
DRAWING TITLE	LINE MARKING TEMPLATE TIER 1 SITES
SIZE	A1
SHEET	SHEET 5
REV	C



ABOVE: RAA EV CHARGING NETWORK MAP



7.2kW AC CHARGER
616x2000x214mm (WxHxD)



TIER 2 RAPID DC CHARGER
650x2150x825mm (WxHxD)

DRAWING LIST

- SHEET 1: COVER SHEET
- SHEET 2: TYPICAL DC CHARGING SITE INFORMATION
- SHEET 3: AERIAL VIEW
- SHEET 4: ELEVATION VIEW

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REV	DESCRIPTION	BY	DATE	CHK	APPD	A1	SHEET 1	B		
B	DRAWING NUMBER CHANGED AND NOTES UPDATED	BD	20/12/23	JM	BD					
A	ISSUED FOR TENDER PURPOSES	DM	15/03/23	JT	JT					

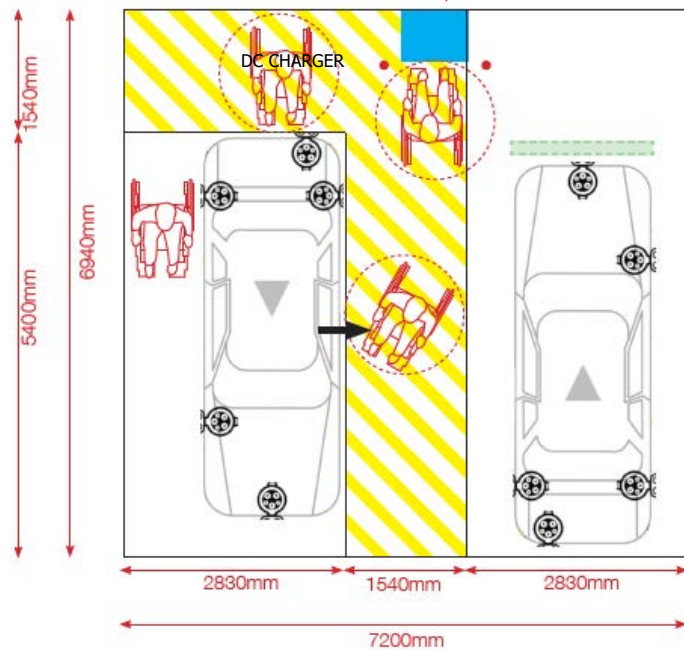
Site 054 - Coonalpyn

TIER 2 RAPID DC CHARGER

1 x AC Charger - mount in Garden Bed

EV Switchboard B&R Monarch 1,600Wx500D

NEW PARKING WHEEL STOPS & BOLLARDS



2 CHARGING BAYS (TYPICAL)

RAA CHARGING BAY MINIMUM SIZE TO BE IN COMPLIANCE WITH AUS/NZ OFF STREET PARKING BAY STANDARDS

NOTES

1. ONE CHARGER CONNECTED TO THE EV DISTRIBUTION BOARD (EVDB).
2. WHERE POSSIBLE, ALL CABLES ARE TO BE RUN UNDERGROUND IN CONDUIT. CABLE LADDER RACK SYSTEM MAY BE USED IN BUILDINGS, AND WHERE SUITABLE.
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 - 6.2 FIRE HYDRANT OUTLETS & ASSOCIATED PLUMBING
 - 6.3 BUILDING SUPPORTS
 - 6.4 STORM WATER GRATES AND PIPES
 - 6.5 OTHER POWER CONDUITS AND COMMS CABLES
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7. NEW EV DISTRIBUTION SWITCHBOARD TO HAVE SAFE WORKING AREA OF AT LEAST 1.5m IN FRONT.
8. RAA TO INSTALL AN MSB DOWNSTREAM OF SAPN TRANSFORMER.
9. ELECTRICAL INSTALLATION TO MEET SAPN REQUIREMENTS AND COMPLY WITH AS3000, AS3008, AS1429 & AS2067.
10. THE PARKING AREA OCCUPIED BY NEW RAA EV CHARGING BAYS TO HAVE "RAA CHARGE" LOGO IMAGE PAINTED AS SHOWN.
11. THE "RAA Charge" LOGO IS TO BE PAINTED IN EACH CHARGING BAY, AND IS TO BE LOCATED AT THE EXTREME END (OPPOSITE END TO THE EXISTING KERB) OF THE LINE MARKINGS.
12. THE PARKING BAY LINES ARE TO BE REPAINTED WITH LINE MARKING YELLOW PAINT Y14.



