

## Company Directive

### STANDARD TECHNIQUE: SD5G (Part 1)

#### Relating to the Connection of Electric Vehicle Charging Points with a Capacity $\leq 32A$ per phase

##### Policy Summary

This document defines Company policy for processing notifications and applications from customers or installers for the connection of individual or multiple Electric Vehicle Charging Points each with a rating  $\leq 32A$  per phase onto WPD's low voltage distribution system.

**Author:** Seth Treasure

**Implementation Date:** September 2018

**Approved by**



Policy Manager

**Date:**

5 September 2018

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## **IMPLEMENTATION PLAN**

### **Introduction**

This document details the approach for managing Electric Vehicle Charging Point installation notifications and applications for individual or multiple equipment (installed beyond the same point of supply) rated up to 32A per phase onto Western Power Distribution's (WPD's) distribution network.

### **Main Changes**

The original document ST: NC1AA has been withdrawn and replaced with two separate documents relating to the installation of car charging installations. Standard Technique: SD5G (Part 1) will detail the required processes and requirements for installations of single or multiple Charge Points each with an individual rating of up to 32A per phase. Standard Technique: SD5G (Part 2) details the processes and requirements for installations where any charge point has a rating > 32A per phase.

### **Impact of Changes**

Standard Technique: SD5G (Part 1) includes a simplified connection procedure for the analysis of Electric Vehicle Charging Point installations where each item has a rating  $\leq$  32A per phase.

### **Implementation Actions**

Team Managers shall ensure that appropriate staff are aware of, and follow, the requirements of this document.

### **Implementation Timetable**

This Standard Technique shall be implemented with immediate effect for new or modified connections involving Electric Vehicle Charging Points.

Where there is a discrepancy between different policies, this policy shall take precedence.

## REVISION HISTORY

Document Revision & Review Table		
Date	Comments	Author
September 2018	<ul style="list-style-type: none"><li>ST:NC1AA/1 has been removed and replaced by this document</li></ul>	Seth Treasure

## **1.0 INTRODUCTION**

- 1.1 This Standard Technique describes WPD policy for processing notifications and applications from customers, or their nominated installer, for the installation and connection of individual or multiple Electric Vehicle (EV) Charging Points (installed beyond the same point of supply) each rated up to 32A per phase to WPD's low voltage distribution system.
- 1.2 WPD will use the information provided by the customer or installer to assess the suitability of the existing network to supply the electric vehicle charging infrastructure. Suitability will be based upon the network's susceptibility to voltage fluctuations, flicker and harmonic voltage distortion, as well as ensuring it is kept within the designated thermal and voltage limits.
- 1.3 This Standard Technique should be read in conjunction with ST:SD5A, ST:SD5C, ST:SD5E, ST:SD5K, ST:SD5O, ST:SD5R, ST:SD6J, ST:TP21E, and ST:NC1P.
- 1.4 The installation of multiple Electric Vehicle charging Points with a point of supply (POS) at high voltage (HV) is outside of the scope of this document. However, the connection requirements for a limited number of EV charging points with a POS at HV are detailed with the Part 2 version of SD5G.

## **2.0 IET CODE OF PRACTICE FOR ELECTRIC VEHICLE CHARGING POINT EQUIPMENT INSTALLATION**

- 2.1 The IET Code of Practice has been created to assist the installer in ensuring the installation of electric vehicle charging equipment complies with the relevant requirements of BS7671:2008 (as amended) and the Electricity Safety, Quality and Continuity Regulations 2002 (as amended).
- 2.2 The Code of Practice requires that the installer of any electric vehicle charging infrastructure shall:
  - (a) Follow the Notification process when there are no identified adequacy or safety concerns with the property's existing service equipment and where the post installation maximum demand is less than 60 amps.

The notification shall be sent by the installer directly to the DNO within one calendar month of installation, using the form in Appendix E.

or

- (b) Follow the Application process when there is identified adequacy or safety concerns with the property's existing service equipment or where the post installation maximum demand is greater than 60 amps.

WPD's Application form is detailed within Appendix F.

### **3.0 CONNECTIONS**

- 3.1 Connections for Electric Vehicle Charging Points shall be designed in accordance with ST: SD5A.
- 3.2 Connections including Electric Vehicle Charging Points shall be designed with a network impedance that meets the requirements of this document at the point of common coupling (PCC).
- 3.3 Connections including Electric Vehicle Charging Points shall not be connected via a service loop. *See clause 10.5.*
- 3.4 Where a connection supplies more than one charging point no diversity shall be allowed unless load control is provided and verified by the charging point installer to prevent the service and cut-out from being overloaded.

### **4.0 MINIMUM CUSTOMER INFORMATION**

- 4.1 The installer shall submit a completed Notification form (Appendix E) or a completed Application form (Appendix F).
- 4.2 Installers not meeting the minimum information requirements shall be contacted to provide the missing information.

