Fixed Electrical Installations - Inspection and Testing Policy

01 April 2018

Title	Fixed Electrical Installations Inspection and Testing Policy
Users of Policy	Colchester Borough Council tenants and leaseholders, staff at Colchester Borough Homes
Date Adopted	April 2018
Date last Reviewed	February 2018
Review Frequency	Every 3 years
Best Before Date	31 March 2021
Scheme of Delegation	
Formation of Policy	Portfolio Holder(s) with delegated responsibility for the Financial Management of the Housing Revenue Account
Amendments	Portfolio Holder(s) with delegated responsibility for the Financial Management of the Housing Revenue Account
Monitoring	Housing Asset Manager
Implementation	Housing Asset Manager
Approval of requests	Housing Asset Manager, delegated to Director of Property Services, Colchester Borough Homes

1 Introduction - Fixed Electrical Installations: Periodic Inspection and Testing

1.1 Purpose & Scope:
The purpose of this Electrical Testing Policy is to set out specific guidelines to enable Colchester Borough Council to be assured that the electrical safety of fixed electrical installations is inspected at appropriate frequencies and maintenance standards, to minimise the risk of fire, injury and / or death.

1.2 Technical Standard:
All works to be carried out in strict accordance with:

- BS7671:2008 including all current amendments.
- The Health and Safety at Work Act 1974.
- The Electricity at Work Regulations 1989.

1.3 Fixed Electrical Installations
All fixed electrical installations within the Council's housing stock are subject to regular inspection and testing.

The fixed electrical installation is the assembly of associated electrical equipment supplied from a common point of origin to fulfil a specific purpose and having certain co-ordinated characteristics.

2 Duties and Responsibilities

2.1 Colchester Borough Homes Employees

To ensure compliance with the Electricity at Work Regulations 1989, the Head of Operations, CBH assumes the role of Duty Holder, and is responsible for actions and requirements defined by this Policy. The Duty Holder may delegate some of the duties to others deemed skilled to aid operational requirements. This will be communicated in written form. Appropriate notice and the likely impact of the testing regime will be agreed with the relevant Managers and business users who will filter this information through to appropriate staff prior to the commencement of any testing.

Colchester Borough Homes employees will schedule electrical contractors to undertake formal Periodic Inspection and Testing of Electrical Installations at prescribed frequencies and as detailed in Appendix A.

2.2 Tenants/Leaseholders

2.2.1 Tenants and leaseholders will need to give access to their property so that inspections can be carried. Appointments will be made so this can be carried out.

2.2.2 To undertake fixed installation inspection and testing, it is necessary to de-energise the electrical supply to the property. All tenants' properties where Electrical Inspection and Testing is to be carried out, shall be written to informing them that the electrical installation will require de-energising accordingly, the tenant shall ensure that:

a) Any requirement to save IT software is identified and actioned prior to the commencement of any electrical operations.
b) Any contingency arrangements arising from the absence of electrical supplies are facilitated.
c) Appropriate access and relocation/removal of any obstacles will be undertaken.
d) All freezers/ fridges contain a minimum amount of perishable food stuffs.

2.2 Authorised Inspectors and Testers

Only skilled persons as defined by BS 7671 2008 (Requirements for Electrical Installations) including all current amendments will be authorised to carry out Inspection and Testing. A person shall be deemed skilled to carry out the appropriate Inspection and Testing only if she/he has sufficient knowledge and experience of the test equipment, the installation being tested and testing procedures.

2.3 Fixed Electrical Installations

It is the responsibility of those undertaking Inspection and Testing:
a) To ensure no danger occurs to any person or livestock.
b) To ensure no damage occurs to property.
c) To compare the inspection and testing results with the design criteria
d) To take a view on the condition of the installation and advice on remedial works
e) In the event of a dangerous situation, to make an immediate recommendation to CBH.
The Duty Holder will define the level of skill required by Inspectors and Testers.

2.4 Contractors

Contractors appointed to undertake Periodic Inspection and Testing of Electrical Installations will be required to conform in full of the requirements of this Policy. Additionally, all Contractors shall comply with the following:

a) They shall be registered through the National Inspection Council for Electrical Installation Contractors (NICEIC) the Electrical Contractors Association (ECA), Nation Association for Professional Inspectors (NAPIT) or other accredited body.

b) All Electricians should have successfully completed City and Guilds 2382 (17th Edition) City and Guilds 2391 (Inspection, Testing and Certification of Electrical Installations). Unless the duty holder deems the Electricians skill level and experience adequate to carry out the testing accompanied by regular monitoring.

c) The Duty Holder must be assured of the technical competence of any contractor, prior to appointment.

d) All contractors shall be subject to monitoring to ensure appropriate standards are met and maintained by performance measure or Audits.

3 Repairs and Rectification

Except for undertaking unforeseen emergency repairs whilst carrying out the Inspection and Testing regime, no repairs or rectification works shall be commenced without first obtaining the correct authority from an appointed member of Colchester Borough Homes.

