

TN08: Discharge of Condition 7 – Electric Vehicle Charging

Site: Florentia Clothing Village, Haringey Warehouse District
Prepared by: GL
Approved by: PdeJ
Date: 22nd August 2023

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1.0 Introduction

- 1.1 This Technical Note has been prepared by Motion on behalf of Florentia Property Unit Trust in response to discharge condition 7 raised by Haringey Council in relation to Electric Vehicle Charging Provision at the proposed development. Condition 7 – Prior to commencement of above ground works states that;

“Prior to commencement of above ground construction works, details and locations of the parking spaces equipped with active electric vehicle charging points (EVCPs) and the passive EVCP provision shall be submitted to and approved in writing by the Local Planning Authority. At least 10 EVCPs, as outlined in TN05 – Response to Haringey Comments (Motion, dated: 29/04/2022), shall be provided. The details shall include:

- a) Location of active and passive charging points;*
- b) Specification of charging equipment; and*
- c) Operation/ management strategy.*

Thereafter, the approved EVCPs shall be retained, unless otherwise agreed in writing by the Local Planning Authority”

2.0 Site Details

- 2.1 The submitted proposals for the development include 29 vehicle parking spaces as follows:

- „ 25 operational spaces;
- „ 3 delivery van spaces; and
- „ 3 accessible car parking spaces.

- 2.2 There will be a portion of retained parking spaces around the site which will relate to the existing Florentia Village business space. The extension scheme will include 10 no. dedicated Electric Vehicle Charging Points (EVCP) on opening - Figure 2.1 indicates the location of the proposed EVCPs for the development.