### **5.0 CONNECTION PROCEDURE**

- 5.1 The Records Team will complete an initial assessment of the information supplied with the charging point notification and, where the charging point maximum demand is less than or equal to 16A single phase and where the overall demand is less than or equal to 60A, will record the relevant information within CROWN (Appendix D).
- 5.2 For any other charging point notifications and for all charging point applications, the Records Team will attach the forms to an unclassified connection enquiry marked **\*\*EV\*\*** and pass to the local teams.
- 5.3 The local Planner will assess the connection;
- When the total after diversity maximum demand of the connection exceeds 60 amps per phase or
  - When the adequacy of the connection is in doubt or
  - When the rating of the electric vehicle charger is greater than 16 amps
- 5.4 The installation will be accepted if;
- The service conductors, cutout and metering equipment have sufficient thermal capacity and;
  - The connection is not made via a looped service (either via the first cut-out or the subsequent looped cut-outs).
  - The impedance at the point of common coupling satisfies the requirement detailed within Table 2 for an individual installation or for multiple installations the impedance requirement as determined within the "Impedance Calculator".

- 5.5 Any Electric Vehicle Charging Point Notification or Application connecting to a network which fails to meet the design requirements detailed above will require a reinforcement scheme to be designed and a connection offer to be made to the applicant. This may or may not include chargeable costs, depending on the work required. The installer will be required to disconnect the charge point until the required reinforcement has been completed.
- 5.6 A list of letters for the interaction with installers / customers is provided within [N:\Connections\Guidance & Overview\Low Carbon Technology\EV Letter Templates](#)

## 6.0 EARTHING ARRANGEMENTS

- 6.1 In accordance with The IET Wiring Regulations (Eighteenth Edition) BS 7671 and ST:TP21E, “ A PME earthing facility shall not be used as the means of earthing for the protective conductor contact of a charging point located outdoors or that might reasonably be expected to be used to charge a vehicle located outdoors unless one of the following methods is used” :-
- The charging point forms part of a three phase installation where all of the demand including the charge point/s are balanced over all of the available phases.
  - The car charging installation includes an earth electrode of sufficient resistance to ensure that the Rise of Earth Potential (ROEP) will be limited to a maximum of 70 volts during a broken neutral event.
  - Protection against electric shock is provided by a device which disconnects the charging point from the live conductors of the supply and from protective earth within 5 s in the event of a broken neutral.
- 6.2 In view of the possible future conversion of SNE networks to PME, a SNE Earth Terminal shall not normally be offered for a supply solely for the Charging of Electric Vehicles. A SNE earth terminal may only be provided to a Charging Pillar when the supply originates from a dedicated distribution transformer which will guarantee the complete separation of the Neutral and Earth conductors.
- 6.3 TT earthing arrangements shall be utilised by electric vehicle charging pillars that do not meet the PME requirements specified in clause 6.1.
- 6.4 The customers buried TT earthing system shall be segregated from any WPD buried earthing systems (including buried LV metalwork and traditional Paper Insulated Lead Covered cables) by the required distance detailed in Table 1:

<b>Connection:</b>	<b>Single Phase or Unbalanced 3 Phase Connection</b>	<b>Balanced Three Phase Connection</b>
Minimum Segregation	3.6m	0.3m

**Table 1 – Segregation requirement between Earthing Zones**

6.5 The electric vehicle charge point (whole installation) shall be segregated (above ground) from metalwork connected to PME or SNE earthing systems by at least 2.5m e.g. metallic street lights and steel frame buildings.

## 7.0 IMPEDANCE REQUIREMENTS FOR ELECTRIC VEHICLE CHARGEPOINTS

7.1 Individual connections of electric vehicles shall comply with the requirements of Table 2 detailed below. The values represented are required at the Point of Common Coupling (PCC).

Equipment Rating (A)	Equipment rating (kVA)			Minimum short circuit power (kVA)			Minimum fault current (A)			Maximum source impedance at PCC (ohms)		
	1 phase	split phase	three phase	1 phase	split phase	three phase	1 phase	split phase	three phase	1 phase (1)	split phase (2)	three phase (3)
16	3.680	7.36	11.085	55.200	110.4	166.277	240	240	240	0.958	1.917	0.962
17	3.910	7.82	11.778	58.650	117.3	176.669	255	255	255	0.902	1.804	0.906
18	4.140	8.28	12.471	62.100	124.2	187.061	270	270	270	0.852	1.704	0.855
19	4.370	8.74	13.164	65.550	131.1	197.454	285	285	285	0.807	1.614	0.810
20	4.600	9.20	13.856	69.000	138	207.846	300	300	300	0.767	1.533	0.770
21	4.830	9.66	14.549	72.450	144.9	218.238	315	315	315	0.730	1.460	0.733
22	5.060	10.12	15.242	75.900	151.8	228.631	330	330	330	0.697	1.394	0.700
23	5.290	10.58	15.935	79.350	158.7	239.023	345	345	345	0.667	1.333	0.669
24	5.520	11.04	16.628	82.800	165.6	249.415	360	360	360	0.639	1.278	0.642
25	5.750	11.50	17.321	86.250	172.5	259.808	375	375	375	0.613	1.227	0.616
26	5.980	11.96	18.013	89.700	179.4	270.200	390	390	390	0.590	1.179	0.592
27	6.210	12.42	18.706	93.150	186.3	280.592	405	405	405	0.568	1.136	0.570
28	6.440	12.88	19.399	96.600	193.2	290.984	420	420	420	0.548	1.095	0.550
29	6.670	13.34	20.092	100.050	200.1	301.377	435	435	435	0.529	1.057	0.531
30	6.900	13.80	20.785	103.500	207	311.769	450	450	450	0.511	1.022	0.513
31	7.130	14.26	21.477	106.950	213.9	322.161	465	465	465	0.495	0.989	0.497
32	7.360	14.72	22.170	110.400	220.8	332.554	480	480	480	0.479	0.958	0.481

**Table 2 – Minimum Fault level/Maximum Impedance at PCC for R<sub>sce</sub>=15**

Notes; (1) Phase to Neutral impedance  
 (2) Phase to Phase impedance  
 (3) Phase impedance (line impedance)

7.2 Connections for more than one installation of electric vehicle charger shall comply with the impedance requirements detailed by using the “Impedance Calculator” found via the following [Link](#).