ROAD STENCIL FOR EACH PARKING BAY

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REV	DESCRIPTION	BY	DATE	CHK	APPD	DWG	THIRD ANGLE	SCALE	SIZE	SHEET 2	REV		
B	DRAWING NUMBER CHANGED	BD	20/12/23	JM	BD	DM	28/02/2023	NTS	A1		B		
A	ISSUED FOR TENDER PURPOSES	DM	15/03/23	JT	JT	JT	10/03/2023						



B	DRAWING NUMBER CHANGED	BD	20/12/23	JM	BD
A	ISSUE FOR APPROVAL	AK	19/06/23	AK	BD
REV	DESCRIPTION	BY	DATE	CHK	APPD

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RAA
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 101 Richmond Road, Mile End SA 5031
raa.com.au

DWG	THIRD ANGLE
DRAWN BY:	AK 19/06/2023
CHECKED:	AK 19/06/2023
APPROVAL:	BD 19/06/2023
SCALE:	1:200

PROJECT NAME
RAA SA EV DC CHARGING NETWORK

SHEET TITLE
Coonalpyn Site Layout - Aerial View

DRG. NO.	2010-DRG-199	
DRAWING TITLE	RAA EV DC SITE INSTALLATION ARRANGEMENTS	
SIZE	SHEET 3	REV B

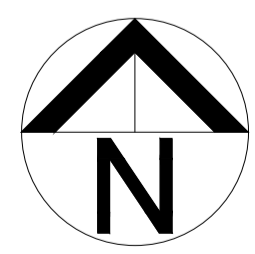


Observe SAPN clearances for all camera poles and lighting apparatus

Remove small bottle brush if required

Cut into grassed area, finish ground level same as road height, (linefall from charger back towards spoon drain)

