

# Periodic Inspection and the Electrical Installation Condition Report

BS 7671:2008 Amendment 1 was published on 1 July. One of the amendments is to the reporting of a periodic inspection for an electrical installation where the previous 'Periodic Inspection Report' has been changed to 'Electrical Installation Condition Report'. This article will answer some typical questions and describe some of the key aspects of what has been amended.

By Paul Bicheno



## Why change the 'Periodic Inspection Report'?

It is worth stating that an electrical installation should still be subjected to periodic inspection and testing as recommended in Regulation 135.1. This states that every electrical installation is subjected to periodic inspection and testing in accordance with Chapter 62. The reporting of the inspection and testing is the key change. As part of the Amendment 1 development programme the technical committee responsible for BS 7671 JPEL/64 decided that periodic inspection and testing was not being carried out and reported

in a clear and consistent manner. A project team was set-up to propose developments to the existing periodic inspection report. The result of the project team was issued as part of the Amendment 1 draft for public comment (DPC) stage. Over 500 comments were received on this topic alone from a number of areas of the industry. After reviewing these comments the Committee eventually decided on the solution now published as part of Amendment 1.

## When should the new condition report be used?

Although Amendment 1 was published on 1 July this does not mean that engineers who provide reports associated with periodic inspection and testing need to start using the new electrical installation condition report straight away. The introduction to Amendment 1 states that it comes into effect on 1 January 2012 so this is when the new report will be need to be used. Until that time the existing periodic inspection report can be used.

## What are the main changes?

The first point to mention is the change of name to 'Electrical Installation Condition Report'. It was agreed that this name is more meaningful to a client as it clearly states that it is a report relating to the condition of the electrical installation. The structure of the report remains the same – it has the report pages and associated schedule of inspections and

schedule of test results. All of these are included as model forms in Appendix 6 of BS 7671:2008(2011). However, a key change is to the schedule of inspections that is to be used when carrying out a periodic inspection. Previously the schedule of inspections was generic and used for both the periodic inspection report and electrical installation certificate. Now a condition report will need to have a schedule of inspections relevant to the periodic inspection work carried out. Included in Appendix 6 is an inspection schedule for domestic and similar premises with a supply rated up to 100 A. This particular schedule is aimed at smaller electrical installations such as domestic and small commercial type

premises where the supply is rated no more than 100 A single-phase or three-phase. Originally the intention was to have a series of schedules aimed at larger installations to complement this schedule; however, the comments from industry during the DPC period voiced concerns over the amount of paperwork that could be generated if this approach was adopted. Therefore, the decision was taken to only have the domestic and similar schedule. For larger installation arrangements a list of example items requiring inspection has been included in Appendix 6. The intention is for this list to be used as the basis of the inspection for a larger installation arrangement. The key difference being no

dedicated schedule is provided. This will need to be agreed between the client and person doing the work as to how the inspection aspect is documented. The previous 'Schedule of Inspections' model form remains but is to be used only when new installation work is being certified and not as part of a periodic inspection. Finally, the schedule of test results remains applicable to both installation work and periodic inspection and testing and thus would be included as part of the report. The structure of an electrical installation condition report applicable to domestic or similar premises is shown in Fig 1.

**What is the intention of the condition report?**

It is worth clarifying that the report is intended to report on the condition of an existing installation and not to certify an installation. The person carrying out the inspection and testing is looking to determine if there is any damage, deterioration, defects, dangerous conditions and any non-compliance with the requirements of the Regulations which may give rise to danger. Only these aspects should be recorded on the report and not a full list of non-compliance with the Regulations. Installations built to an earlier edition are not likely to fully comply with the current edition. However, this does not mean that the installation is unsafe for continued use. Also the report should not state how any



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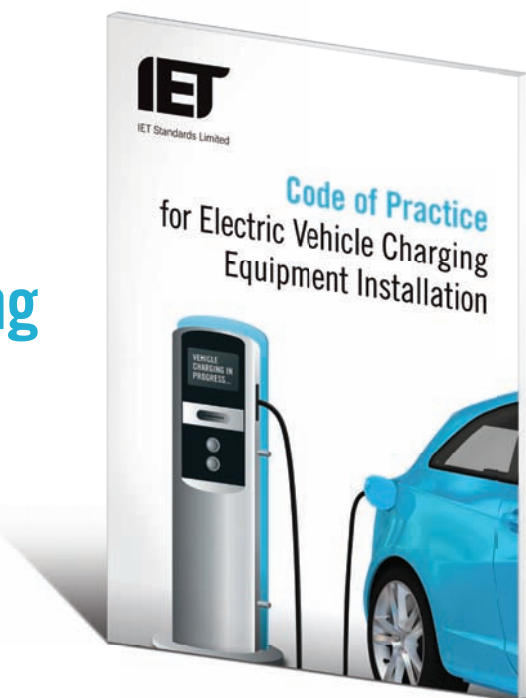
## IET Code of Practice for Electric Vehicle Charging Equipment Installation