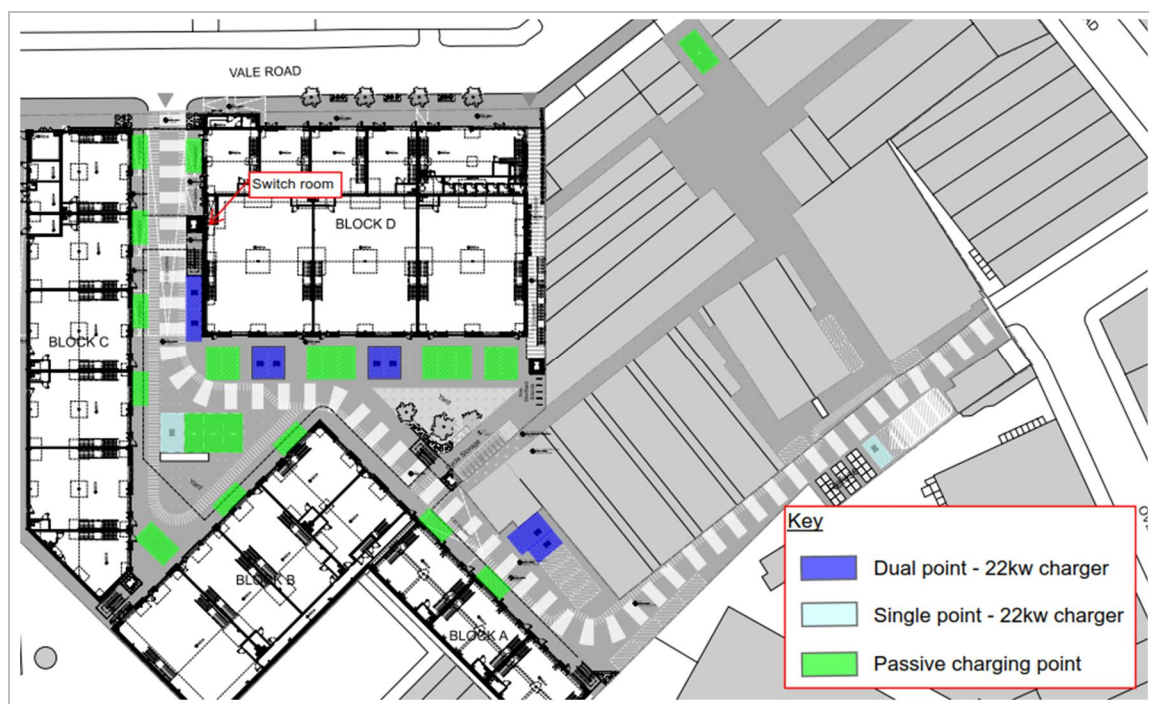


Figure 2.1 – Location of proposed electric vehicle charging points

- 2.3 As illustrated in Figure 2.1, the active EV charging points will be distributed around the site to enable all occupants of the commercial units reasonable access to EVCPs. The remaining spaces within the new development space are identified as 'passive' spaces which can be used for future EVCPs when demand requires.
- 2.4 The charging points have been allocated to Operational Spaces as opposed to Delivery Parking on the basis that it is unlikely delivery vehicles would remain on site long enough to utilise on-site EV charging. The operational spaces may potentially accommodate business vehicles which may be left on site overnight, an ideal time to charge the vehicle when not in use.

3.0 EV Charging Points specification

- 3.1 The developer will appoint an electrical contractor to design, supply, install, test and commission the electric vehicle charging points system. The details of the installation layout for proposed electric vehicle charging infrastructure is presented in Figure 3.1 and also provided in more detail in [Appendix A](#).

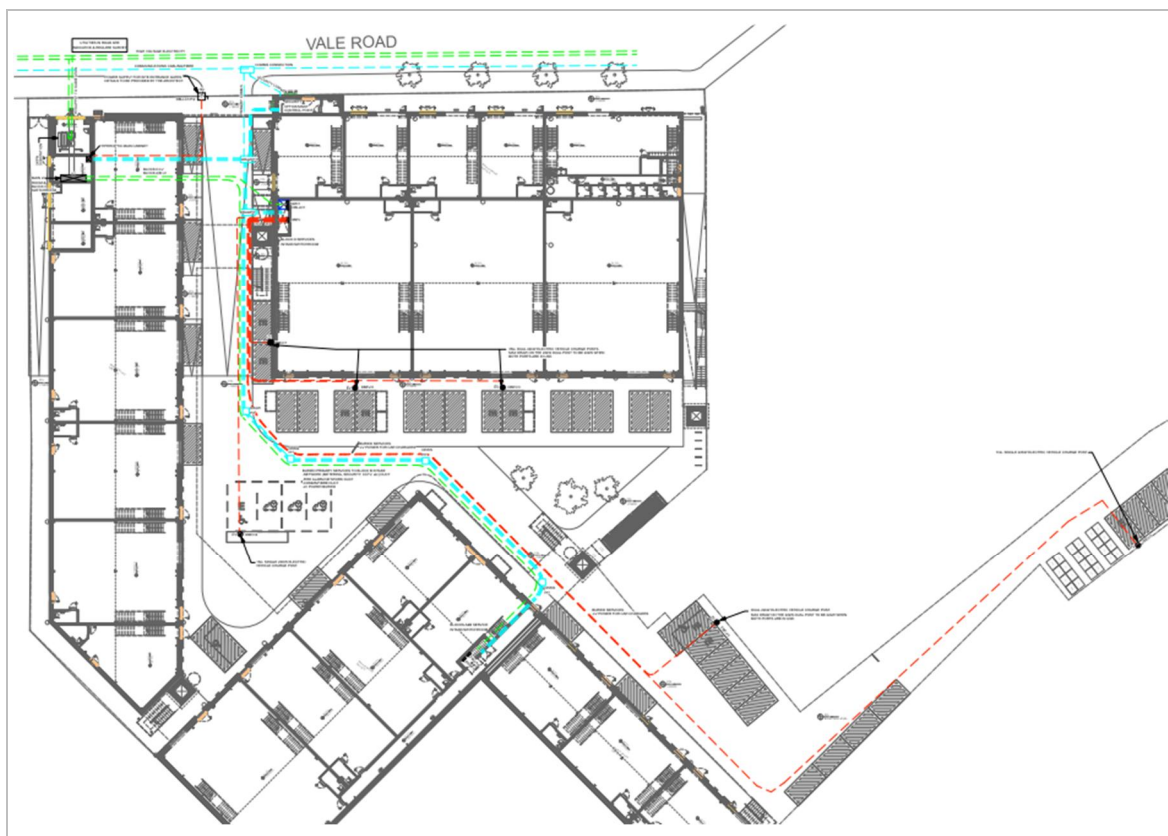


Figure 3.1 – Proposed Electric Charging Point Infrastructure.

