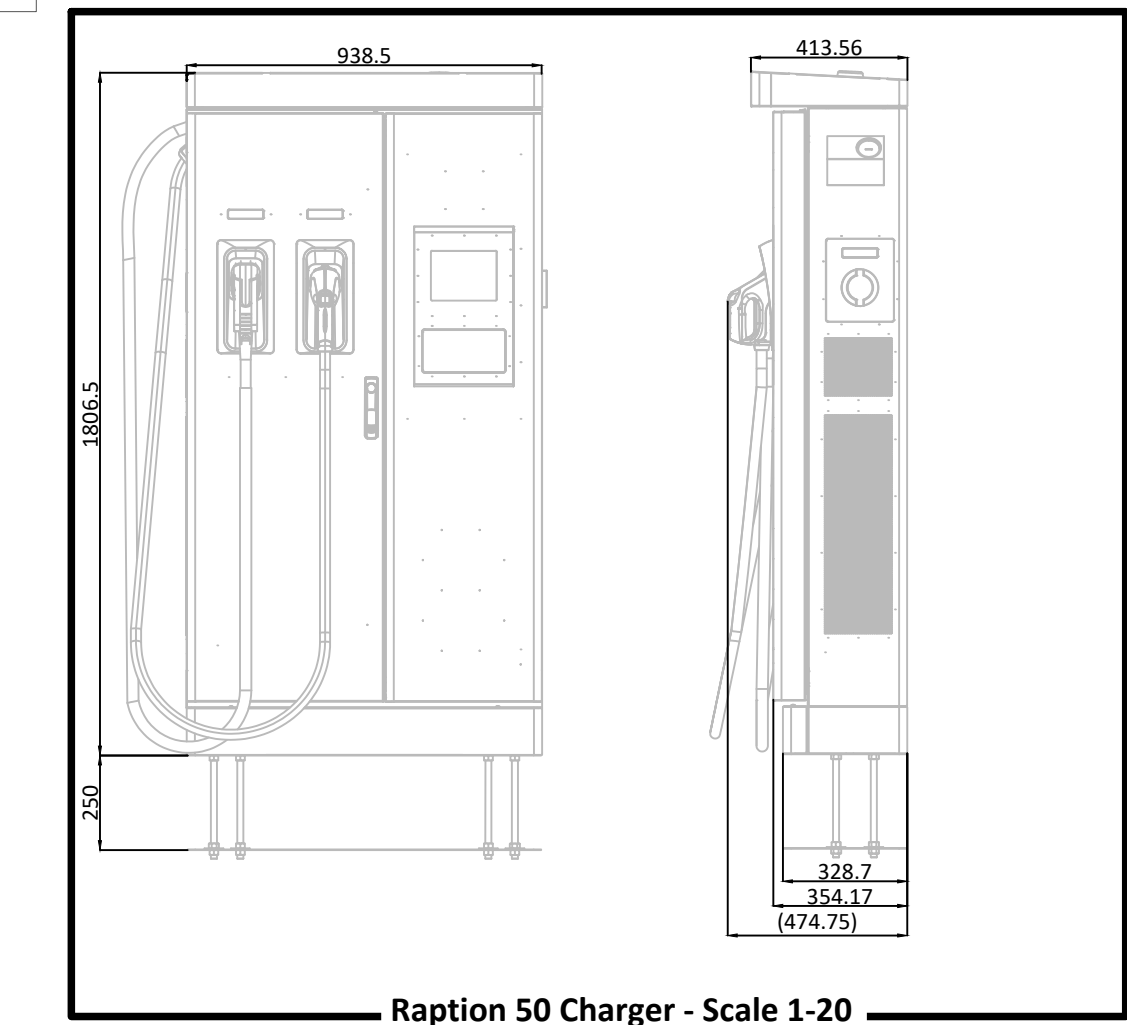
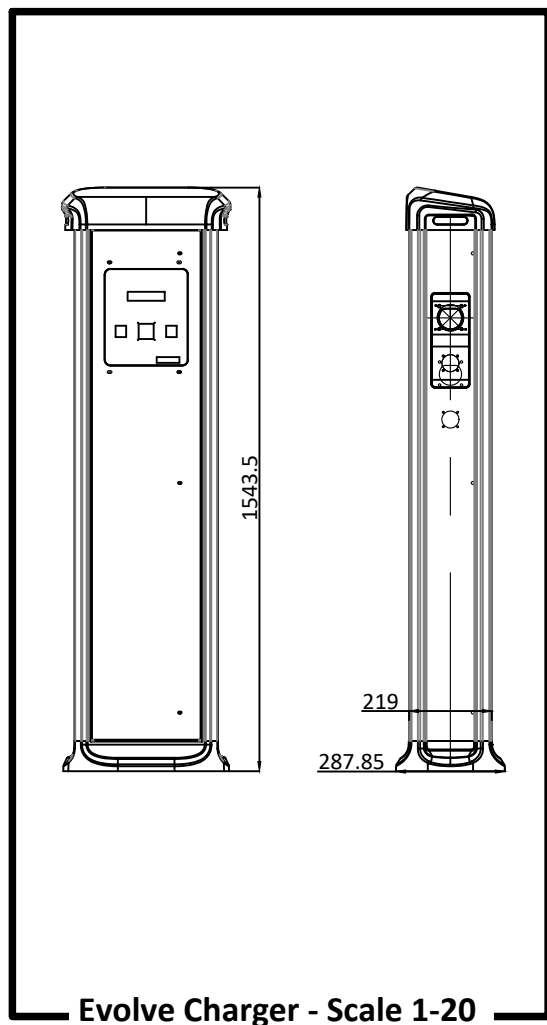