Publication Autumn 2011

This Code of Practice aims to provide expert guidance on EV charging equipment installation, an important emerging area which is not covered in detail by the current edition of the Wiring Regulations (BS 7671) or the IET's Guidance Notes. Aimed at experienced electricians interested in understanding a wide range of equipment and systems available, it covers the specialised installation requirements of electric vehicle charging equipment in public, private and commercial locations.

It provides detailed on-site guidance and recommendations on all aspects of the installation from the origin of the electrical supply, through distribution and final circuits, installation of the charging equipment itself to the cable between the charging equipment and vehicle's electrical inlet. Also included are related issues of site layout and planning and subsequent inspection, testing, certification and maintenance of installations.

The Code of Practice includes an overview of all types of equipment, connectors and cables that an installer is likely to encounter and provides detailed references to all relevant standards and regulatory requirements in the UK.



For more information please visit:

[www.ietstandards.com/EV5](http://www.ietstandards.com/EV5)

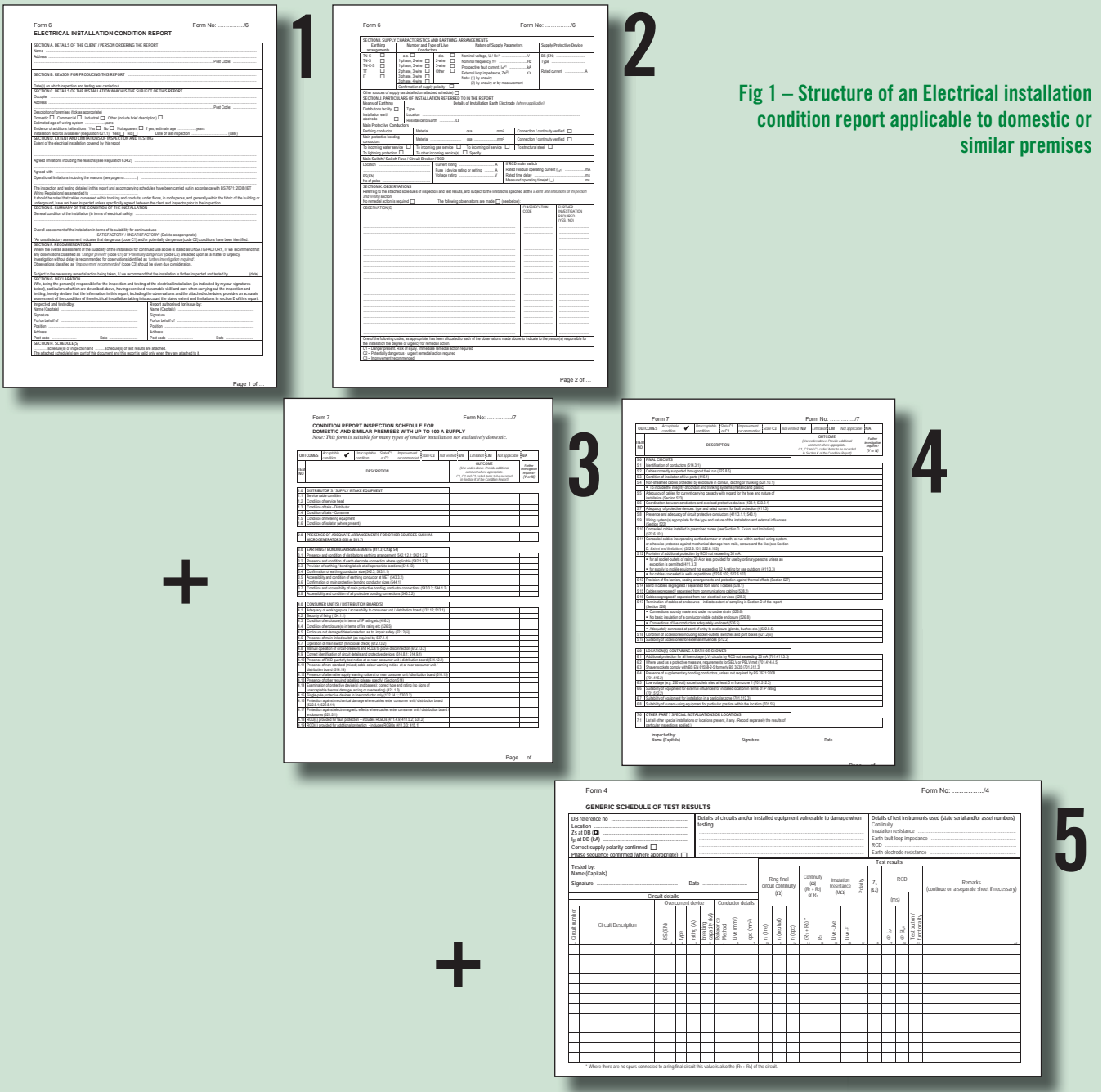


Fig 1 – Structure of an Electrical installation condition report applicable to domestic or similar premises

defects should be rectified e.g. consumer unit should be replaced. This information should be provided separately if requested by the client.

**Domestic and similar condition report inspection schedule**

A main part of the work was to produce an inspection schedule that would be a benefit to the person carrying out the inspection to enable them to inspect an installation in a structured and consistent way and for the client to better understand the result of the inspection. The format of the

published domestic and similar condition report inspection schedule (see Fig 2) has been designed so that a number of specific items requiring inspection are listed that are likely to be relevant to an installation of this type and size. Any relevant regulation references are provided for an item to assist the inspector. The requirement is for an outcome based on the inspector's assessment to be recorded against each item. These are listed in Table 1 along with a description of their meaning but are also

included as part of the schedule for easy reference. The person carrying out the work should also record an associated comment to reinforce the reason for a particular outcome. This approach is intended to provide more detail on the condition of a number of aspects of an installation and is one of the key differences compared to the previous report where only a summary list of observations and recommendations were recorded. This has the benefit of providing a detailed

