

Taunton Deane Borough Council

Tenant Services Management Board – 20th January 2014

Legionella and Electrical Installation Testing Policies

Report of – Property Manager – Maintenance – Steve Esau

1. Executive Summary

This report has been produced to propose the new Legionella and Electrical Installation testing policies for Taunton Deane Borough Council Housing Services.

It outlines the strategic overview that the tenants can expect from Housing Property Services in relation to Legionella and Electrical Installation testing of our properties.

The Legionella policy gives the organisations arrangements for managing the risk of exposure to *Legionellosis* within Taunton Deane Borough Council Housing Revenue Account properties

The Electrical Installation Testing Policy sets out the aims and objectives of the organisation and outlines responsibilities for managing the Electrical Condition Inspection Report programme.

The policies are living document and will be reviewed on a regular basis.

1.0 Information

The policy covers all activities under the control of the Taunton Deane Borough Council Housing Property Services and includes all properties that it owns, occupies or where it acts as landlord.

Housing Property Services recognises and accepts its responsibility for providing a safe and healthy environment for its employees and the public who may be affected by its facilities and services. This statement is an expression of the Housing Property Service's commitment to managing risks arising from any activities under its control.

2.0 Background

Legionellosis is the collective name given to pneumonia illnesses caused by Legionella bacteria; the most serious is Legionella's disease. Similar but less serious illnesses include Pontiac fever and Lochgoilhead fever. To date over 50 species of Legionella bacteria have been identified

Housing Property Services has obligations under the Health & Safety at Work Act 1974, The Electricity at Work Regulations 1989, that electrical installations are inspected and tested.

3.0 Aim

Housing Property Services recognises and accepts its responsibility for providing a safe and healthy environment for its employees and the public who may be affected by its facilities and services. The policies are an expression of Housing Property Services commitment to managing Legionella and Electrical Installations risks arising from any activities under its control. Housing Property Services will, so far as is reasonably practicable take all reasonable steps to protect the health and environment of:

- Employees
- Contractors (employed directly or indirectly)
- Clients and tenants
- Other persons

4.0 Approximate costs

The cost of implementing this policy will be met within existing budgets.

5.0 Impact on tenants

Tenants will be better informed on what to expect from the Housing Property Services team.

6.0 Equalities impact

An equality impact assessment has been carried out and views and feedback have been obtained from tenants.

7.0 Risk management

No risks have been identified from the equality impact assessment

8.0 Diversity

Some people may need specific help to fully access the policy and leaflet. Additionally information may be required in different formats:

- Large Font
- Audio Version
- Different Languages
- Website page

9.0 Recommendation

We recommend that the Tenant Services Management Board approve the policies.

Once approval is obtained the policy will be forwarded to the portfolio holder
Councillor Jean Adkins for affirmation.

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TAUNTON DEANE BOROUGH COUNCIL

Housing Property Services

Legionella Policy

Policy	
Policy Number	
Title	Legionella Policy
Author	Steve Esau
Responsible Officer	Phil Webb
EQIA Date	
Date Agreed by TSMB	
Date agreed by Housing Portfolio Holder	
Next Review Date	
Version	1.1

1.0 Information.

The policy covers all activities under the control of the Taunton Deane Borough Council Housing Property Services and includes all properties that it owns, occupies or where it acts as landlord. Where premises do not come under the direct responsibility of housing services, this Policy and Code of Practice will be commended to them.

Legionellosis is the collective name given to pneumonia illnesses caused by Legionella bacteria; the most serious is Legionella's disease. Similar but less serious illnesses include Pontiac fever and Lochgoilhead fever. To date over 50 species of Legionella bacteria have been identified.

2.0 Intention

The policy gives the organisations arrangements for managing the risk of exposure to *Legionellosis* within Taunton Deane Borough Council Housing Revenue Account properties.

Housing Property Services recognises and accepts its responsibility for providing a safe and healthy environment for its employees and the public who may be affected by its facilities and services. This statement is an expression of Housing Property Services commitment to managing Legionella risks arising from any activities under its control. Housing Property Services will, so far as is reasonably practicable take all reasonable steps to protect the health and environment of:

- Employees
- Contractors (employed directly or indirectly)
- Clients and tenants
- Other persons

This policy has been drawn up to set out clearly the systems and procedures, which will be implemented to manage the risk from exposure to Legionella bacteria. It therefore:

- Puts procedures in place to control and minimise these risks
- Ensures work is to higher standards than the minimum required by law, where reasonably practicable
- Provides information, guidance and training for managers responsible for properties and other key managers to

ensure they are aware of their role with regard to this policy

- Promotes good system design to reduce the risk of Legionella bacteria multiplying
- Promotes good maintenance procedures to reduce the risk of Legionella bacteria multiplying.