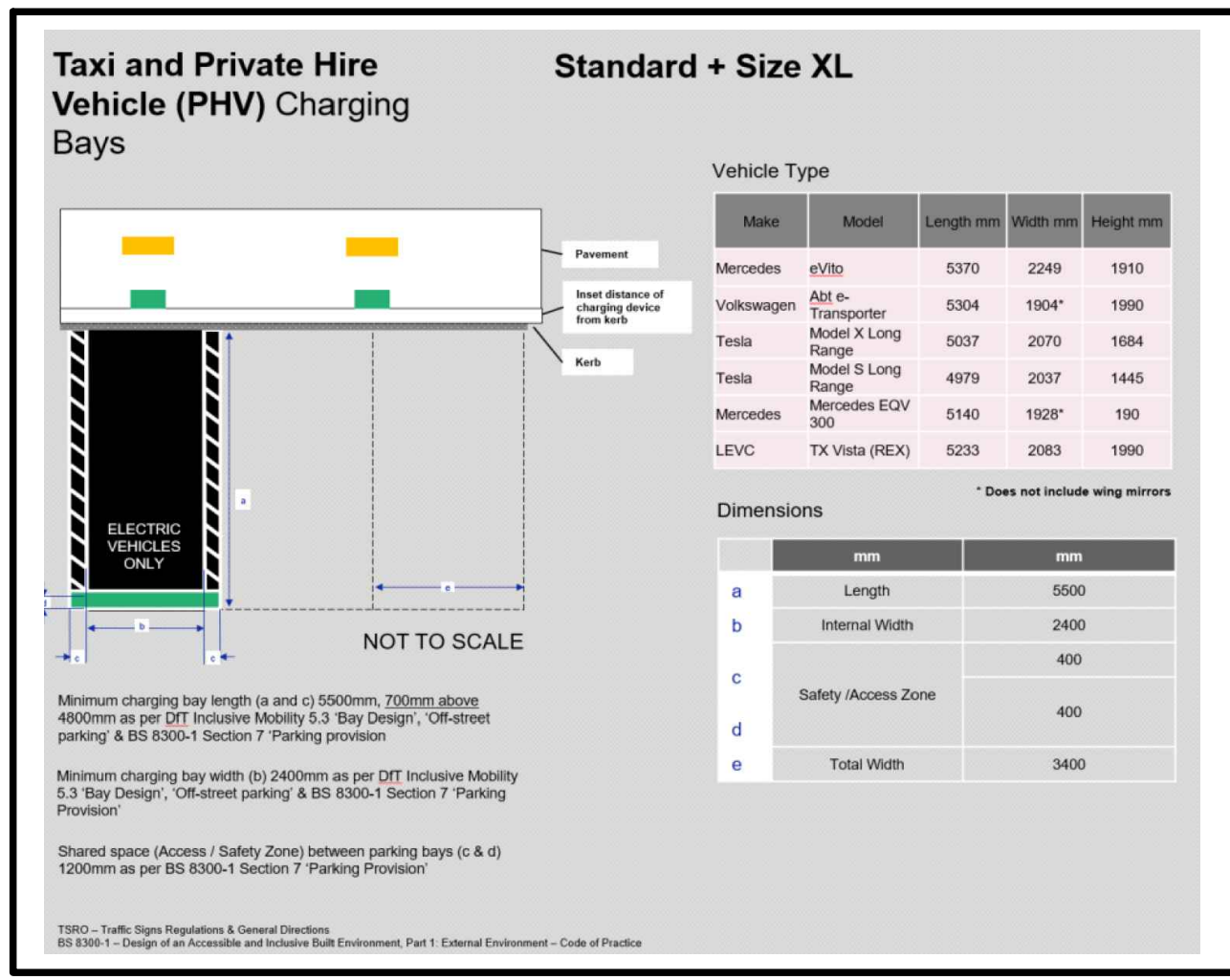