assessment to the client to clarify any dangers, improvements or limitations and will aid any future inspection of the installation. For each item there will also be a requirement to record if any further investigation is recommended as it is recognised that various factors could inhibit a complete inspection at the time it is carried out or the inspector has not verified an item but feels that further assessment is needed to confirm the safety aspect. The second key difference is to do with the

classification codes to highlight an unacceptable condition or improvement. This is now limited to C1 (danger present – immediate remedial action required), C2 (potentially dangerous – urgent remedial action required) and C3 (improvement recommended). The previous C3 code (further investigation) is now covered by an individual entry for each item and summarized on the observations section K on the report. The previous C4 code (does not comply with BS 7671:2008 amended to..) has been removed from the reporting process as this was an area causing confusion. The intention is not to list why an installation does not comply with the current requirements just the condition with regards to safety. Any C1, C2 or C3 classification code should be recorded in the summary of observations section K on the report. Any C1 or C2 classification code will now mean that the condition of the installation would be classed as unsatisfactory in the summary section E on the report and will need to be conveyed to the client. The client should be notified of any C1 classifications straight away so that immediate remedial action can be taken such as repair, replacement or isolation. If remedial work is not part of the periodic inspection contract then it is recommended that a dangerous condition notification is issued to the client highlighting their responsibility. A final point to highlight with regards to the schedule is the Committee agreed that the guidance notes

**Table 1 – Classification code outcomes used for the inspection schedule for domestic and similar premises with up to 100 A supply**

for the inspector included in Appendix 6 should have a statement highlighting that any older installations designed prior to BS 7671:2008 may not have been provided with RCDs for additional protection. If this is the case then the inspector should record a C3 classification code as a minimum in relation to item 5.12 of the schedule. This is to highlight that the installation could be improved in this respect.

**How will the condition report models forms be made available?**

The model forms as published in Amendment 1 will be made available as a downloadable via the IET’s electrical website <http://electrical.theiet.org/wiring-regulations/forms/index.cfm>. They are also provided by other organisations. However they are model forms and may well be tailored in some way to suit their preferred method of publication. ■

Form 7 Form No: ...../7  
**CONDITION REPORT INSPECTION SCHEDULE FOR DOMESTIC AND SIMILAR PREMISES WITH UP TO 100 A SUPPLY**  
*Note: This form is suitable for many types of smaller installation not exclusively domestic.*