3.0 Responsibilities

The Housing and Communities Director has responsibility for Housing Property Service's Legionella Risk Management procedures and ensuring their implementation and proper compliance through the Housing Property Services Manager who is responsible for health and safety issues relating to housing revenue account properties. The Housing Property Services Manager will be the "responsible person" for ensuring adequate systems is in place to ensure compliance and control the risks from Legionella in council housing stock.

The nominated deputy is the "The Housing Property Manager (Maintenance)" The theme manager will ensure that sufficient time and resources are provided to implement the policy and procedures within the Housing Property Services, through their services' management systems. They are responsible for ensuring full compliance with the procedures through their managers and staff.

The responsibilities of Housing Property Services staff and others involved in the control regime are as follows:

3.1 The Housing Property Services Manager is responsible for

- Implementing this policy, for the delivery of Legionella risk assessments and for monitoring to ensure that recommendations arising from risk assessments are carried out
- Instructing maintenance contractors to undertake any improvement and adaptation works necessary following a risk assessment, for properties where housing property services holds the central building maintenance budget.
- Responsible for promoting good design practice and operating procedures to reduce as far as is reasonably practical the risk of Legionellosis from premises, equipment under their control;
- Overall responsibilities for ensuring arrangements are in place in their areas of control for the effective management of Legionella. In particular they are responsible for ensuring that this policy and the HSE approved Legionella code of practice (L8) is implemented.

Taunton Deane Borough Council

- Monitoring the implementation of the housing property services policy. Ensuring that a person is identified (the Responsible Person) for the housing stock and there is clearly an identified line management regime established with responsibility for ensuring that duties are carried out;
 - Distributing this policy throughout their Department;
 - Arranging appropriate training and ensuring competence for those staff identified as requiring training;
 - Responding appropriately with respect to emergency procedures;
 - Ensuring systems are in place for monitoring the implementation of this policy.
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Managers and staff are responsible for ensuring that contractor access is available to complete tasks in line with this policy.

Managers responsible for housing stock are responsible for ensuring that this policy is complied with in their premises and that they have a risk assessment in place, and are following the actions required as a result of that assessment.

Additionally they must:

- Have available, and keep up to date, all information supplied for the operation and management of their premises, including a copy of all the relevant records, schematic diagrams and risk assessments for the premises under their control;
- Inform staff of the potential health risks of exposure to Legionella bacteria (for which they will receive appropriate training), their responsibilities in the implementation of the services policy and actions that Housing Services/ Property Services are taking to mitigate the risks.
- Monitor, or arrange for the monitoring of, water systems as detailed in the Written Scheme produced following a risk assessment.
- Establish and implement appropriate controls for any maintenance or modification work to be done by contractors, service engineers, volunteers and own staff (e.g. Site maintenance staff);
- Ensure safe systems of work are effectively implemented;
- Understand the implications of modifying or maintaining the water systems and the characteristics which govern

the risk and control of the susceptibility to colonisation by Legionella;

- Understand the risks of exposure to Legionella bacteria; and ensure that regular risk assessments are completed and actioned.
- Know what action to take if a case of Legionnaires disease is found or suspected;
- Ensure, where there is information known about the water system that this is drawn to the attention of the maintenance contractor and those who do maintenance work etc before they commence work. Close consultation and co-operation with contractors, staff and tenants will assist managers in meeting this obligation;
- Update the property records and schematic diagrams where they have ordered any changes to the water systems in their properties.
- Review the risk assessments every two years or where a change occurs in the water systems or a substantial change in the type and susceptibility of users and tenants.
- Co-operate and co-ordinate with other managers on shared properties.
-

3.2 Staff are responsible for advising the Housing Property Services Manager on any issues relating to their premises that may affect the risk assessment in premises under their control and must:

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- All employees have a duty not only for their own health and safety but also a duty to co-operate with the service in the implementation and maintenance of its arrangements to satisfy its statutory duties for health and safety. Employees therefore have a responsibility to:
- Understand the health risks associated with exposure to Legionella bacteria;
- Report any defective equipment or systems;
- Use any water system in a safe manner; and
- Attend training and read briefing documents.
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Housing Property Services Legionella Consultant/Contractor or a competent and trained staff member is contracted to deliver risk assessments to sites where the service holds the maintenance budget.