Cut guttering, replace with spoon drain the length of the car bays



B	DRAWING NUMBER CHANGED	BD	20/12/23	JM	BD
A	ISSUE FOR APPROVAL	AK	19/06/23	AK	BD
REV	DESCRIPTION	BY	DATE	CHK	APPD

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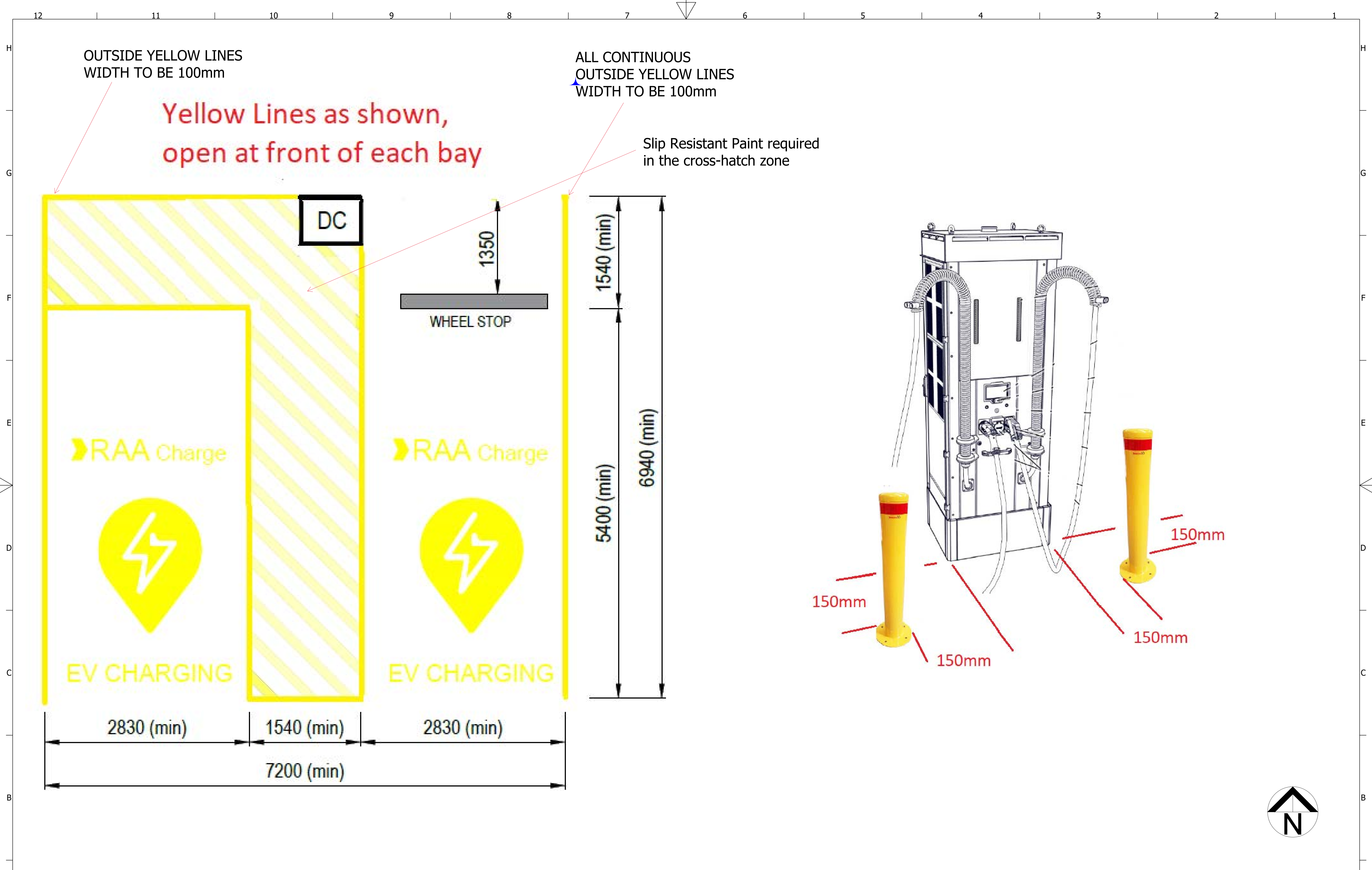


RAA Innovation Pty Ltd
 101 Richmond Road, Mile End SA 5031
raa.com.au

DWG	THIRD ANGLE
DRAWN BY:	AK 19/06/2023
CHECKED:	AK 19/06/2023
APPROVAL:	BD 19/06/2023
SCALE:	1:200

PROJECT NAME	RAA SA EV DC CHARGING NETWORK
SHEET TITLE	Coonalpyn - Elevation

DRG. NO.	2010-DRG-199	
DRAWING TITLE	RAA EV DC SITE INSTALLATION ARRANGEMENTS	
SIZE	SHEET 4	REV B



OUTSIDE YELLOW LINES
WIDTH TO BE 100mm

Yellow Lines as shown,
open at front of each bay

ALL CONTINUOUS
OUTSIDE YELLOW LINES
WIDTH TO BE 100mm

Slip Resistant Paint required
in the cross-hatch zone

DC

1350

WHEEL STOP

1540 (min)

5400 (min)
6940 (min)

RAA Charge

RAA Charge



EV CHARGING

EV CHARGING

2830 (min)

1540 (min)

2830 (min)

