

Checklists for dwelling installations

(Form to be included with forms for certification given to the person ordering the work.)

Arrangements prior to installation – Dwelling installations				
CoP Ref	CHECK	YES	NO	N/A
3.2	Is the existing supply adequate for the additional demand?			
3.3	Has the earthing arrangement of the incoming power supply been established?			
	Are the existing earthing and bonding arrangements compliant with BS 7671?			
6.5 and 6.6	Is the supply TN-C-S (PME) or TN-S?			
6.4	Is the supply TT?			
6.7 and 6.8	If TN-C-S or TN-S, have the precautions necessary been identified? (for example, isolating transformer, electrical separation, voltage operated trip, additional electrode system, adopting TT)?			
5.1.2 and 6.9	Has a simultaneous contact assessment been carried out? See form B1			
3.6	Has the installer reviewed the installation instructions provided by the charging equipment manufacturer?			
3.7	Has planning permission and/or Building Regulations approval been granted for the electric vehicle charging equipment installation?			
3.9	Have any constraints or difficulties of the proposed installation been discussed and agreed with the client?			
	Have any necessary repairs to the existing installation been agreed with the client?			

Physical installation requirements – Dwelling installations

CoP Ref	CHECK	YES	NO	N/A
4.2	Has the charging equipment been installed in an optimum location with respect to the intended vehicle parking position?			
4.3	Has the electric vehicle charging equipment been installed in a location to minimize the likelihood of vehicle impact damage?			
	If required, have protective barriers been provided?			
4.4	Are the main operating controls and any socket-outlets between 0.75 m and 1.2 m above the ground, and displays between 1.2 and 1.4 m above ground?			
4.5	Is there sufficient space around the charging equipment to open all doors and covers?			
4.6	Is there sufficient space around the charging equipment for ventilation and cooling purposes?			
4.7	Have all trip hazards been considered and, where possible, avoided?			
4.9	Have any BS 1363 socket-outlets been labelled as electric vehicle connecting points?			

Electrical installation requirements – Dwelling installations

CoP Ref	CHECK	YES	NO	N/A
	Pre-work survey of installation carried out including: <ul style="list-style-type: none"> rating and condition of existing equipment suitability for additional load earthing and bonding 			
	Pre-work tests of installation carried out including: <ul style="list-style-type: none"> earth continuity, polarity and insulation resistance earth fault loop impedance operation of RCDs 			
	Isolation of installation			
	Precautions taken to prevent inadvertent energizing			
	Defects in existing installation identified and notified to the client			
	Electrical Installation Certificate to hand, with preliminaries complete, including signatures for design			
	Installation isolated and precautions to prevent inadvertent switching on taken			
9	Preceding testing, inspection carried out on disconnected installation			
9	Inspections carried out as per BS 7671 Schedule of Inspections			
9	Schedule of Inspections completed			
9	Dead tests carried out as required by BS 7671 <i>prior to</i> energizing, and appropriate parts of the test schedule completed			
9	Remaining tests carried out as required by BS 7671 <i>after</i> energizing, and appropriate parts of the test schedule completed			
9	Electrical Installation Certificate completed, complete with schedule of inspections and schedule of test results			
9	Copy of certificates issued to the person ordering the work			
9	Customer advised in writing of any defects in the electrical installation not rectified			
9	Competent person scheme provider notified of completion			
9.3	Correct operation of the charging equipment demonstrated to the client			
9.4	Client provided with the instruction manual for the equipment and informed of any maintenance requirements			
11	DNO notification form for the installation submitted via the Energy Networks Association website			

Risk assessment form B1 IET Standards

Premise with PME supply and vehicle charging equipment to be installed outdoors where a TT system is proposed to be adopted for charging equipment only

(Form to be included with forms for certification given to the person ordering the work.)