- 3.2 The system shall comprise 4 dual 22kw points and 2 single 22kw point (10 no. total EV charging points) connected individually to a dedicated distribution board within the switch room of Block D, as indicated on Figure 2.1. The units shall be post-mounted type in proprietary mountain bases.
- 3.3 The proposed system shall be manufactured by Rolec, product of Autocharge EV with open charge point protocol (OCPP) back-office compatibility allowing for a pay charge solution using the EV driver's smart phone. Details of the type of Autocharge EV system is provided in [Appendix B](#) and the EVCP Specifications to be used are provided in [Appendix C](#).
- 3.4 The charging points shall be equipped with dynamic power management for optimal use of the power. This will require an EMpro power meter to measure the entire energy consumption of the incoming supply within the main switchboard.
- 3.5 The system shall be designed and installed fully in accordance with the IET wiring regulations, the IET code of practice for EV charging equipment 4th and the manufacturer's recommendations.
- 3.6 The dedicated electric vehicle charging distribution board (DBEV) shall incorporate an O-PEN device(s) suitably sized or the installation.
- 3.7 Each circuit shall be protected by a 32A TP&N RCBO of a type suitable for the installation. Cabling shall be multicore armoured type run with prepared cable trenched. Road crossings shall be provided with suitable buried Black ridgecuts.
- 3.8 The Contractor shall have the responsibility to inform the DNO, complete the Energy Networks Association (ENA) documentation and provide circuit test certifications and the Contractor shall test and commission the installation and shall provide suitable certification for the completed installation.

4.0 Operation and Management Strategy

- 4.1 The EVCPs have been distributed around the development site with active spaces located adjacent to Block A, B C and D providing charging points for all types of spaces (blue badge, operational and delivery spaces) and all remaining spaces will have the potential for EVCPs to be installed when demand is required.
- 4.2 The vehicle parking spaces across the site will be allocated to specific units in accordance with the Operational Parking Management Plan developed for the site. On the occasion an occupier requires an EVCP within their allocated space where there is not one available, the Estate Management team will action the request for the equipment to be installed.
- 4.3 The Autocharge equipment will allow any costs for the EVCP to be allocated to the appropriate occupier. The Florentia Property Unit Trust and the Estate Management team will be responsible for the overall management of the Electric Vehicle Charging points within the site.
- 4.4 In terms of operational responsibilities:
 - „ The occupier requesting an EVCP will be liable for the utility costs associated with vehicle charge-usage (e.g. electricity costs); and
 - „ Florentia Property Unit Trust will be responsible for the installation of new EVCPs when required.

5.0 Conclusion

- 5.1 This Highways Technical Note is prepared by Motion on behalf of Florentia Property Unit Trust to discharge Condition 7 which regards to EV Charging Points. The development will include 4 dual 22kw chargers (8 electric vehicle charging points) and 2 single 22kw point (10 total EV charging points) connected individually to a dedicated distribution board within the switch room of Block D.
- 5.2 An Operation and Management Strategy has been developed to ensure demand for charging points is maintained as demand requires and the sets out that the Estate Management team will be responsible for ensuring adequate EVCP is maintained for occupiers.

Appendix A

Florentia Village Extension – Electrical Services Distribution Plan

Appendix B

Autocharge Data Sheet



ROLEC**EV**

AUTOCHARGE

Intelligent EV charging pedestal



Manufactured
in the UK

AUTOCHARGE

Intelligent EV charging pedestal

The AUTOCHARGE is a robust and hard-wearing EV charging pedestal. Its heavy-duty and vandal-resistant features, make it the ideal solution for exposed locations such as workplaces and public car parks.

This future-proof OCPP compliant pedestal can offer a simple plug & charge or pay-to-charge solution via the EV driver's smartphone and/or RFID card/fob through any chosen OCPP back-office management system.

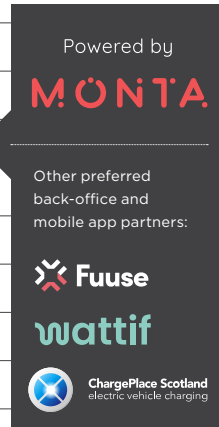
Feature-rich, this EV charger supports dynamic load balancing and is equipped with PME fault detection, so there is no requirement for an earth rod, reducing installation costs.