4 References

The Health & Safety Commission Approved Code of Practice & Guidance, document L8 “The Control of Legionella Bacteria in Water Systems”, is taken as the primary source of guidance on Legionellosis risk management, however further reference is taken from BS8580, COSHH, HASAWA 1974, MHASAWR 1999, Water Regulations, CIBSE Guidance etc.

5 Monitoring and review

Monitoring and review of this statement, ongoing assessments and control precautions will be reviewed at intervals as appropriate, and at least annually. Revisions will be made as necessary to reflect organisational, technical or legislative changes. Housing Property Services will obtain further competent advice as required. This policy will be reviewed every three years.

A copy of this policy will be made available to employees. It will be reviewed, added to and modified as appropriate to sustain its effectiveness, and such changes will be brought to the notice of employees. It may be supplemented in appropriate cases by further statements relating to the work of particular departments or groups of workers.

Legionella Control Principles

Persons with responsibilities for the control of Legionella must comply with the following principles:

1. Eliminating the risk

This must be the first consideration in any design or alteration proposal. If the risk cannot be eliminated and alternative options are available and can be provided, then a thorough assessment must be undertaken to ensure that the appropriate solution is used.

2. Reducing the risk and controlling the risk in hot and cold water services

Where elimination of risk is impractical, the risk should be controlled so as to minimise the release of water droplets and prevent water conditions that permit the growth of Legionella. It is possible to have very low concentrations of Legionella in many water systems and by careful control prevent them from multiplying. Generally, proliferation of Legionella may be avoided by:-

- keeping water temperatures outside the range 20-45 degrees Celsius;
- minimising water stagnation;
- not using materials that provide nutrients for the bacteria or other organisms;
- keeping systems clean;
- ensuring effective water treatment programmes are in place, e.g. Spa Baths;
- operating systems safely and keeping them correctly maintained.

This is achieved by: -

- identifying and ensuring the proper application of maintenance, repair, cleaning and treatment regimes for all water services and ancillary equipment. This is necessary to maintain satisfactory water quality with respect to potential health hazards;
- maintaining an up-to-date premises record containing details of a risk assessment, Written Scheme of Control for minimising the risk, and reports of periodic water quality checks and reviews by an independent competent assessor. These records must be kept on the premises and made available to any person with the authority to inspect them. Such persons would include the competent assessor, inspectors of the Health & Safety Executive, officers of the County and District Council, the Health Protection Agency and maintenance and repair personnel.

Specific methods of control are as follows:

- The temperature regime shall be the main method employed, in any new or refurbished system, to control bacteria in water systems.
- Direct cold mains water systems must be considered in all new designs in preference to providing cold stored water, however, if required for backflow prevention or if the design assessment requires cold-water storage to be available, it must be sized to hold the minimum amount of water possible and no more than 8 hours use, and the temperature must be maintained and distributed at low temperature not exceeding 20° C. It is crucial that the inlet of the cold water supply and outlet from the cold-water tank are at opposite sides of the tank to ensure that there is no stagnation. All tanks must comply with the Water Supply (Water Fittings) Regulations 1999 and must be easily and readily accessible for both maintenance and monitoring.
- All cold-water pipework must be appropriately insulated and isolated from heat sources.
- Preference shall be given to using instantaneous direct-fired gas water heaters, or direct-fired gas water heaters with water stored at a minimum of 60°C. All stored hot water in main calorifiers shall be maintained at a minimum temperature of 60° C, which must be matched to demand. All calorifiers must be fitted with a drain valve, temperature gauge on the inlet and outlet pipework, and an access panel for cleaning and located in such a position as to be easily accessible for maintenance.
- The system design must ensure that the entire contents of the calorifier can achieve a temperature of 60° C for at least one hour before the building users draw off any water at the start of each day and for one hour after the last user has drawn off water at the end of each day. An additional, time controlled, shunt pump must be fitted on all new calorifiers to aid circulation throughout the calorifier. When upgrading or reutilising existing calorifiers, shunt pumps shall only be fitted following an assessment of the internal condition of the calorifier. Where there is any doubt the calorifier should be replaced.
- For new installations, where possible, a minimum distribution temperature of 55° C should be available at the outlet or any point of use mixer valve within 30 seconds of opening the tap. For existing installations and/or where a risk assessment supports a lower temperature, a minimum temperature of 50°C must be achieved within one minute of opening the tap.