Raption 50 Charger - Scale 1-20



Evolve Charger - Scale 1-20



4.10 Lighting

Adequate lighting should be available to facilitate safe connection and use of the equipment, including:

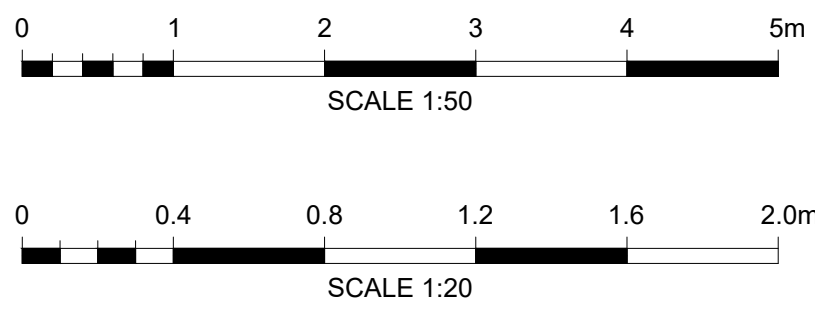
- the safe use of EVSE;
- checking of vehicle connectors, plugs and socket-outlets for evidence of damage (for example, burning or blackening of contacts and contact tubes) prior to use;
- the safe insertion and removal of vehicle connectors, plugs and socket-outlets; and
- identification of trip hazards, including charging cables, around the EVSE or socket-outlet and the vehicle.

If the locations of the vehicle on charge and/or the EVSE do not have adequate lighting, it is strongly recommended that this is installed at the same time as the EVSE. Alternatively, it may be possible to install EVSE that has lighting included.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION FOR CONSTRUCTION WORKS

- EXCAVATIONS
- BURIED SERVICES
- OPERATIONAL RAILWAYS
- MANUAL HANDLING
- ELECTRIFICATION
- WORKING AT HEIGHT
- LIFTING OPERATIONS
- DUCT
- DRILLING AND FIXING
- WET WORKS
- PUBLIC INTERFERENCE

THESE NOTES ARE BASED ON THE USE OF EXPERIENCE AND COMPETENT CONTRACTORS CARRYING OUT THE WORK USING AN APPROVED SAFE METHOD OF WORKING



No information on this drawing shall be shared with a third party without the written authority of Kingswood Building Services Engineers Ltd. ©2022.

All scaled dimensions taken from this drawing shall be verified on site. For reference, this box should measure 90mm in length when plotted at the correct paper size and scale.

The latest Kingswood drawings are accessed via this QR code & link within a folder named: 'W#/#_File SHARE'. Other files of relevance may also be shared. Ensure you you have the latest information by checking this folder.