Available in 1way or 2way versions, providing up to 22kW superfast charging.



Product features

- Plug & charge, mobile app or RFID controlled charging
- Choose from 1x or 2x universal charging socket(s)
- Up to 7.4kW or 22kW charging output(s)
- PME fault detection (no earth rod required)
- Supports dynamic load balancing & static load management
- OCPP 1.6 compliant (can integrate with any back-office)
- Over-the-air firmware / software updates
- Built-in AC overload & fault current protection (RCBO)
- Built-in 6mA DC leakage protection
- Dual tamper and breach security notifications
- Switchgear & components behind lockable door
- Cable lock security feature (can be permanently locked by user)
- Integrated RFID reader
- MID-approved energy metering
- 4G / Wi-Fi / Ethernet connectivity
- IK10 impact resistant design
- Surface or root mountable
- OZEV grant fundable
- Designed & manufactured in the UK



OCPP 1.6 compliant

Ability to integrate with any OCPP compliant back-office management system and app.



Easy to operate

Three quick and easy ways to operate: mobile app, RFID cards and fobs or plug & charge.



Office for Zero
Emission Vehicles

Eligible for grant funding

This range is approved for grant funding via the OZEV Workplace Charging Scheme (WCS).



4G / Wi-Fi / Ethernet enabled

Complete with secure 4G, Wi-Fi and Ethernet connectivity, ensuring chargers are always online 24/7.



Branding & colour options available

Rolec offers a bespoke chargepoint branding service; from logos & brand colours, to vinyl wraps.



No earth rod required

Equipped with built-in PME fault detection, saving installation time and costs.

The details

UP TO 22KW

Available in both single phase and three phase models, providing up to 22kW superfast charging.

AUTOCHARGE is compatible with all EVs & PHEVs, charging at the fastest speed possible, ensuring vehicles are ready to go in no time.

2 WAY CHARGING

The AUTOCHARGE is available in 1way and 2way versions, allowing up to two vehicles to charge simultaneously, using just one EV charging pedestal.

The perfect EV charging pedestal solution for fleet, workplace and private car park requirements.

ACCURATE BILLING

Built-in MID-approved energy metering ensures accurate consumption reporting, which is essential for businesses and residential car parks, wishing to bill for their usage. Use our back-office management platform to generate revenue by setting your own tariffs.

SAFE AND SECURE

Rest assured, Rolec's entire EV chargepoint range is fully UK Smart Charge Point Regulation compliant.

Over-the-air updates allow the chargers to receive the very latest features, ensuring a safe and future-proof product 24/7.

3 YEAR WARRANTY

Rolec EV chargepoints are designed, developed and manufactured in the UK and come with a 3 year warranty included as standard, for added peace of mind on your investment.

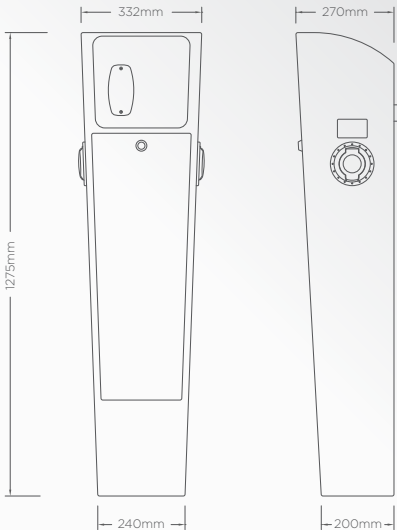


Specifications

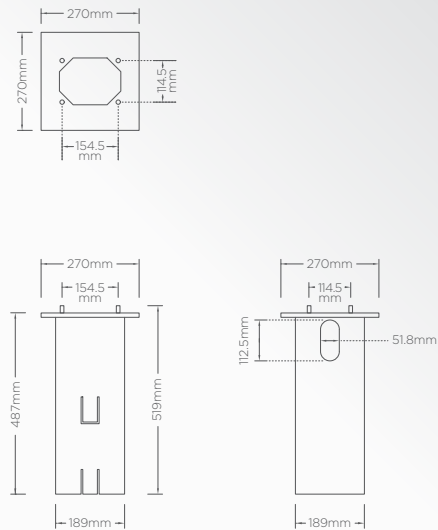
Product Overview:

	Connection Type	Charging Output	Input Supply	Unit Colour	Product Code
Single Phase Units	1x Type 2 (IEC 62196) charging socket	Up to 7.4kW (32A)	1x 32A Single Phase 230V AC (±10 %) 50/60Hz	● Black	ROLEC0011B
				● Grey	ROLEC0011G
				○ White	ROLEC0011W
	2x Type 2 (IEC 62196) charging sockets	Up to 7.4kW (32A) per socket	1x 63A Single Phase 230V AC (±10 %) 50/60Hz	● Black	ROLEC0021B
				● Grey	ROLEC0021G
				○ White	ROLEC0021W
Three Phase Units	1x Type 2 (IEC 62196) charging socket	Up to 22kW (32A)	1x 32A Three Phase 400V AC (±10 %) 50/60Hz	● Black	ROLEC0013B
				● Grey	ROLEC0013G
				○ White	ROLEC0013W
	2x Type 2 (IEC 62196) charging sockets	Up to 22kW (32A) per socket	1x 63A Three Phase 400V AC (±10 %) 50/60Hz	● Black	ROLEC0023B
				● Grey	ROLEC0023G
				○ White	ROLEC0023W

AutoCharge 1way/2way unit:



Ground mounting base:



Specifications

Technical Data:

User Interface	• Mobile app • RFID reader (MIFARE ISO/IEC 14443 A) • Plug & charge • RGB LED status indicator halo(s) – configurable
Charge Protocol	Mode 3 (IEC 61851-1)
Protection	• AC overload & fault current protection – 40A 30mA Type A RCBO (per socket) • DC fault protection – 6mA • Lightning surge, over temperature protection • PME fault detection – No earth electrode/rod required • Supports automatic dynamic load balancing (may require additional hardware) • Supports static load management (software configurable)
Cable Terminals	• Single Phase – 3x 50mm 1P + N + E • Three Phase – 5x 50mm 3P + N + E
Communications	• 4G LTE Cat-1 (built-in nano SIM, subscription required) • LTE FDD: B1/B3/B5/B7/B8/B20/B28 • GSM: B2/B3/B5/B8 • Wi-Fi 802.11 b/g/n 2.4 GHz (2412-2472 MHz / 2422-2462 MHz) • NFC 13.56 MHz • RJ45 Ethernet connection • Bluetooth Low Energy (BLE 4.1) 2402-2480 MHz (for installer configuration purposes) • OCPP 1.6J • Cyber security – Data encryption level TLS 1.2
Energy Metering	Integrated Class 1 MID compliant metering
Standby Power Consumption	• Charging circuits – < 7.5W (per socket) • Panel heater – 8W
Dimensions	332mm x 1275mm x 270mm (W x H x D)
Weight	< 27kg (model dependant)
Environmental	• Ingress protection – Enclosure IP54, Socket IP54 • Impact protection – IK10 • Security – Dual tamper and breach notifications • Operating temperature – -30°C to +50°C • Operating humidity – 5% to 95%
Materials	• Body – Heavy duty 1.5mm Steel applied with 45-55 microns of Zinc primer • Finish – Corrosive resistant, textured Polyester powder coating
Unit Colour	 Black  Grey  White  Other colours available upon request
Certifications & Compliances	• EV Charging Compliance – EN 61851-1:2019, EN 61851-22:2002 • Smart Charge Points – (SI 2021/1467) • Wiring Regulations – BS 7671:2018+A2:2022 • EMC Compliance – EN 61000-6-3:2007+A1:2011, EN 61000-6-2:2005, 2014/30 /EU, SI 2016/1091 • Safety Compliance (LVD) – EN 62368-1:2014, 2014/35/EU, SI 2016/1101 • Communications / RED – EN 62311:2008, 2014/53/EU, SI 2017/1206, EN 300 330 V2.1.1 (2017-02), EN 301 908-1 V15.1.1 (2021-09), EN 301 908-13 V13.2.1 (2022-02), EN 301 511 V12.5.1 (2017-03), EN 300 328 V2.2.2 (2019-07), EN 300 440 V2.2.1 (2018-07) • Environmental Protection – BS EN 60529:1992+A2:2013 • Impact Rating – BS EN 62262:2002+A1:2021 • Metering – 2014/32/EU, SI 2016/1153 • RoHS – 2011/65/EU, SI 2012/3032 • REACH – 1907/2006, REACH etc. (Amendment) Regulations 2021 • Certification Markings – CE & UKCA
Warranty	3 years