- On circulation systems, the return temperature to the calorifier must be greater than 50°C.
- Where the water temperature is reduced at the point of use from 55°C, by the use of a thermostatic mixing valve, the pipework length must be kept to a minimum. The leg from the distribution circuit must not exceed 3.0 metres and the leg from the blender must not exceed 2.0 metres.
- Where hot water is to be provided by electric point of use heaters, a blending valve must be fitted so that the stored water can be maintained at 60°C. However, in exceptional circumstances, where this is not practicable due to insufficient water pressure a thermostatically controlled unit may be considered, the temperature must be set to suit the outlet requirements and a thermal disinfection regime must then be put in place as appropriate.
- All materials and fittings used in any water system must be low corrosion and in compliance with the Water Supply (Water Fittings) Regulations.
- For cold water services, where possible, lower use outlets must be installed upstream of higher use outlets.
- Generally, all hot and cold outlet pipes must be of minimum length, and any pipework that is removed must be cut back to the main pipe work runs to ensure no dead legs or blind ends remain.
- If standby equipment is installed, e.g. pumps, these must operate automatically and at least once a week to avoid stagnation.
- All new and refurbished hot water systems and any systems that have been out of use without regular flushing on at least a weekly basis must be cleaned and disinfected in accordance with BS 6700:1987, section three clause 13.9 or as amended.

3. Design Standards

For all building services systems containing water must comply with the requirements specified in:

- 3.1.** the Water Supply (Water Fittings) Regulations 1999, SI 1999 No 1148 and incorporating amendment SI 1999 No 1506;
- 3.2.** the Health and Safety Commission Approved Code of Practice and Guidance L8: "Legionnaires disease. The control of Legionella bacteria in water systems";

3.3. BS 6700: 1987 or as amended “Specification for design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages”.

4. A **Risk Assessment** must be carried out by a competent person (who has sufficient knowledge and understanding of the system and of control schemes) to enable them to prior to the occupation of any new premises, or occupation of any extension to an existing premises, where there is a foreseeable risk of exposure to Legionella bacteria. This must include premises where any of the following exist:

- Cooling towers & evaporating condensers
- Hot water services
- Cold water services
- Shower heads
- Ultrasonic humidifiers/foggers & water misting systems
- Spray humidifiers, air washers & wet scrubbers
- Water softeners
- Emergency showers & eye wash stations
- Lathe & machine tool coolant systems
- Swimming Pools
- Hydrotherapy pools
- Spa baths
- Horticultural misting systems
- Vehicle washing facilities [lance or drive through]
- Indoor fountains & water features
- Any water system not listed above which is between a temperature of 20°C to 45°C and where an aerosol may be produced

5. The **significant findings** of the risk assessment must be recorded at the premises and a copy sent to the Housing Property Services Manager. If the assessment has shown that there is a reasonably foreseeable risk of exposure to Legionella bacteria, there must be a written scheme in place to control that risk.

The written scheme for controlling the exposure must be implemented and properly managed. The scheme must include instructions on the operation of the system and details of the precautions to be taken to control the risk of exposure to Legionella bacteria, including checks and their frequency.

The recommended inspection frequencies must be based on Appendix 1 of the Health and Safety Commission Approved Code of Practice and Guidance L8: “Legionnaires disease- The control of Legionella bacteria in water systems”. In the absence of premises-specific procedures, Appendix 2 of this policy specifies typical tasks, with their associated frequencies, that must be undertaken.