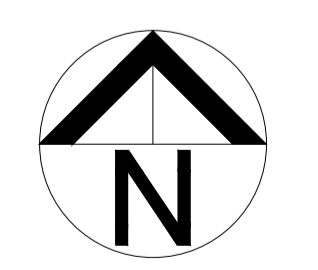
7200 (min)

150mm

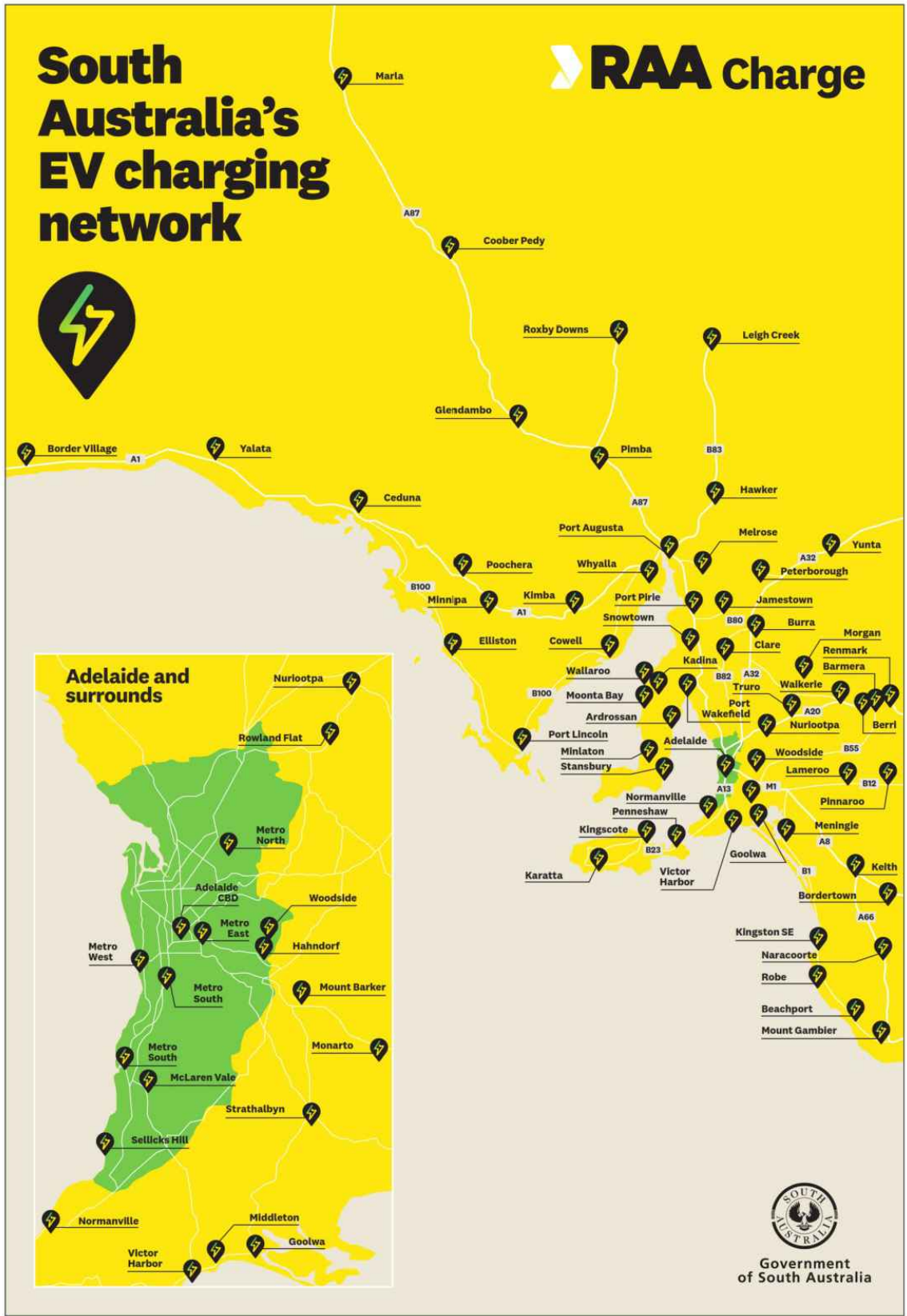
150mm

150mm

150mm



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REV	DESCRIPTION	BY	DATE	CHK	APPD			SIZE	SHEET 1	REV	B			



ABOVE: RAA EV CHARGING NETWORK MAP



7.2kW AC CHARGER
616x2000x214mm (WxHxD)