Options & accessories

Product Code	Item Description
RFID0010	RFID card
RFID0020	RFID fob
GMPG0010	Ground mounting base for AutoCharge pedestal
EVCB0020	Root mount protection barrier – 48mm
EVCB0040	Surface mount protection barrier – 48mm
EVPS0010	EV parking sign – A4 landscape (Other sizes are available)
EVPP0100	5m 32A Type 2 to Type 2 charging cable
EVPP0107	10m 32A Type 2 to Type 2 charging cable
EVPP0105	5m 32A Three phase Type 2 to Type 2 charging cable
EVPP0108	10m 32A Three phase Type 2 to Type 2 charging cable (Other cables are available, including Type 1 options)
ACSR0125	100A up to 35mm ² screened CT clamp with 10m cable



RFID0010
RFID0020



EVCB0040

EVPS0010



GMPG0010



EVPP0100



Branding & colour options available

Rolec offer a bespoke chargepoint branding service; from logos & brand colours, to vinyl wraps. This can be arranged at time of order. Contact Rolec for details.

Brand names, logos and trademarks used herein remain the property of their respective owners. This listing of any firm or their logos is not intended to imply any endorsement or direct affiliation with Rolec Services Ltd. and is purely to demonstrate branding opportunities.

Chargepoint management



Monta's chargepoint management platform provides businesses and organisations with the ability to deploy and self-manage their very own electric vehicle charging network. Ideal for workplace, fleet, commercial and residential locations.

-  Full & automated control of your chargepoints
-  Unlock additional revenue streams
-  Set chargepoints for public and/or private use
-  Set different pricing for individual chargepoints & groups
-  Dynamic pricing allows operators to set pricing in line with their hour-by-hour energy cost
-  Fully scalable solution; add or remove chargepoints & users
-  Complete fleet management solutions with analytical feedback & reporting
-  Reduce charging costs and CO₂ with Smart Charge feature
-  Vehicle integration provides visibility of battery size, SOC, percentage & location etc.
-  Automatically reimburse employees' home charging
-  Smart queuing system that sends notifications to drivers when they become available
-  Over-the-air updates and self-healing algorithms ensure charger stability & availability
-  Static, Dynamic or True Dynamic load balancing options
-  EV Roaming feature, allowing chargepoints to be available on other apps

Charge point settings

Set charge point to public

Private ☒ Public

Reserve charge point

Book charge points at a time that suits you the best!

Reserve

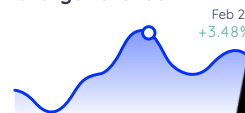
Easy payment for your employees

Apple Pay

Google Pay

VISA

Charge revenue



Other preferred back-office partners:

 Fuuse

 wattif

 ChargePlace Scotland
electric vehicle charging

+ many more

▶ For more information about Monta's chargepoint management solutions and pricing, see the Powered by Monta Overview Sheet

Chargepoint operation

ROLEC**EV**

Powered by

MONTA



Charge your EV on your terms. With Monta you have full control over your charging experience, at home or on the road.

- Easily locate and navigate using the chargepoint map
- Remotely control your home EV charging
- Choose your ready time and choose to prioritise lower costs, lower CO₂ or only using renewable energy
- Schedule charges so your car is ready when you are
- Integrate with most EV manufacturer apps and cars
- Real-time information on your car and battery levels to maximize your charging experience
- Share and give charging access to friends, family and guests
- Set your home charger for public use with custom pricing
- Access to over 300,000 public chargepoints across Europe
- Easily initiate charging and complete payments via credit card, Apple Pay, Google Pay or Monta Wallet
- Online chat or support line for help when you need it most



The Monta app is 100% free with no subscription cost when charging at home

Other preferred mobile app partners:



RFID activation

Great for quick activation, RFID cards or key fobs are easily accessible and add for a much simpler charging experience, which can also be used alongside the mobile app.