4 Exceptions to the Requirements

All extra low voltage systems (below 50Va.c. or 120Vd.c (ripple free) are exempt from this policy. The following schedule shows typical installation of this type (the list is not exhaustive).

a) Lift shaft Wiring and Controls

b) Building Management System

c) Fire Alarm Installation

d) Central battery-operated Emergency Lighting Systems

e) Telephone and data systems.

5 New Installations

All new installations shall be provided with an Electrical Installation Certificate complete with a Schedule of Inspections and Test Results. The documents shall be suitably completed and in full compliance with BS 7671: 2008 Requirements for Electrical Installations., Guidance Note 1 (Selection and Erection) and all current amendments.

6 Frequency of Inspection and Testing

The frequency of periodic inspection and testing must be determined considering:

a) the type of installation

b) its use and operation

c) the frequency and quality of maintenance

d) the external influences on which it is subjected.

Appendix A Table T1 indicates a suggested frequency of Periodic Inspection and Testing of Electrical Installations and conditions of use, but is subject to appropriate risk assessment and dependent on the environment and use.

All buildings shall be subject to a full Periodic Inspection and Test at the prescribed frequency. Partial testing of circuits or installations is not generally permitted. However, should detailed records, test results and drawings be available, the Duty Holder may relax the requirements subject to Risk Assessment. This is especially relevant to properties which may be the subject of short term lets.

The frequency should be increased if the history indicates signs of progressive deterioration. The Duty Holder or other appointed Colchester Borough Homes employees will agree an appropriate programme of works, and issue instructions for this to be carried out.

7 Tests to be undertaken

Tests to be carried out on each Periodic Inspection and Test are detailed on Appendix B - Table T2.

7.1 Labelling

The provision of Marking and Labelling shall be provided in full accordance with BS 7671 2008 Requirements for Electrical Installations and Guidance Note 3 (Inspection and Testing). Including all current amendments.

7.2 Records

Records shall be provided in full accordance with BS 7671:2008 Requirements for Electrical Installations and Guidance Note 3 (Inspection and Testing) including all amendments. Additionally, record drawings shall be suitably provided /annotated to illustrate the electrical layout and circuit configuration of the installation following the completion of the Inspection and Testing regime and any necessary rectification works. Original Inspection certificates must be provided to Colchester Borough Homes in an electronic format.

7.3 Approved Test Equipment

Test equipment shall comply with the requirements of BS 7671:2008 Requirements for Electrical Installations and Guidance Note 3 (Inspection and Testing) GS38 Electrical test equipment for electricians including all amendments.

8 Risk Assessments

Prior to commencement of any works activities, Colchester Borough Homes appointed contractors shall undertake a suitable and sufficient risk assessment for the work involved.

9 Programme of Works

The Duty Holder or other appointed Colchester Borough Homes employees' will agree an appropriate programme of works, and issue instructions for this to be carried out.

10 Further Information

Further information or advice on the requirements of this Policy is available from

Colchester Borough Homes Property Services Team.

11 Definitions

Duty Holder: The person nominated by Colchester Borough Homes who has responsibility for implementation, monitoring of standards and quality in respect of Inspection and Testing. Additionally, they have responsibility for the health and safety and other legal requirements relating to the electrical work undertaken.

ECA: Electrical Contractors Association.

Electrical Contractors: An external procured competent resource appointed to undertake prescribed electrical operations on behalf of Colchester Borough Homes.

Extra Low Voltage: Normally not exceeding 50V a.c. or 120V d.c. (Ripplefree)

Low Voltage: Exceeding extra low voltage, but not exceeding 1000V a.c. or 1500V d.c.

NICEIC: National Inspection Council for Electrical Installation Contracting.

Skilled Person: A person with technical knowledge or sufficient experience to enable Him / her to avoid dangers which electricity may create.

12 Related Documents

- Health and Safety at Work etc. Act 1974,
- The Management of Health and Safety at Work Regulations 1999,
- Electricity at Work Regulations 1989, BS 7671: 2008 - Requirements for electrical installations, IEE Guidance Note 3 (Inspection and Testing),
- Construction (Design and Management) Regulations 2015

13 Controls and Risk Assurance

The responsible officer, Duty Holder (M&E Manager), to ensure this policy and procedure is being followed, will:

- Monthly, provide an update report detailing performance against targets to the Property Services Manager Meeting or Core Monitoring Group (CMG).
- Annually, details of compliance and material issues will be provided by the Director of Housing Services (November) to the Origin Board through a detailed report of performance and compliance to the Origin Audit Committee.