Website

CDM PRE-CONSTRUCTION INFORMATION

The following information is provided in pursuance of Regulation 9 of the CDM regulations 2015:

- Safety procedures, correct PPE, site level risk assessments, method statements as required and precautions to be followed as necessary for general/typical activities as required to carry out the works as prescribed within this drawing and associated project documents.

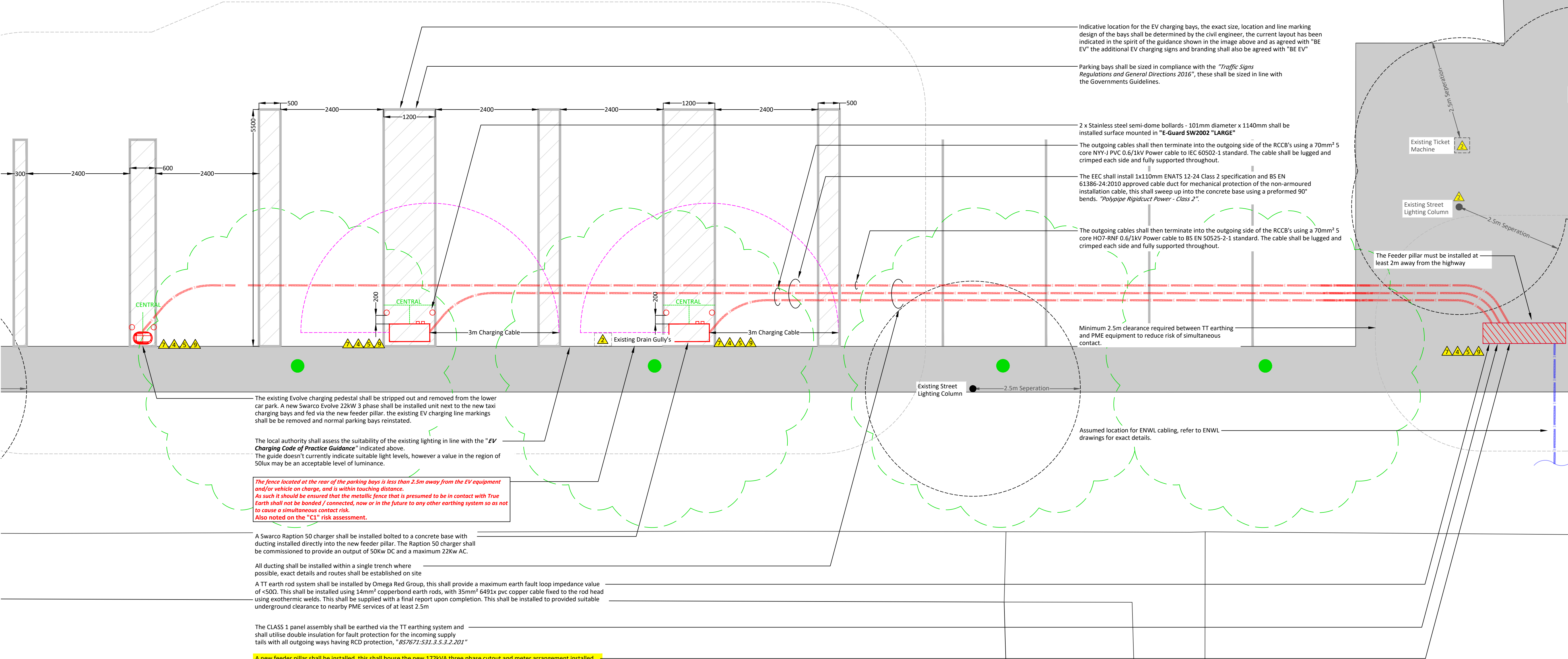
GENERAL NOTES

Notes

- This drawing shall be read in conjunction with the relevant Kingswood specification(s) and all relevant Architect's and other Engineer's drawing(s).
- Details are for tender purposes only and shall be verified on site by the Engineering Contractor. The exact location of all plant items/equipment and the route of all services shall be determined on site.
- The installation shall be Designed, installed, tested and commissioned in accordance with the latest edition of BS7671 and all associated documents, recommendations, guides and standards, as well as NICEIC guides and recommendations.
- All plant, equipment, distribution system components and ancillaries shall be installed in strict accordance with the manufacturer's guidelines.
- The Engineering contractor shall ensure that the description given for items and equipment matches the part code given. Check with the supplier before ordering.
- "BS7671:2018; 134.1.1 - Good Workmanship" by one or more skilled or instructed persons and proper materials shall be used in the erection of the electrical installation. The installation of electrical equipment shall take account of manufacturers' instructions.
- The Engineering Contractor shall allow for changes in distribution system(s) invert levels (including any sets up and down etc.) as necessary to coordinate fully with the building structure and other M&E Services.
- The Engineering Contractor shall review site and verify all proposals before ordering equipment. As it is not often possible to gain adequate access to all areas during the design stage, it is required that the Engineering Contractor checks to ensure there is adequate space available as required for items and equipment proposed. Any issues shall be brought to the engineers attention.
- The exact location of all plant items/equipment and the route of all services shall be determined prior to installation by the Engineering Contractor.

DRAWING SPECIFIC NOTES:

- *



The existing Evolve charging pedestal shall be stripped out and removed from the lower car park. A new Swarco Evolve 22kW 3 phase shall be installed unit next to the new taxi charging bays and fed via the new feeder pillar. the existing EV charging line markings shall be removed and normal parking bays reinstated.