**Note:** Where the Electric Vehicle Charge Point has an A.C. output the conversion to D.C. is made within the Electric Vehicle itself, therefore the Harmonic Emissions are produced by the vehicle and are subject to the make and model.

It has been determined that where the capacity of the Electric Vehicle Charge Point is rated  $\leq 32A$  per phase (A.C.), the installation will be compliant with BSEN 61000-3-12 and BSEN 61000-3-11 regarding Harmonics and Flicker respectively.

## **8.0 DEMAND REQUIREMENTS FOR ELECTRIC VEHICLE CHARGEPOINTS**

- 8.1 When undertaking an assessment of the service and cut out (sole use equipment) for thermal capacity, no diversity factor shall be applied.
- 8.2 When undertaking an assessment of the network capacity (transformers and mains conductors) for thermal capacity, the diversity factor as detailed within Standard Technique: SD5A shall be applied. This is currently set at a 50%.
- 8.3 Customer load management schemes for electric vehicle charge points will be accepted if the principles of Standard Technique: SD1E (ENA ER G100) are followed.

## **9.0 POWER QUALITY REQUIREMENTS FOR ELECTRIC VEHICLE CHARGING POINTS**

- 9.1 The installation shall comply with the requirements of Energy Network Association Engineering Recommendation G5 regarding Harmonic emissions.
- 9.2 The installation shall comply with the requirements of Energy Network Association Engineering Recommendation P28 regarding Voltage Fluctuations (Flicker).
- 9.3 The installation shall comply with the requirements of Energy Network Association Engineering Recommendation P29 regarding Voltage Unbalance.

**Note:** By following the processes within this document, the installation will be deemed compliant with the above Engineering Recommendations.

## **10.0 REINFORCEMENT FOR ELECTRIC VEHICLE CHARGEPOINTS ( $\leq 32A$ per phase) <sup>(1)</sup>**

- 10.1 Where it has been determined that the installation of an electric vehicle charge point will thermally overload sole use items – transformer, conductors, cut out<sup>(2)</sup>, metering tails or meter<sup>(3)</sup> the item(s) of concern shall be upgraded to a sufficient capacity and due to the item(s) being sole use the customer shall fully fund the required reinforcement works.
- 10.2 If a sole use item (cut out, service conductor) requires reinforcement works and the shared use main also requires reinforcement works due to thermal constraints. The reinforcement cost of upgrading the shared use main shall be apportioned in accordance with ST: NC1P. The reinforcement costs shall be split across Budget Code 10 and 19.
- 10.3 If the sole use items (cut out or service conductors etc.) do not require reinforcement works but the shared use main does need upgrading. The cost to upgrade the shared use items shall be fully funded by WPD <sup>(4)</sup> (Socialised cost recovered via DUOS charges).
- 10.4 If the impedance at the Point of Common Coupling is insufficient to ensure that the connected device does not produce harmonic emissions greater than the accepted levels detailed within BSEN 61000-3-2 or BSEN 61000-3-12. WPD will fully fund the required reinforcement works <sup>(4)</sup> subject to the sole use items being sufficient, however if a sole use item also requires reinforcement works. The reinforcement of the shared use items shall be apportioned in accordance with ST: NC1P. Where WPD is to fully fund reinforcement works the costs will be allocated to Budget Code 12.



- 10.5 Services that have been looped via the incoming terminals of a cutout shall be removed at WPD's cost and shall be allocated to Budget Code 49 – Service Replacement. Where a service has been looped by an alternative method, the connection shall be analysed for compliance with thermal and voltage requirements (SD5A and SD5K etc.) and each customer connection shall be individually fused.
- 10.6 WPD will only contribute to required reinforcement costs where the connection is to an existing domestic (profile class 1-2) or small business (profile class 3-4) property with whole current metering.
- 10.7 Where reinforcement works are required for new connections or for properties with a profile class 5-8 with CT metering, any required reinforcement works shall be fully funded by the customer / installer.