Appendix A

Table T1 - Recommended Initial Frequencies of Inspection of Electrical Installations

Recommended Initial Frequencies of Inspections of Electrical Installations			
Type of installation	Routine check*	Maximum period between inspections and testing as necessary	Reference (See notes below)
General installations			
Domestic (owner occupied)	1 year	Change of Occupancy/10 years	1, 2
Domestic (rented property)	4 months	Change of tenancy/5 years	1, 2
Commercial	1 year	Change of occupancy/5 years	1, 2
Educational establishments	1 year	5 years	1, 2
Hospitals	1 year	5 years	1, 2
Offices	1 year	5 years	1, 2
Shops	1 year	5 years	1, 2
Laboratories		5 years	
Industrial		3 years	
Building open to the public			
Cinemas	1 year	1-3 years	2, 6
Leisure complexes excluding swimming pools	1 year	3 years	1, 2, 6
Places of public entertainment	1 year	3 years	1, 2, 6
Places of worship	1 year	5 years	2
Restaurants and hotels	1 year	5 years	1, 2, 6
Theatres	1 year	3 years	2, 6, 7
Public houses	1 year	5 years	1, 2, 6
	1 year	5 years	1, 2

Village halls/Community centres			
Special installations			
Agricultural & horticultural	1 year	3 years	1, 2
Caravans (infrequently moved)	1 year	3 years	
Caravans (frequently moved)		1 year	
Caravan parks	6 months	1 year	1, 2, 6
Highway power supplies	As convenient	6 years	1, 2
Marinas	4 months	1 year	1, 2
Fish farms	4 months	1 year	1, 2, 6
Swimming pool	4 months	1 year	
Emergency lighting	Daily/monthly	3 years	2, 3, 4
Fire alarms	Daily/week/month	1 year	2, 4, 5
Launderettes	1 year	1 year	1, 2, 6
Petrol Filling Station	1 year	1 year	1, 2, 6
Construction site installations	3 months	3 months	1, 2

Reference Key

1. Particular attention must be taken to comply with S1 1988 No. 1057. The Electricity Supply

Regulations 1988 (as amended).

2. S1 1989 No. 635. The Electricity at Work Regulations 1989 (Regulation 4 & Memorandum).

3. See BS 5266: Part 1: 2005 Code of Practice for the emergency lighting of premises other than

cinemas and certain other specified premises used for entertainment.

4. Other intervals are recommended for testing operation of batteries and generators.

5. See BS 5839: Part 1: 2002 Code of Practice for system design installation and servicing (Fire

detection and alarm systems for buildings).

6. Local Authority Conditions of Licence.

7. S1 1995 No. 1129 (Clause 27) The Cinematograph (Safety) Regulations.

Appendix B

Table T2 reproduced from Guidance Note 3: Inspection and Testing IEE.

TABLE T 2: - Testing to be carried out where practicable on existing installations.

Test	
Protective Conductors Continuity	Between the earth terminal of distribution boards to the following exposed conductive parts. > Socket Outlet earth connections (Note 4) > Accessible exposed conductive parts of current using equipment and accessories (Note 4 & 5)
Bonding Conductors Continuity	> All main bonding conductors. > All necessary supplementary bonding conductors.
Ring Circuit Continuity	Where there are proper records of previous tests, this test may not be necessary. This test should be carried out where inspection/documentation indicate that there may have been changes made to the final ring circuit.
Insulation Resistance	If tests are to be made

	> Between live conductors, with phases and neutral connected together, and earth at all final distribution boards. > At main and sub main distribution panels, with final circuit distribution boards isolated from the mains. (Note 6)
Polarity	At the following positions > Origin of the installation > Distribution boards > Accessible Socket Outlets. > Extremity of Radial Circuit. (Note 7)
Earth Electrode Resistance	Test each earth rod or group of rods separately, with the test links removed, and with the installation isolated from the supply source.
Earth Fault loop impedance	At the following positions > Origin of the installation. > Distribution boards. > accessible Socket Outlets. > Extremity of Radial Circuits. (Note 8)
Functional Tests RCD's, Circuit Breakers, Isolators and all Switching Devices	Tests as required by Regulation 713-13-01, followed by the operation of the functional test button. Manual tests to prove that the devices disconnect the supply.

Notes;-

1) The person carrying out the testing is required to decide which of the above tests are appropriate by using their experience and knowledge of the installation being inspected and tested and by consulting any available records.

2) Where sampling is applied, the percentage used is at the discretion of the tester. However, a percentage of less than 10% is inadvisable.

3) The tests need not be carried out in the order shown in the table.

4) The earth fault loop impedance test may be used to confirm the continuity of protective conductors at socket outlets and at accessible exposed conductive parts of current using equipment and accessories.

5) Generally, accessibility may be considered to be within 3 metres from the floor or from where a person can stand.

6) Where the circuit includes SPD's or other electronic devices which may require a connection to earth for functional purposes, these devices will require disconnecting to avoid influencing the test result and to avoid damaging them.

7) Where there are proper records of previous tests, this test may not be necessary.

8) Some earth loop impedance testers may trip RCD's in the circuit. Table T2 reproduced from Guidance Note 3: Inspection and Testing IEE.