TIER 2 RAPID DC CHARGER
650x2150x825mm (WxHxD)

DRAWING LIST

- SHEET 1: COVER SHEET
- SHEET 2: TYPICAL DC CHARGING SITE INFORMATION

REV	DESCRIPTION	BY	DATE	CHK	APPD
A	ISSUED FOR TENDER PURPOSES	DM	15/03/23	JT	JT

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RAA
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raa.com.au

DWG	THIRD ANGLE
DRAWN BY:	DM 28/02/2023
CHECKED:	JT 10/03/2023
APPROVAL:	JT 10/03/2023
SCALE:	NTS

PROJECT NAME	RAA SA EV DC CHARGING PROJECT
SHEET TITLE	COVER SHEET

DRG. NO.	2010-DRG-024-01
DRAWING TITLE	RAA EV DC SITE INSTALLATION ARRANGEMENTS
A1	SHEET 1

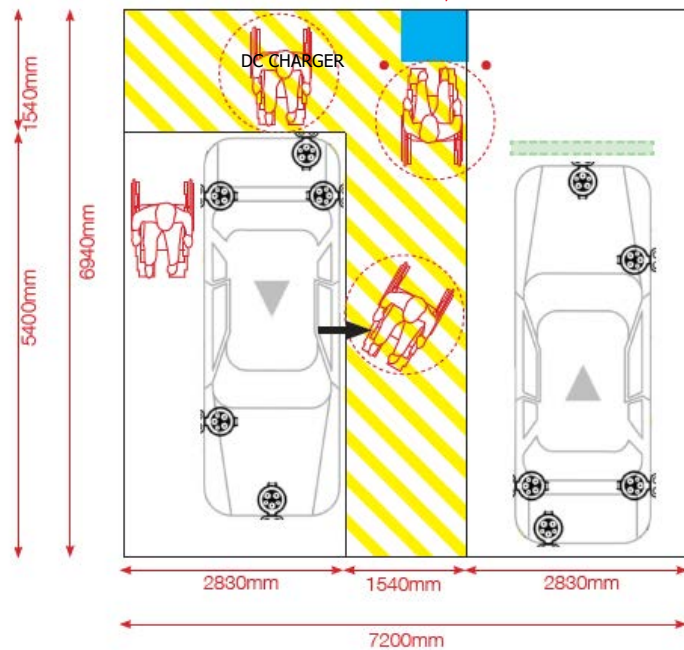
Site 054 - Coonalpyn

TIER 2 RAPID DC CHARGER

1 x AC Charger - mount in Garden Bed

EV Switchboard B&R Monarch 1,600Wx500D

NEW PARKING WHEEL STOPS & BOLLARDS



2 CHARGING BAYS (TYPICAL)

RAA CHARGING BAY MINIMUM SIZE TO BE IN COMPLIANCE WITH AUS/NZ OFF STREET PARKING BAY STANDARDS

NOTES

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7. NEW EV DISTRIBUTION SWITCHBOARD TO HAVE SAFE WORKING AREA OF AT LEAST 1.5m IN FRONT.
8. RAA TO INSTALL AN MSB DOWNSTREAM OF SAPN TRANSFORMER.
9. ELECTRICAL INSTALLATION TO MEET SAPN REQUIREMENTS AND COMPLY WITH AS3000, AS3008, AS1429 & AS2067.
10. THE PARKING AREA OCCUPIED BY NEW RAA EV CHARGING BAYS TO HAVE "RAA CHARGE" LOGO IMAGE PAINTED AS SHOWN.
11. THE "RAA Charge" LOGO IS TO BE PAINTED IN EACH CHARGING BAY, AND IS TO BE LOCATED AT THE EXTREME END (OPPOSITE END TO THE EXISTING KERB) OF THE LINE MARKINGS.
12. THE PARKING BAY LINES ARE TO BE REPAINTED WITH LINE MARKING YELLOW PAINT Y14.