The local authority shall assess the suitability of the existing lighting in line with the "EV Charging Code of Practice Guidance" indicated above.
The guide doesn't currently indicate suitable light levels, however a value in the region of 50lux may be an acceptable level of luminance.

The fence located at the rear of the parking bays is less than 2.5m away from the EV equipment and/or vehicle on charge, and is within touching distance.
As such it should be ensured that the metallic fence that is presumed to be in contact with True Earth shall not be bonded / connected, now or in the future to any other earthing system so as not to cause a simultaneous contact risk.
Also noted on the "C1" risk assessment.

A Swarco Raption 50 charger shall be installed bolted to a concrete base with ducting installed directly into the new feeder pillar. The Raption 50 charger shall be commissioned to provide an output of 50Kw DC and a maximum 22Kw AC.

All ducting shall be installed within a single trench where possible, exact details and routes shall be established on site

A TT earth rod system shall be installed by Omega Red Group, this shall provide a maximum earth fault loop impedance value of <500. This shall be installed using 14mm² copperbond earth rods, with 35mm² 6491x pvc copper cable fixed to the rod head using exothermic welds. This shall be supplied with a final report upon completion. This shall be installed to provided suitable underground clearance to nearby PME services of at least 2.5m

The CLASS 1 panel assembly shall be earthed via the TT earthing system and shall utilise double insulation for fault protection for the incoming supply tails with all outgoing ways having RCD protection, "BS7671:531.3.5.3.2.201"

A new feeder pillar shall be installed, this shall house the new 172KVA three phase cutout and meter arrangement installed by "ENWL". The feeder pillar shall be a bespoke Lucy Zodian solution external Dims - Depth 480mm, Width 1950mm, Height 2200mm. This will contain a 400A MCB main switch, 2x 125A 4p Type C MCB with a 4 pole Type B 300mA RCD unit, 1x 40A 4p Type C MCB with a 4 pole Type B 300mA RCD unit and; 1x6A DP RCBO for the anti condensation heater (with thermostat). A Type 1 & 2 surge protection device shall also be installed.

D2	01.08.22	Second Issue (design) - For Approval	MSH	JB
D1	16.06.22	First Issue (design) - For Approval	JB	n/a
Rev.	Date	Description	By	Chkd

Revisions

Client:



Contractor:



Mechanical & Electrical Consultants:



Project:

TFGM
Electric Vehicle Charging Rollout.
"Trinity Street"

Drawing Title:

EV Charging Layout

Design By:	JB	Drawn By:	JB	Review By:	n/a
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Scale:	1:50	Status:	Design
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Dwg No:	1223-Bury-2641-Trinity ST-60-002	Rev:	D2
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