- 6. All records** must be kept at the offices of Housing Services / Property Services preferably as an electronic copy. They must be maintained and managed under the control of the Property Services Manager, and retained for a period of at least 5 years following expiry.
- 7. Consultation with employees** must be undertaken at regular team meetings and briefing sessions. All employees must be aware that the two primary objectives of this policy are to avoid:
- conditions that allow the proliferation of Legionella; and
 - avoid the creation of sprays or mists that give rise to respirable water droplets.
- 8. Risk assessments must be reviewed** at least every 24 months and when:
- significant changes have been made to a system, e.g. following maintenance or alteration ;
 - significant changes have occurred in the way a system is being used, e.g. a formerly fully occupied building is now only partially occupied;
 - changes to the occupancy of the building e.g. higher risk users;
 - changes have been made to the management and/or maintenance of the system, e.g. 6 months after a new maintenance company has been appointed;
 - the results of checks indicate that control measures are no longer effective;
 - a case of Legionnaires' disease or Legionellosis is associated with the; system;
 - there is new relevant information about risks or control measures;

If there is doubt as to what changes should trigger a risk assessment, a programme of annual reviews or audits should be considered.

If it is considered that microbiological testing is required, samples should only be taken by a competent person and analysed by a United Kingdom Accreditation Service (UKAS) approved laboratory.

1. TECHNICAL SPECIFICATION

1.1. To provide a document for risk assessment/testing tender between **Taunton Deane Borough Council – Housing Property Services** (Client) and the **Specialist Service Provider** (Contractor).

1.2. The scope of this specification includes the identification and assessment of risks to staff; visitors and members of the public exposed to water systems operated by the client and testing to comply with ACOP L8 and are limited to Legionella. The Legionellosis risk assessment is intended to demonstrate compliance with the Approved Code of Practice L8 (2000): Legionnaires' disease the control of legionella bacteria in water systems.

1.3. This specification does not include assessment of mechanical condition, pressure system compliance, electrical safety or any other health and safety risks.

1.4. The Contractor will be asked to provide comment on water-system compliance with the following documents;

1. Water regulations (WRAS Water Regulations Guide, second edition).
 2. Workplace (Health, Safety and Welfare) Regulations 1992
- Approved Code of Practice L24
3. ACOP L8
 4. CIBSE Guide TM13
 5. COSHH regulations
 6. HaSAWA 1974
 7. MHaSAWR 1999
 8. BS 8580

1.5. Terms;

1.5.1. 'Client' refers to the employer / self-employed person / person in control of the premises (ACoP L8 Para 23).

1.5.2. 'Contractor' refers to the service provider contracted to conduct the specified services.

1.5.3. 'Assessor' refers to the individual person(s) carrying out the risk assessment.

2. GENERAL REQUIREMENTS

2.1. Clauses within this specification are mandatory. The Contractor shall identify in the tender return any items they wish to be excluded or modified for consideration at the pre-tender selection process.

2.2. The Contractor shall seek clarification from the Client where any specification clauses appear to be ambiguous or do not appear to correspond to the requirements for this project.

2.3. The work shall comprise all labour and materials necessary to complete the risk assessment, testing & descaling tasks

2.4. The contractor is expected to include the costs of specialist access equipment as required.

2.5. The scope does not include for labour or materials to dismantle replace or repair building fabric obscuring access to water systems.

2.6. The Client will not be responsible for providing simple access equipment such as steps / ladders. Assessors will be expected to carry a ladder (or step ladder) to be used: -

For visual inspection of equipment in one position for less than 30 minutes;

For 'light work' – where the task involves a worker carrying less than 10 kg up the ladder, tool belts or shoulder bags are to be used.

Surveyor's ladders should extend to 10 – 12ft.

Where higher (or difficult) access is required a safe method of access must be designed. The required equipment will be stated in the property schedule for safety and costing purposes.

2.7. The Contractor shall provide the Client with sufficient information to allow the Client to assess the competency of the Contractor and individual personnel carrying out the risk assessments. This might include, among any other relevant information: -

The names of each person who may carry out surveys and produce assessments together with their qualifications and relevant experience. **Which must include a current certificate showing that the operative has attended and passed an approved asbestos awareness course**

An up to date certificate indicating the Contractor is a member of the Legionella Control Association (LCA).

2.8. The Contractor will obtain agreement from the Client before substituting alternative personnel before or during the contract.

2.9. The Contractor must provide details of any sub-contractors including microbiological testing laboratories to be used in the contract. No sub-Contractors will be allowed on site without the prior approval of the Client.