ROAD STENCIL FOR EACH PARKING BAY

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REV	DESCRIPTION	BY	DATE	CHK	APPD	SCALE	NTS	SIZE	A1	SHEET 2	REV	A



SAPN TF poletop Connection Point, SAPN to install new Stobie pole

Underground Cable Route

Main Switchboard Must be installed outside SAPN transformer zone (5m) 1.6W x 0.5D x 2.1H

Provide Light and camera pole next to main switchboard

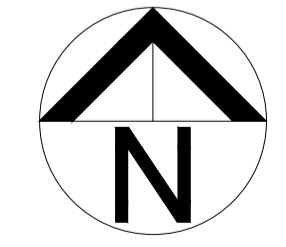
EV Charger Location

Provide Ground Scan reports prior to construction, Mark areas of hazards in Carpark

Provide Ground Scan reports prior to construction, Mark areas of hazards in Carpark

Sat Dec 10 2022
Imagery © 2023 Nearmap, HERE

5 m



REV	DESCRIPTION	BY	DATE	CHK	APPD
A	ISSUE FOR APPROVAL	AK	19/06/23	AK	BD

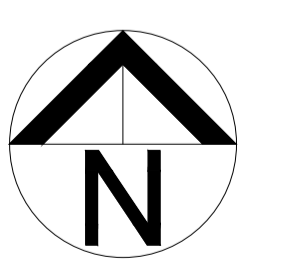
NOTE: THE INTENTION OF THIS DOCUMENT IS TO PROVIDE ELECTRICAL CONCEPT REQUIREMENTS.
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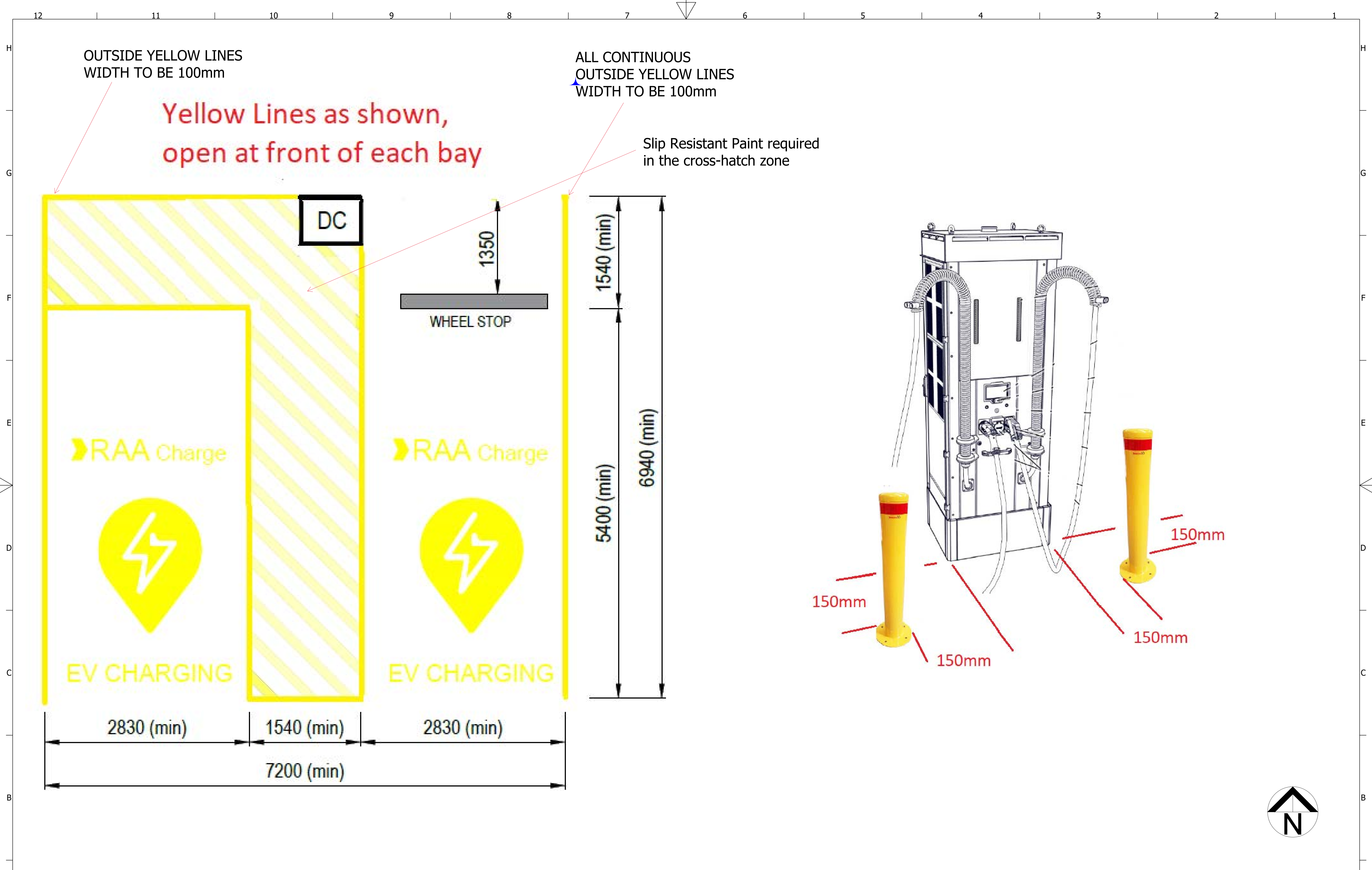
DWG	THIRD ANGLE