*Notes:*

- (1) Western Power Distribution's policy regarding the charging methodology for the reinforcement of the distribution system is detailed within Standard Technique: NC1P.*
- (2) Fixed price costings can be utilised for simplistic reinforcement works (cut out changes etc.), the fixed costs can be found via Standard Technique: CS4E.*
- (3) Where the meter or meter tails of an installation are deemed to be thermally overloaded, the customer's supplier shall be informed. The installation will remain disconnected until the supplier has confirmed that reinforcement works have been completed.*
- (4) WPD will contribute towards the cost of any required reinforcement works where the installed items / system comply with the Power Quality standards BSEN 61000-3-2 or BSEN 61000-3-12 relating to Harmonics and BSEN 61000-3-3 or BSEN 61000-3-11 relating to Flicker. In addition the rating of the vehicle charger is rated  $\leq 32$ amps per phase.*

## **11.0 ARRANGEMENTS FOR FUEL FILLING STATIONS**

- 11.1 A separate supply shall not be provided to an Electric Vehicle Charge Point installation positioned (entirely or partially) within the boundary of a Fuel Filling Station. The supply shall be fed via the existing Fuel Filling Station Connection Point to ensure that normal and emergency isolation is provided at one position only.
- 11.2 The installer shall ensure that the Electric Vehicle Charge Point installation including the full extent of connected cable and charging vehicle shall not be positioned within the noted hazardous area associated with a Fuel Filling Station forecourt.

## 12.0 MULTIPLE CONNECTIONS

12.1 WPD normally provides a single point of connection to each site or premises but in some cases the customer may require more than one connection, for example, where:

- enhanced security is required
- the site is large and fragmented and there is no electrical interconnection between separate parts of the site

12.2 With the exception of fuel filling stations, where EV charge points are proposed one or more additional points of connection may also be requested to supply the charge points, however, multiple connections introduce a number of challenges, including:

- a risk of paralleling WPD's connections through the customer's network
- complex earthing / bonding issues
- added complexity (e.g. means of electrically isolating the site under emergency conditions or when work is carried out)

### (a) Risk of Paralleling:

It is essential that the multiple connections are not paralleled through the customer's network. If this were to occur this could adversely affect the protection performance and/or cause current to flow through the customer's network. This flow of current could overload cables, switchgear etc. or give rise to unexpected power flow through the metering.

In order to prevent the customer's network from being paralleled the customer shall either:

- Physically segregate the network supplied by each connection so that interconnection is impossible.
- Fit interlocking to prevent paralleling. This interlocking shall either consist of mechanical interlocking (without over-ride facilities) and/or fail-safe electrical (hard wired) interlocking. Where electrical interlocking is provided any mechanical closing facilities must be disabled to prevent it from being bypassed.

Software interlocking provided by programmable logic controllers (PLCs), programmable relays or equivalent are not acceptable.

### (b) Complex Earthing / Bonding:

The earthing systems of each connection may be derived from different earth electrodes / earthing systems. This could cause differences in potential between items of equipment, including charge points, connected / bonded to different connections, if adequate precautions are not taken.

Precautions shall include either:

- Ensuring metalwork and items of equipment that are connected / bonded to the earth terminal of different connections are physically segregated from each other to prevent anyone touching both items of equipment at the same time. Where this approach is used any item of equipment that could possibly transfer the potential from one earth zone to another must be removed / isolated (e.g. pipes, wiring, fences, communication cables etc.); or
- Ensure the earthing systems associated with each connection are common (i.e. physically bonded together). Where this approach is taken each connection must utilise the same type of earthing and it is not acceptable to bond different earthing types together. The only exception is that a PME connection may be bonded to a “SNE connection derived from a CNE network” since both options are considered to be a type of TN-C-S. Any such bonding must be rated for the current that is expected to flow through it. For LV installations the bonding shall satisfy the requirements for main equipotential bonding within the IET Wiring Regulations (BS7671).

All connections that are bonded together shall comply with the requirements of Section 6.

Multiple connections provided at different voltages (e.g. one connection provided at 11kV and one at LV) should be avoided, where possible. Where this cannot be avoided precautions shall be taken to prevent earth potential rise caused by faults on the high voltage network from causing danger in the low voltage system. The simplest way of achieving this is to physically segregate the buildings / metalwork / equipment supplied by each connection.

Further guidance on earthing is included in ST: TP21D.

(c) Isolation Requirements:

Where multiple connections are provided, the means of disconnecting and isolating the customer’s network will be more complex than normal. Appropriate schematic drawings and labels / notices shall be provided at each connection point that clearly state i) that more than one connection point is provided and ii) describe where the other points of disconnection / isolation are.

## **13.0 IDNO NETWORKS**

13.1 The responsibility for the connection of EV charge points within an IDNO network lies with the IDNO and not with WPD.

13.2 Under the requirements of ENA EREC G88 IDNOs are obliged to provide WPD with technical details of the disturbing load that is connected to, or proposed to be connected to, their network. In this context disturbing load is demand or generation that is outside of the scope of stage 1 of ENA EREC G5, P28 or P29 (i.e. typically equipment rated > 75A per phase).