**New classification outcomes**

**Grouped inspection items**

**Regulation references provided**

**Outcome entered against each item plus any additional comments**

**Record if further investigation is required**

ITEM NO	DESCRIPTION	Acceptable condition ✓	Unacceptable condition ; or C2	State C1 or C2	Improvement recommended ; State C3	Not verified ; N/V	Limitation ; LIM	Not applicable ; N/A	OUTCOME (Use codes above. Provide additional comment where appropriate. C1, C2 and C3 coded items to be recorded in Section K of the Condition Report)	Further investigation required? (Y or N)
1.0	<b>DISTRIBUTOR'S / SUPPLY INTAKE EQUIPMENT</b>									
1.1	Service cable condition									
1.2	Condition of service head									
1.3	Condition of tails - Distributor									
1.4	Condition of tails - Consumer									
1.5	Condition of metering equipment									
1.6	Condition of isolator (where present)									
2.0	<b>PRESENCE OF ADEQUATE ARRANGEMENTS FOR OTHER SOURCES SUCH AS MICROGENERATORS (511.6-551.7)</b>									
3.0	<b>EARTHING / BONDING ARRANGEMENTS (411.3; Chap 54)</b>									
3.1	Presence and condition of distributor's earthing arrangement (542.1.2.1; 542.1.2.2)									
3.2	Presence and condition of earth electrode connection where applicable (542.1.2.3)									
3.3	Provision of earthing / bonding labels at all appropriate locations (514.13)									
3.4	Confirmation of earthing conductor size (542.3; 543.1.1)									
3.5	Condition of enclosure(s) in terms of IP rating etc (543.3.2)									
3.6	Confirmation of main protective bonding conductor sizes (544.1)									
3.7	Condition and accessibility of main protective bonding conductor connections (543.3.2; 544.1.2)									
3.8	Accessibility and condition of all protective bonding connections (543.3.2)									
4.0	<b>CONSUMER UNIT(S) / DISTRIBUTION BOARD(S)</b>									
4.1	Adequacy of working space / accessibility to consumer unit / distribution board (132.12; 513.1)									
4.2	Security of fitting (134.1.1)									
4.3	Condition of enclosure(s) in terms of IP rating etc (416.2)									
4.4	Condition of enclosure(s) in terms of fire rating etc (526.5)									
4.5	Enclosure not damaged/deteriorated so as to impair safety (621.2(ii))									
4.6	Presence of main linked switch (as required by 537.1.4)									
4.7	Operation of main switch (functional check) (612.13.2)									
4.8	Manual operation of circuit-breakers and RCDs to prove disconnection (612.13.2)									
4.9	Correct identification of circuit details and protective devices (514.8.1; 514.9.1)									
4.10	Presence of RCD quarterly test notice at or near consumer unit / distribution board (514.12.2)									
4.11	Presence of non-standard (mixed) cable colour warning notice at or near consumer unit / distribution board (514.14)									
4.12	Presence of alternative supply warning notice at or near consumer unit / distribution board (514.15)									
4.13	Presence of other required labelling (please specify) (Section 514)									
4.14	Examination of protective device(s) and base(s); correct type and rating (no signs of unacceptable thermal damage, arcing or overheating) (421.1.3)									
4.15	Single-pole protective devices in line conductor only (132.14.1; 530.3.2)									
4.16	Protection against mechanical damage where cables enter consumer unit / distribution board (522.8.1; 522.8.11)									
4.17	Protection against electromagnetic effects where cables enter consumer unit / distribution board enclosures (521.5.1)									
4.18	RCD(s) provided for fault protection – includes RCBOs (411.4.9; 411.5.2; 531.2)									
4.19	RCD(s) provided for additional protection – includes RCBOs (411.3.3; 415.1)									

**Fig 2 – Domestic and similar installations condition report inspection schedule**

Classification code outcomes	Description
<b>Acceptable condition (✓)</b>	The condition of the particular item inspected has been classed as acceptable
<b>Unacceptable condition (C1)</b>	The condition of the particular item inspected has been classed as unacceptable. Immediate danger is present and the safety to those using the installation is at risk (e.g. a live part is directly accessible)
<b>Unacceptable condition (C2)</b>	The condition of the particular item inspected has been classed as unacceptable. There is potential danger and the safety to those using the installation may be at risk (e.g. absence of main protective bonding)
<b>Improvement recommended (C3)</b>	The installation is not dangerous for continued use but the inspector recommends that an improvement could be made in relation to the item inspected (e.g. no RCDs for additional protection are installed)
<b>Not Verified (N/V)</b>	A particular item on the schedule is relevant to the installation but has not been verified as to its condition
<b>Limitation (LIM)</b>	A particular item on the schedule is relevant to the installation but there were certain limitations in being able to check the condition
<b>Not Applicable (N/A)</b>	The particular item on the inspection schedule is not relevant to the installation being inspected