2.10. Any person attending site will be required to carry a photographic identity card issued by either the Client or the Contractor if no Client system is in operation.

2.11. The Contractor will be required to provide a method statement & specific risk assessment for the work to be undertaken prior to starting works.

2.12. The Contractor's insurance must include Professional Indemnity for the sum of at least £1,000,000 for any one event and be in force before work is allowed to commence. The Contractor should make copies of the policies available for approval.

2.13. The Contractor must comply with the Client's Health and Safety Policy including all permit-to-work and risk assessment procedures. Failure to do so will result in immediate expulsion of Contractor personnel from the site.

2.14. All work and procedures shall be undertaken with due care to avoid damage to the contents and fabric of the building.

2.15. The Contractor is expected to exercise discretion if questioned by Client staff during the course of the survey. Results of the risk assessment may not be divulged to the Client's staff or other persons prior to being formally supplied to the nominated person.

2.16. Where a serious and/or immediate risk to health and safety is identified during survey works the Contractor shall inform the nominated individual directly at the earliest opportunity. The use of hand written urgent attention reports will be required.

3. PROGRAM OF WORKS

3.1. The contractor is to supply a proposed program of work within 10 days of contract award advising on approximate inspection dates for each site to ensure all works are completed within the required time scales. Each property will require at least 48 hours notice prior to the site visit commencing.

3.2. Reports are to be supplied to the Client within 2 weeks of the site survey.

3.3. The Contractor must indicate in the tender where he is likely to require accompaniment from site personnel or Client staff.

3.6. The Contractor should advise the Client at the earliest opportunity where plant may need to be shut down and/or dismantled to provide access for the purposes of the risk assessment.

3.7. The Client must indicate to the Contractor where he requires the Contractor to be accompanied by site personnel or Client staff, e.g., for safety / security reasons.

3.8. The Client will provide the Contractor with any special equipment required to complete the work, e.g., special attire for entry into restricted areas.

4. SAFE WORKING

4.1. It is considered that the work specified is outside the scope of the Construction (Design & Management) Regulations.

4.2. The Contractor shall allow for ensuring that all operations both on and off the Works are carried out in complete accordance with the provisions of the Health and Safety at Work, etc. Act 1974 and appropriate existing enactments which are relevant Statutory provisions under that Act, and all appropriate Codes and Regulations made under that Act and other relevant Statutes and any amendments thereto.

4.3. Working practices must ensure that they do not endanger the health and safety of all personnel engaged upon the Works, employees of the Client or any other persons entitled to be near the area of Works.

4.4. The Contractor must comply with the Clients Health & Safety practices as supplied with this tender invitation.

4.5. The Client will appoint a Health and Safety Manager who may make unannounced visits to the site from time to time and he shall be allowed to inspect the Works in order to ensure compliance with Method Statements.

4.6. The Client reserves the right to terminate any contract that fails to meet the above H & S requirements.

4.7. As one of the more obvious risks the Contractor will be required to demonstrate compliance with *Work at Height Regulations 2005* SI 2005/735

Reg 4. - (1) Every employer shall ensure that work at height is - (a) properly planned; (b) appropriately supervised; and (c) carried out in a manner which is so far as is reasonably practicable safe, and that its planning includes the selection of work equipment in accordance with regulation 7.

4.8. In order to comply with the above regulations the contractor will need to demonstrate personnel are trained and understand the risks of accessing water storage cisterns and that the Contractor has a safe system of work.

4.9. The Client accepts the duty to manage asbestos as contained in regulation 4 of the Control of Asbestos Regulations 2006. We have: -
Taken reasonable steps to find out if there are materials containing asbestos in premises, and if so, its amount, where it is and what condition it is in;
Listed, and kept up-to-date, a record of the location and condition of the asbestos containing materials – or materials which are presumed to contain asbestos;

We will provide information on the location and condition of the materials to the Contractor where they are liable to work on or disturb them.

4.10. The Contractor shall be aware of the need to notify the Supervising Officer or his appointed representative immediately, of situations which have a potential involvement with asbestos based or similar composition of material in the form of thermal insulation to services pipe work, storage tanks and calorifiers. **IF IN ANY DOUBT HE SHOULD CONTACT THE CLIENT IMMEDIATELY FOR FURTHER ADVICE.**

5. ASSESSMENT OF "AT RISK" SYSTEMS

Stage 1 of the risk assessment shall be to identify a comprehensive list of all water-related systems on site.