CONNECTING AN ELECTRIC VEHICLE CHARGEPOINT TO AN LV NETWORK

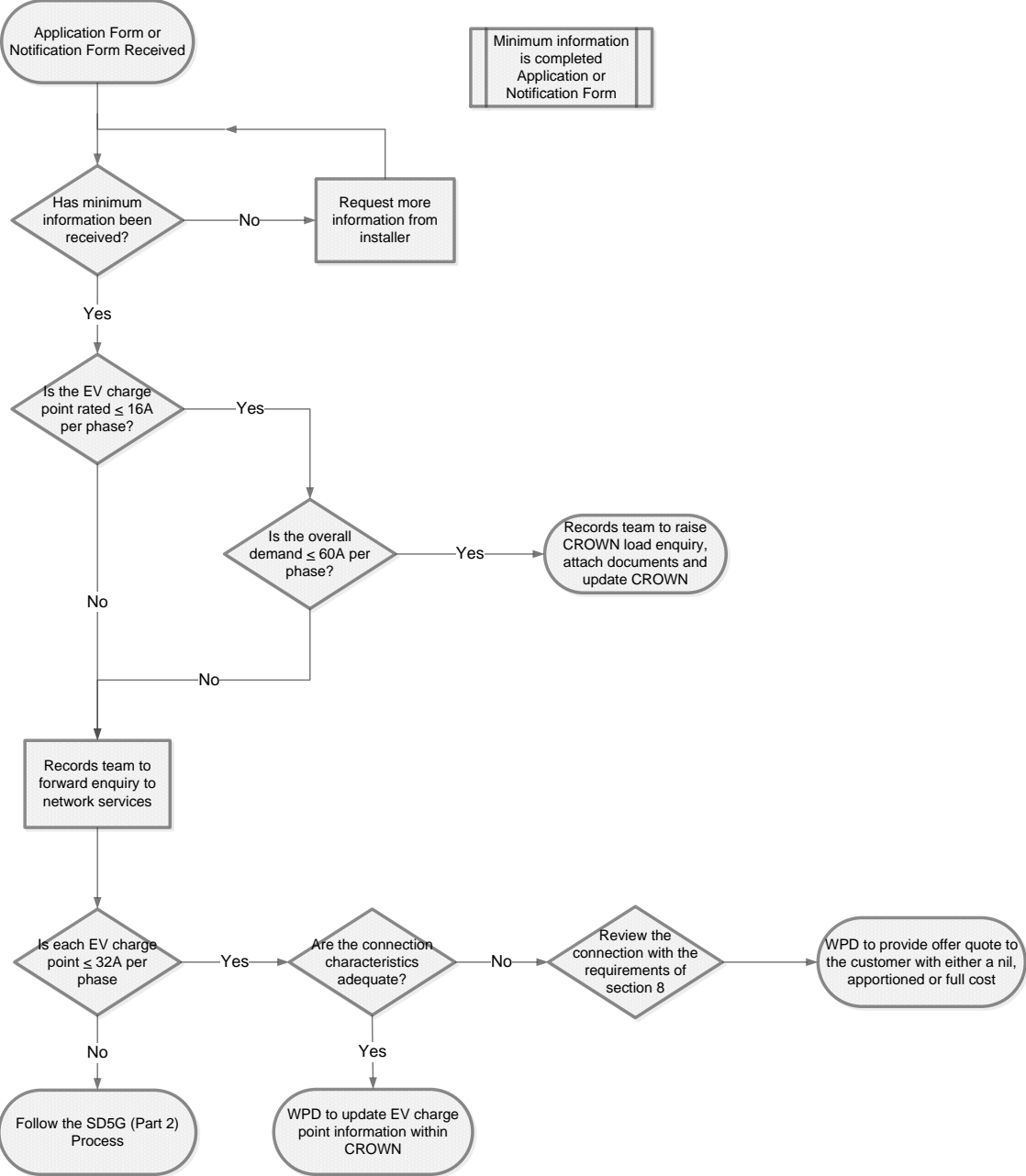


Figure 1 – EV Charge point Connection Process

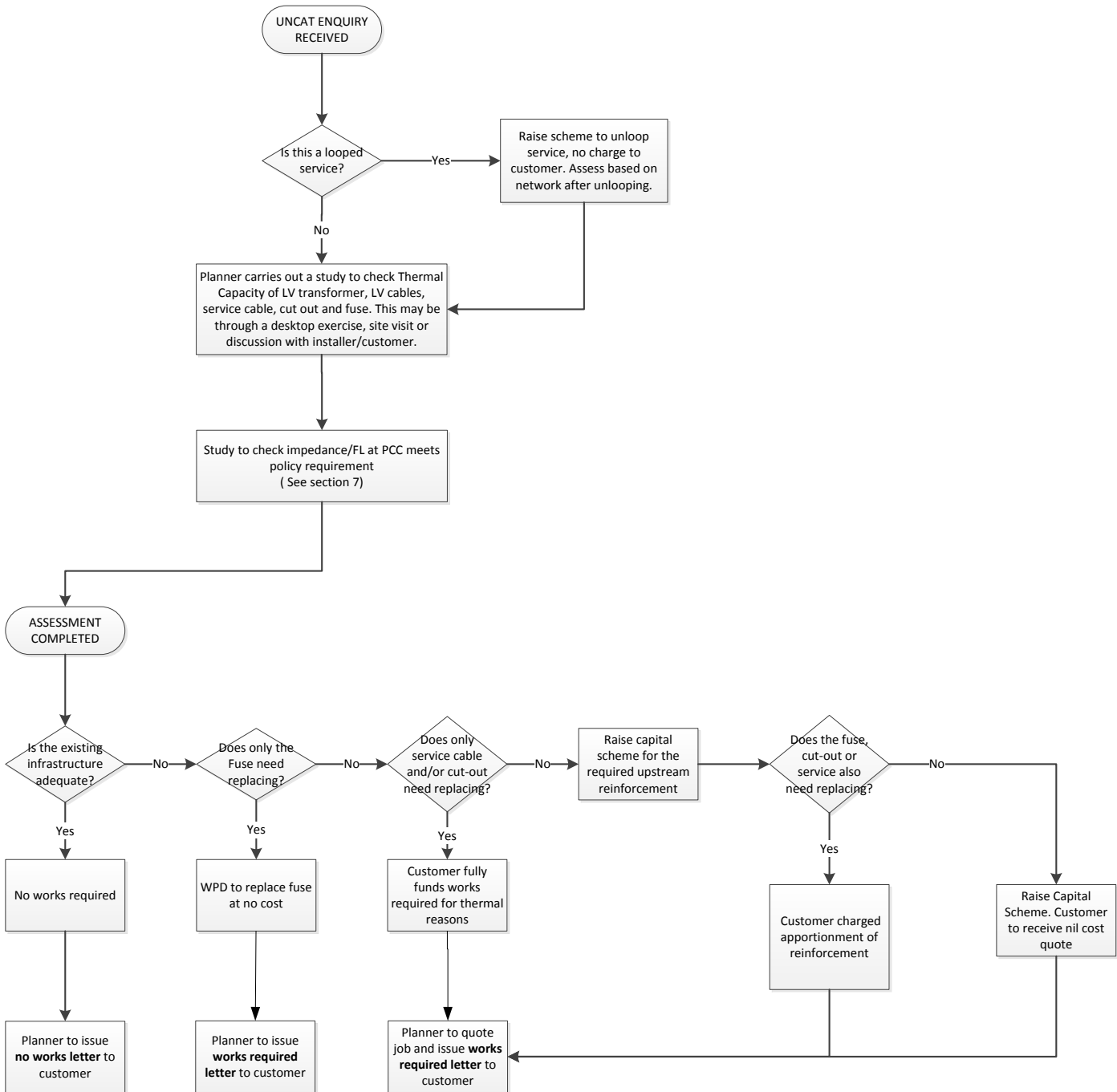


Figure 2 – WPD EV Charge Point Charging Methodology

**A.1 RECORDING INFORMATION IN CROWN**

- A.1.1 When an EV charge point installation notification form is received by the WPD,NewSupplies, WPD,NewSuppliesMids, or WPD,NewSuppliesWales mailbox, the form shall be checked for minimum information.
- A.1.2 The Records Team will raise an unclassified connection enquiry and attach all documentation to the enquiry.
- A.1.3 For notifications with Electric Vehicle Charging Equipment rated  $\leq 16A$  per phase, the Records team will record the presence of a charge point and its maximum demand (in kW) under the relevant customer MPAN (Appendix D).
- A.1.4 The conversion of demand from Amperes to Power on the LV network shall use 230VAC as a base:
- A.1.5 For notifications with Electric Vehicle Charging Equipment over 16A per phase and for all applications or new connections, the Records Team will pass the enquiry over to the Planning Team for the area.

Equipment Rating (A)	Equipment rating (kW)		
	1 phase	split phase	three phase
1	0.230	0.46	0.693
2	0.460	0.92	1.386
3	0.690	1.38	2.078
4	0.920	1.84	2.771
5	1.150	2.30	3.464
6	1.380	2.76	4.157
7	1.610	3.22	4.850
8	1.840	3.68	5.543
9	2.070	4.14	6.235
10	2.300	4.60	6.928
11	2.530	5.06	7.621
12	2.760	5.52	8.314
13	2.990	5.98	9.007
14	3.220	6.44	9.699
15	3.450	6.90	10.392
16	3.680	7.36	11.085

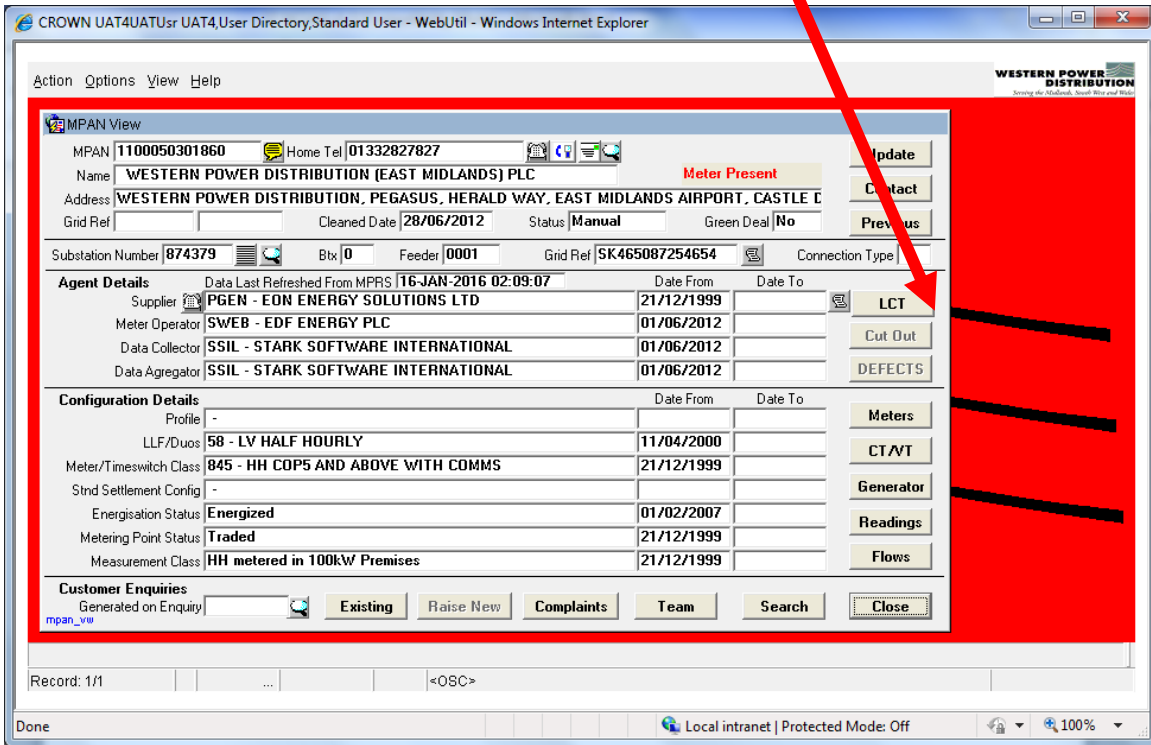
- A.1.6 For notifications, the Planner will assess the network and if acceptable, the Planner will record the connected charge points in CROWN (Appendix D).
- A.1.7 For cases where a supply upgrade is required, the Planner will raise a quotation and issue to the customer. This will also be required for non-chargeable schemes, where a nil-cost quote will be issued.