DOWNLOAD THE APP



▶ For more details about the Monta solution for EV drivers and the Monta app, please visit www.monta.com/uk/home-charging



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EVAD-V01-R8 AutoCharge Data Sheet



ROLECEV

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www.rolecserv.com



Appendix C

EVCP Specification

- b) Hot water heaters
- c) Toilet extract fans
- d) High level and roof fans
- e) Wall ventilation dampers
- f) BMS fused connection units
- g) Plant room mechanical control panel
- h) WC heat recovery ventilation units
- i) Hot water cylinders and associated pumps
- j) Towel rails in showers

The entire small power installation shall be wired using single core LSF cable in galvanised trunking and conduit.

The Contractor shall supply and install flexible cords from the switched fused connection units to terminate within the fan coil unit itself.

Where power supplies are taken to externally mounted units a suitably rated weatherproof isolator shall be provided adjacent to the unit concerned. Cable entry to and from the isolator shall be installed as bottom entry only. All isolators shall be labelled with unit reference and area of building served.

The Contractor shall design, supply and install fire alarm interfaces complete with relay to activate / deactivate the power supply feeds to the fan coil units via contactor for the ring or radial circuits which serve the fan coil units.

The Contractor shall supply and install power supplies to water savers, solenoid valves and taps.

B14 ELECTRIC VEHICLE CHARGING POINTS

The Contractor shall design, supply, install, test and commission the electric vehicle charging points system as indicated on the drawings and as described below.

The system shall comprise 4no dual 22kW points and 1No. single 22KW point connected individually to a dedicated distribution board within the switchroom of block D, as indicated on the drawings. The units shall be post mounted type in proprietary mounting bases.

The system shall be manufactured by Rolec, product Autocharge EV with open charge point protocol (OCPP) back office compatibility allowing for a pay to charge solution using the EV driver's smartphone.

The system shall comprise all EV charging points, mounting poles, and dynamic power management equipment.

The dynamic power management system sets a dynamic maximum current for all charge points within a group by measuring the energy consumption of the building.

The charging points shall be equipped with dynamic power management for optimal use of the power. This will require an EMpro power meter to measure the entire energy consumption of the incoming supply within the main switchboard.

The system shall be designed and installed fully in accordance with the IET Wiring Regulations, the IET Code of Practice for EV Charging Equipment 4th and the manufacturer's recommendations.

The dedicated electric vehicle charging distribution board (DBEV) shall incorporate an O-PEN device(s) suitably sized for the installation. The Contractor is to contact Matt:E to discuss incorporating the device accordingly.

<https://matt-e.co.uk/contact-matte/>

Technical – 01543 227 290

Each circuit shall be protected by a 32A TP&N RCBO of a type suitable for the installation. Cabling shall be multicore armoured type run with prepared cable trenches. Road crossings shall be provided with suitable buried black Rigiducts.

The Contractor shall have the responsibility to inform the DNO, complete the Energy Networks Association (ENA) documentation and provide circuit test certificates

The Contractor shall apply for the OLEV workplace charging grant.

The Contractor shall test and commission the installation and shall provide suitable certification for the completed installation.

B15 EARTHING AND BONDING

The Contractor shall design, supply and install a complete earthing and bonding installation in accordance with the IET Regulations and British Standards (BS 7671).

The earth bonding installation shall provide adequate protection to both the electrical installation and the fabric/building components.

The Contractor shall supply and install a main earthing terminal located within the electrical switchroom and each block.

The earthing and bonding system shall be designed to carry the maximum earth fault current that would flow in the event of a fault and for the time required for the protective devices to operate. The system shall carry the fault current safely with no undue rise in temperature or permanent damage occurring. The earth bar shall be provided with an additional spare capacity of 25% for future use.

The Contractor shall supply and install earth bonding conductors to all items of extraneous metalwork including sink units, pipework, ductwork, suspended ceilings, raised floor, etc., by using conductors of size in accordance with the specific requirements of the IET Regulations.

All the incoming mains services including water mains shall be bonded to earth.

The Contractor shall ensure that socket outlets used for IT / data equipment shall incorporate high integrity earthing arrangements and shall ensure that the installation is compliant to BS7671 Clause 543.7; this shall include the reception desk power.

Circuit protective conductors shall be provided comprising of:-

- Steel wire armoured of the sub-main distribution and separate single core copper LSOH sheathed cable.