Name and address of client Postcode.....	Installation Address Postcode.....
Supply taken from, e.g. main building/house/ garage/other
Location of electric vehicle charging equipment considered in this risk assessment, (approximate distance to reference points)
Step	Record
Step 1 Identify the hazards	
(a) Does the building from which the charging supply is to be obtained have a PME (TN-C-S) or public TN-S supply?	Yes/No
(b) Is the vehicle charging equipment to be installed outdoors?	Yes/No
(c) Is a TT system to be adopted for the vehicle charging equipment only?	Yes/No <i>If the answer to all three of the above questions is Yes, the hazard will be:</i> In the event of an open-circuit neutral in the PME supply system, all conductive-parts connected to the main PME earthing terminal, e.g. any exposed- or extraneous-conductive-parts that may be directly, or indirectly, or otherwise connected to this earthing terminal, may become raised to a dangerous voltage relative to true Earth.
Step 2 Decide who might be harmed and how	Any person who can simultaneously touch any conductive-parts or conductor that might be connected to the main PME earth terminal of the building, e.g. a water tap, or metallic gas/water or fuel pipe, or metallic conduit, or item of Class I electrical equipment such as an outside light, switch or socket-outlet, or a boiler flue, or structural steel work, etc., AND the vehicle being charged OR any other conductive-parts or conductor that might be directly or indirectly or otherwise connected to the TT earth terminal of the vehicle charging equipment.

Step	Record
<p>Step 3 Evaluate the risks and decide on precautions</p> <p>(1) Is it possible to simultaneously touch any conductive-parts or conductor that might be connected to the main PME (TN-C-S) or public TN-S earthing terminal AND the vehicle being charged OR any conductive-parts or conductor that might be connected to the TT earth terminal of the vehicle charging equipment? NB: All possible locations and positions of the vehicle on charge, and the charging lead and connector must be considered here.</p> <p>(2) If the answer to question (1) is Yes, can this simultaneous contact be reliably prevented, e.g. by fitting an insulating section into any pipe or conduit, or replacing any item of Class I equipment with Class II equipment, or by providing a permanent barrier or enclosure, or by applying permanent insulation, etc.?</p>	<p>Yes/No</p> <p><i>If the answer to question 1 is No, retain the following text; if Yes, delete the following text:</i></p> <p>'THIS RISK ASSESSMENT SHOWS THAT IT IS NOT CURRENTLY NECESSARY TO TAKE ANY PRECAUTIONS TO PREVENT RISK OF SIMULTANEOUS CONTACT BETWEEN ANY CONDUCTIVE-PARTS OR CONDUCTOR THAT MIGHT BE CONNECTED TO THE MAIN PME EARTHING TERMINAL AND THE VEHICLE BEING CHARGED OR ANY OTHER CONDUCTIVE-PARTS OR CONDUCTOR THAT MIGHT BE CONNECTED TO THE TT EARTH TERMINAL OF THE VEHICLE CHARGING EQUIPMENT.</p> <p>THE CUSTOMER HAS BEEN INFORMED IN WRITING THAT A FURTHER RISK ASSESSMENT MUST BE UNDERTAKEN TO CHECK WHETHER THE CHARGING EQUIPMENT WILL REMAIN SAFE TO ENERGIZE AND/OR USE IF THIS SITUATION CHANGES.'</p> <p>Yes/No</p> <p><i>If the answers to question 1 and question 2 are both Yes, record here the ESSENTIAL precautions required to prevent the possibility(ies) of simultaneous contact identified by Question (2):</i></p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p><i>And</i></p> <p>THE CUSTOMER HAS BEEN INFORMED IN WRITING THAT THE CHARGING EQUIPMENT WILL BECOME UNSAFE TO ENERGIZE AND/OR USE IF THE PRECAUTIONS LISTED ABOVE ARE REMOVED OR OTHERWISE BECOME INEFFECTIVE.</p> <p><i>If the answer to question 1 is Yes and the answer to question 2 is No, retain the following text here (otherwise delete):</i></p> <p>'THIS RISK ASSESSMENT SHOWS THAT IT IS NOT CONSIDERED TO BE SAFE TO PROVIDE A TT EARTHED OUTDOOR VEHICLE CHARGING POINT AT THE CHOSEN LOCATION AND/OR TO CHARGE A TT EARTHED ELECTRIC VEHICLE AT THE CHOSEN LOCATION. THIS HAS BEEN MADE KNOWN TO THE CUSTOMER IN WRITING.'</p>

Step	Record
<p>Step 4 Record your findings and implement them</p> <p>If the precautions are inadequate, is it less of a risk to convert the complete installation to TT?</p> <p>If precautions are likely to be inadequate, consider the risks associated with the conversion of the complete installation to TT, considering, for example, adjoining properties on TN-C-S or TN-S, or adjoining properties with extraneous-conductive-parts or exposed-conductive-parts within reach of a vehicle on charge.</p>	<p>All precautions required by step 3 completed.</p> <p>Signature.....</p> <p>Date carried out.....</p>
<p>Step 5 Review the assessment and update if necessary</p>	<p>To be reviewed whenever further work is carried out on the installation, including any inspection and testing</p>