**A.2 MONITORING CHARGEPOINT LEVELS**

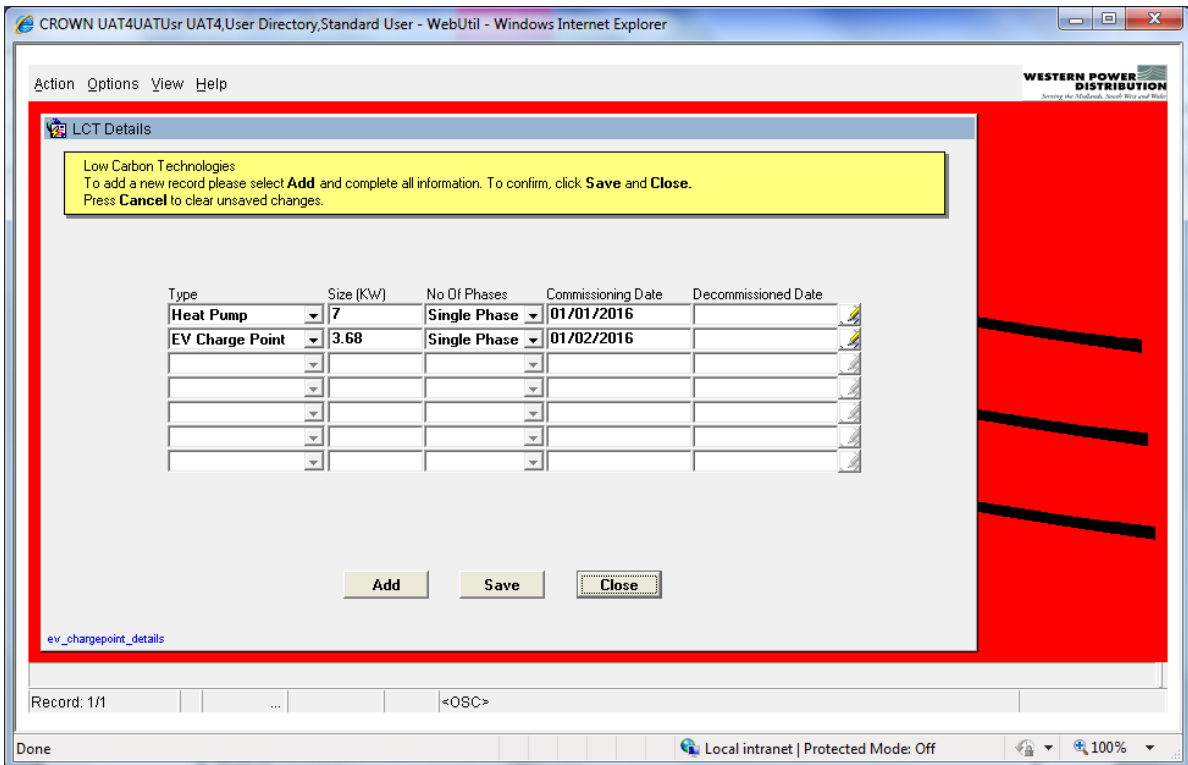
- A.2.1 The Policy Team shall monitor and review the levels of electric vehicle charge points connected on the LV network using the CROWN reporting function and will inform Network Services of Low Carbon Technology hot spots as per ST:SD1D.

RECORDING ELECTRIC VEHICLE CHARGEPOINT INFRASTRUCTURE ON CROWN

1) Find the MPAN record for the customer and click on the 'LCT' button.

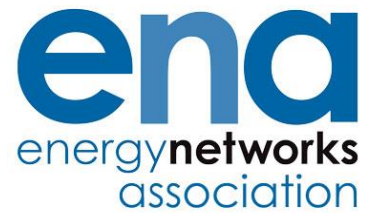


2) Insert the details for the EV Charge point, including commissioning date.