5.1. The Contractor will identify all water systems and go on to conduct a Stage 2 assessment where appropriate.

5.2. A premises shall be regarded as possibly comprising of the following separate water systems. Each should be assessed as a separate entity: -
Wholesome water (fluid category one): mains cold water from the outside stop valve.

Cold water down services; stored cold water feeding outlets other than those fed by direct mains.

Hot water services; stored hot water feeding outlets, including small point of use water heaters.

Air conditioning; to include chilled water drip trays and any humidification plants.

Water features; indoor fountains or artificial outdoor ponds.

Fire fighting systems; to include hose reels and sprinkler systems.

Closed systems; such as heating and chilled systems, which are normally considered to be low risk. (Stage 2 not required).

Other systems (any specialised water systems).

5.3. This tender does not cover any of the following types of water system. If identified during Stage 1 survey they will form part of a separate agreement: -

Cooling towers; to include evaporative condensers or any other evaporative cooling system.

Swimming pools.

Spa baths.

Stage 2 of the risk assessment shall be the visual inspection of water systems from Stage 1.

5.4. Extent of inspection

5.5. To achieve a satisfactory degree of inspection pipework should be visually traced along its routes (as far as practicable) and components of the installation located.

5.6. In buildings where distribution pipework is partially concealed: -
Sufficient loose or removable panels shall be taken down or lifted, to allow pipe routes to be ascertained, and carefully replaced when the examination has been completed.

Where access is not possible without causing structural damage the assessor shall make an educated assumption as to the routing of the pipework. As these assumptions are open to question then a note should be made on the line diagram clearly indicating that an assumption was made at this point.

5.7. The Contractor shall inspect and comment upon the records held by site in order to assess the completeness of the management system as required by the ACOP including the written scheme for controlling the risk from exposure to Legionellosis.

5.8. The Contractor is being employed as the expert therefore the method of inspection is left open. The Client requires the Contractor to report on aspects of the system design, installation, condition, operation and usage that present

a Legionellosis risk using ACoP L8[Ref 1], BS 6700 [Ref 9] and the Water Regulations Guide[Ref 10] as standards. This survey is not designed to provide evidence of full compliance with the Water Regulations.

5.9. Backflow prevention devices, dead legs, TMVs and stagnant regions should be identified on the outlet asset register or marked on the schematic diagrams. The Contractor will need to question the Client on typical water use patterns in order to assess possible dead legs and stagnant regions.

5.10. The Contractor shall indicate if any materials of non-approved type are noted, including Lead pipework.

5.11. The increased risk of scalding must be commented on if recommendations include raising hot water temperatures to comply with the ACoP.

5.12. The Contractor should take into account special provisions for extended plant shut-down and restart such as school holidays in educational buildings.

5.13. Temperature measurement shall be conducted on all water systems to generate a representative picture throughout the

To assess performance typically 10 to 20% of the building outlets will be tested with careful attention paid to select sentinel outlets (points nearest to & furthest from plant and long

Circulating loops), flow / return & base on each calorifier, inlet and outlet of cold storage cisterns and & any locations of concern present such as remote or little used areas. The client requires comment on the condition of outlets if they are damaged, scaled or not operating. All temperature measurements shall be carried out. High usage on the HWS may reduce temperatures during peak loads this should be considered by the assessor when conducting the assessment.

5.14. In addition where water systems employ control measures other than temperature then measurements should be taken at representative points to assess the distribution and effectiveness of the process.

5.15. All measurement points and shower heads must be included in an outlet asset register.

5.16. Microbiological sampling for general (heterotrophic) bacteria is to be carried out on water systems only after approval by the client and will be additional to the contract sum. The Contractor should state the site specific reason for sampling as it is not considered to be good practice to collect samples on an ad hoc basis.

5.17. *Legionella* sampling will only be conducted after approval by the client and will be additional to the contract sum. Where sampling is carried out the method of draw off and subsequent handling of samples shall comply with The determination of Legionella bacteria in water and other environmental samples (2005) - Part 1 - Rationale of surveying and sampling.[Ref 8].

