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ELECTRIC VEHICLE CHARGING SPECIFICATION & REQUIREMENTS

Term: 10-15 years

Location: Market Hill Car Park, Bawtry (south side at the rear of the bus shelter although alternative areas on the Pay & Display car park will also be considered)

No of units: 2 ideally (1 accessible)

Charging speed: 22-50kw minimum

Equipment: to be supplied by the operator

Electrical connections: to be supplied by the operator (flexible)

Equipment ownership (above ground) to remain with the operator

Electrical connection ownership to remain with the Council

(below ground)

Tariff details: to be supplied in all tenders.

Maintenance: to be provided by the operator for the full term.

Hardware/back office requirements: the Council will expect, at a minimum, a quarterly report detailing use, frequency, consumption etc. Tenders should provide specific details of the data that will be provided and if relevant how this can be accessed by the Council.

Future proofing requirements: In light of the length of the contract tenders should specify how they intend to future proof the equipment/ installation over the period of the contract and upgrade the equipment to maintain the performance of the network.

Technology should be Open Charge Point Protocol (OCPP) compliant to allow the chargepoint hardware to be operated by a different changepoint network in the future if necessary.

Concession Model: Revenue sharing is desirable so all tenders should advise of the % offered to the Council

**Unrestricted off-street residential chargepoints**

This section defines the specification for electric and plug-in hybrid electric road vehicle conductive charging equipment with unrestricted (public) access.

Manufacturers or suppliers of proposed charging equipment must demonstrate compliance with the following technical specifications.

Where standards or regulations are mentioned, you must comply with the most current edition at the time of the installation. In cases of apparent inconsistency, the IET Wiring Regulations ([BS 7671:2018](https://shop.theiet.org/bs-7671-2018-requirements-for-electrical-installations-iet-wiring-regulations-18th-edition-blue)+[A2:2020](https://electrical.theiet.org/wiring-matters/years/2020/79-march-2020/bs-76712018plusa1/)) take precedence for electrical installation requirements.

**Installation**

This specification is for the charging equipment only and not the final installation.

But the final installation must be carried out in accordance with:

1. IET Wiring Regulations [BS 7671:2018+A2:2020](https://electrical.theiet.org/wiring-matters/years/2020/79-march-2020/bs-76712018plusa1/)
2. The recommendations of the [IET Code of Practice for Electric Vehicle Charging Equipment Installation](https://shop.theiet.org/code-of-practice-for-electric-vehicle-charging-equipment-installation-4th-edition).
3. All other applicable standards.

Charging equipment must be installed in accordance with BS 7671.

Where a means of earthing or supplementary earth electrodes are provided, they must comply with BS 7671 and [BS 7430](https://shop.bsigroup.com/ProductDetail?pid=000000000030322344), and consider any requirements of [Energy Networks Association (ENA) Engineering Recommendation G12/4](http://dcode.org.uk/assets/uploads/ENA_EREC_G12_Issue_4_Amendment_1__2015_.pdf) if applicable

The electrical supply of the final installation must allow the charging equipment to operate at full rated capacity. Where local supply constraints prevent this, the charging equipment shall be classified according to actual output capacity.

**Charging equipment**

**Common requirements**

Charging equipment must be CE marked in accordance with [European Commission (EC) Directive 768/2008/EC](https://www.legislation.gov.uk/eudn/2008/768/contents) and meet all relevant UK legislation at the time.

Details of any precautions necessary to ensure safe operation with active implantable medical devices must be clearly displayed on the charging equipment.

Charging equipment must be compliant with:

1. The relevant parts of [BS EN 61851](https://landingpage.bsigroup.com/LandingPage/Series?UPI=BS%20EN%2061851).
2. [Electromagnetic Compatibility Regulations 2016](https://www.legislation.gov.uk/uksi/2016/1091/contents).
3. [Electrical Equipment (Safety) Regulations 2016](https://www.legislation.gov.uk/uksi/2016/1101/contents) (as amended).

BS EN 61851 Mode 1 or Mode 2 charging equipment is not compliant with this specification.

Charging equipment must use either:

* socket outlets (BS EN 61851-1 case A2 or B2 connection)
* tethered cables (BS EN 61851-1 case C connection)

Where there are multiple outlets, the charging equipment is classified according to the output power delivered at each outlet with all outlets operating simultaneously.

Where multiple connectors are associated with a single outlet, only one connector shall be active – and all other connectors inactive – when the outlet is in use.

**DC charging equipment**

DC charging equipment must:

1. Be compliant with [BS EN 61851-23:2014](https://shop.bsigroup.com/ProductDetail/?pid=000000000030343862).
2. Use BS EN 62196 Mode 4 charging.

**User interface**

Charging equipment status must be indicated using lights, light-emitting diodes (LEDs) or display.

When installed in an unrestricted (public) location, charging equipment must:

* be fitted with a payment or access control mechanism (as appropriate)
* display instructions for payment or access (as appropriate) and equipment operation
* allow use on an ad hoc (or pay-as-you-go) basis without requiring the user to enter into an ongoing contract or membership scheme with the operator concerned (as required under the [Alternative Fuels Infrastructure Regulations 2017](https://www.legislation.gov.uk/uksi/2017/897/contents/made)) and without limiting the user to a maximum number of charges. When deciding how to achieve this, it should be assumed that all users will have a debit or credit card and a mobile phone

**Specific data requirements**

When installed in an unrestricted (public) location, charging equipment must allow remote data collection. Each chargepoint outlet must measure energy supplied and output this both to:

* the display (or other receipt)
* a remote data acquisition system

If the outlet uses an [electricity meter that is not approved under the Measuring Instruments Directive (MID)](https://www.gov.uk/guidance/mid-approved-gas-and-electricity-meters), details of metering and accuracy must be provided.

**Evaluation**

As with any tender, suppliers will be evaluated against a range of cost and quality criteria. In terms of quality criteria, chargepoint operators may seek to differentiate themselves based on performance metrics (such as network uptime) or the added value they can offer through partnering with the authority on network planning, consultancy or public engagement and local marketing.

30th September

Bawtry Town Council