3) Save the record

# Notification



## Notification to DNO of installation of dedicated electric vehicle charging equipment

This form must be sent by the installer to notify the DNO directly. For help identifying the correct DNO and their contact details please visit

<http://www.energynetworks.org/electricity/futures/electric-vehicle-infrastructure.html>

Please note that an 'adequacy of the supply' assessment, highlighted in the IET Code of Practice, is required prior to any EV charge point installation. This requires a load survey to calculate the new post diversity **Maximum Demand (MD)**, including the new electric vehicle charging equipment at the property.

DNO should be contacted **prior to installation** to establish the property's supply capacity in the following instances;

- Where there is an identified issue with adequacy or safety concern with the property's existing service equipment
- Where the property's MD (post-installation) will be **greater than 60A (13.8kVA)**

Date of installation		DD/MM/YYYY
Full address of installation	Address line 1	
	Address line 2	
	Town	
	Postcode (if known)	
<p style="text-align: center;"><b>Compulsory</b></p> 21-digit Meter Point Administration Number (MPAN) or the 11-digit Meter Point Reference Number (MPRN) in Northern Ireland for the meter to which the electric vehicle charging equipment is connected. Digits 9 and 10 identify the Distribution Network Operator		xx – xxx – xxx- <u>xx</u> –xxxx –xxxx –xxx
<p style="text-align: center;"><b>Maximum Demand</b></p> Maximum demand (load) of property including EV installation, concluded from a Load Survey		Amps
<p style="text-align: center;"><b>Property's Service Capacity</b></p>		Amps
<p><b>Has the service capacity been verified by the DNO?</b> You must verify the service capacity with the relevant DNO <u>prior to installation</u> if MD &gt; 60 Amps</p>		Yes / No If yes, give DNO reference:
<p style="text-align: center;"><b>Details of New Installation</b></p> Maximum demand from all electric vehicle charging equipment connected to the above meter, including any previously connected charging equipment that is available for use or where multiple charge points have been installed		Amps



Earthing arrangements installed – Detail the final earthing arrangements that have been applied for the installation of the charging point as per BS 7671 e.g. TT		
Installer	Name	
	Telephone / email	
Charging point owner	Name	
	Telephone / email	
	Address (if different from installation address)	

**For the following questions, please choose from the options given**

Type of installation	<ul style="list-style-type: none"> <li>- Private – Domestic</li> <li>- Private – Non-domestic</li> <li>- Public access e.g. car park, on street, please attach location map to email submission</li> </ul>	
Is the property on a looped service?	Yes / No / Don't know	
Has DNO been contacted prior to installation for any other reason? e.g. new connection, concerns regarding adequacy of service equipment	Yes / No If Yes, give DNO reference:	

## WPD ELECTRIC VEHICLE CHARGEPOINT APPLICATION FORM

Use this form when WPD needs to be contacted **prior to installation**

<b>CROWN Ref. No.:</b> (if applicable) .....	<b>MPAN<sup>1</sup> (21/13-digits):</b> .....
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<b>Customer/Charge point Owner</b>	.....
<b>Address</b> (where equipment is to be installed)	..... ..... ..... .....

<b>Installer</b>	.....
<b>Contact Details</b>	..... ..... ..... .....

Period	Existing Maximum Demand <input type="checkbox"/> kW/ <input type="checkbox"/> kVA	Additional Maximum Demand <input type="checkbox"/> kW/ <input type="checkbox"/> kVA	Required Maximum Capacity <sup>2</sup> (kVA)
Day <sup>3</sup>	.....	.....	.....
Night <sup>4</sup>	.....	.....	

<b>Proposed EV Chargepoint Details</b>	
Nominal Voltage	.....V
Phases	<input type="checkbox"/> 1 phase, <input type="checkbox"/> split phase or <input type="checkbox"/> 3 phase
Make	.....
Model	.....
Technology type	A.C. Output <input type="checkbox"/> , Other <input type="checkbox"/>
Rating or Aggregate Rating	..... <input type="checkbox"/> kW/ <input type="checkbox"/> kVA/ <input type="checkbox"/> A

<b>Signed on behalf of customer</b>	.....
<b>Please PRINT name</b>	.....
<b>Date</b>	.....

<sup>1</sup> Unique identifying number for the electricity meter at a property.

<sup>2</sup> The Maximum Capacity required after diversity.

<sup>3</sup> Day = 7am to 11pm.

<sup>4</sup> Night = 11pm to 7am.

## **APPENDIX G**

### **SUPERSEDED DOCUMENTATION**

This Document supersedes ST:NC1AA/1, dated April 2017 which has now been withdrawn.

## **APPENDIX H**

### **ASSOCIATED DOCUMENTATION**

Electricity Act 1989 (as amended by the Utilities Act 2000), ESQCR 2006, ST:SD5A, ST:SD5K, ST:SD5O, ST:SD6J, ST:TP21E and ST:NC1P.

The Code of Practice for Electric Vehicle Charging Equipment Installation

ENA ER G5

ENA ER P28

ENA ER P29

## **APPENDIX I**

### **KEY WORDS**

EV, Notification, Application, Electric Vehicle Charging Point