DRAWN BY:	AK 19/06/2023
CHECKED:	AK 19/06/2023
APPROVAL:	BD 19/06/2023
SCALE:	1:200

PROJECT NAME	RAA SA EV DC CHARGING NETWORK
SHEET TITLE	Tailem Bend Site Layout - Aerial View

DRG. NO.	2010-DRG-111-00	
DRAWING TITLE	RAA EV DC SITE INSTALLATION ARRANGEMENTS	
SIZE	SHEET 1	REV A



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A	ISSUE FOR APPROVAL	AK	19/06/23	AK	BD									
REV	DESCRIPTION	BY	DATE	CHK	APPD			SIZE A1	SHEET 1	REV A				



OUTSIDE YELLOW LINES
WIDTH TO BE 100mm

Yellow Lines as shown,
open at front of each bay

ALL CONTINUOUS
OUTSIDE YELLOW LINES
WIDTH TO BE 100mm

Slip Resistant Paint required
in the cross-hatch zone

DC

1350

WHEEL STOP

1540 (min)

5400 (min)
6940 (min)

RAA Charge

RAA Charge



EV CHARGING

EV CHARGING

2830 (min)

1540 (min)

2830 (min)

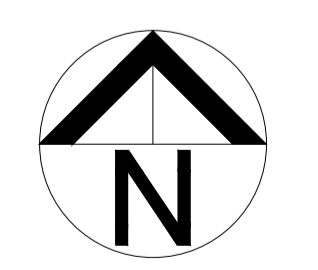
7200 (min)

150mm

150mm

150mm

150mm



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REV	DESCRIPTION	BY	DATE	CHK	APPD			SIZE	SHEET 1	REV	B			