5.18. All sampling points must tie up with outlet locations recorded in the outlet asset register.

5.19. All microbiological measurements shall be carried out using approved methods and by UKAS (or equivalent) accredited laboratories. Dip slides are not acceptable for analysis of hot & cold water systems.

6. REPORTING

- 6.1. The written report shall contain the following:
- 6.2. A header page signed by the person responsible for the assessment.
- 6.3. A brief description of the site, its activities and its management structure
- 6.4. An overview of the systems and key points raised by the survey, and assessment of the overall risks associated with each system.
- 6.5. A summary list of all systems found and inspected for Legionellosis risk including the survey date(s).
- 6.6. The inspections surveys, temperature measurements, shower descales, and any other tests undertaken.
- 6.7. Photographs (including electronic copies) are to be included where they highlight poor conditions or specific points of concern.
- 6.8. Schematic drawings of the water systems will be updated or produced (many sites have little or no drawings) for each site. An example of the required standard can be found in the appendices. Any system schematic diagrams known to the Client will be made available to the Contractor for updating. The Contractor should assume service drawings are out of date until proven correct by survey. The schematic drawings shall be produced using CAD software (AutoCAD, Turbo Cad or compatible package). The drawings shall be provided both as paper prints per site and as stored files on CD-ROM in a suitable format DWG/DXF format. Drawings shall be a maximum size of A1, but preferably A4 or A3 where practicable.
- 6.9. A specific evaluation of the existing written scheme for controlling the risk of Legionellosis including recommendations for additional provisions.
- 6.10. A list of detailed recommendations should be included for each water system the list should be ordered by risk rating prioritizing the highest risks.
- 6.11. The Contractor shall include detailed proposals for the site specific tasks to be conducted with frequencies in order to allow the production of a control scheme.
- 6.12. Two copies of the report shall be provided.
- 6.13. Classification of Risk – The contractor is required to produce a system that provides some indication as to the degree of risk present, for example: -

Risk Level	Action	
0	No risk	No action required
1	Slight risk under exceptional operating conditions	Consider risk reduction measures when more urgent

2	Slight risk under normal operating Conditions	risks have been actioned. Program risk reduction measures for completion.
3	Serious present risk	Implement remedial actions or changes in procedure to reduce the risk as soon as practicable.
4	Imminent danger to health	Consider closing down the system until risk reduction measures have been implemented.

7. TESTING

Water Temperature Testing is to be completed in line with the TDBC Property Services Legionella Policy and ACOP L8. The methodology of reporting and recording the findings of these tests are to be agreed with the Contract Administrator appointed by TDBC Property Services prior to the commencement of the contract but it is envisaged that hard copy log books retained at TDBC offices will be the preferred method.

8. QUOTATIONS FOR REMEDIAL WORKS

Fully costed and itemised quotations to complete identified remedial works should be provided to the Contract Administrator appointed by TDBC Property Services on;

1. Submission of the risk assessments & 2. Following any identified non compliance with TDBC policy or ACOP L8.

However TDBC reserve the right to obtain alternative competitive quotations for any works.

9. REFERENCES

1. Approved Code of Practice L8 (2000): Legionnaires 'disease The control of Legionella bacteria in water systems, HSC. ISBN 0 7176-1772-6.
2. HS(G)70: The Control of Legionellosis Including Legionnaires' Disease, HSE 1993. ISBN 0 11 882150 4 (Withdrawn).
3. Health and Safety at Work etc Act 1974.
4. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice L24, HSE 1992. ISBN 0 7176 0413 6.

5. Health and Safety - The Work at Height Regulations 2005 SI 735 ISBN 0-110-72563-8 (& Amendment 2007).
6. Guidance to the Standard Specification of Water Services Risk Assessment - FMS 4/99. BSRIA 1998. ISBN 0 86022 518 6.
7. Water Management Society Guide to Risk Assessment.
8. Environment Agency - The determination of *Legionella* bacteria in water and other environmental samples (2005) - Part 1 - Rationale of surveying and sampling.
9. BS 6700:2006 Specification for the Design, Installation, Testing and Maintenance of Services Supplying Water for Domestic use Within Buildings and their Curtilages.
10. Water Regulations Advisory Scheme WRAS Water Regulations Guide ISBN 0-9539708-0-9

Outbreaks of Legionella

- 1. In the event of an emergency** the Responsible Person or their deputy must be immediately advised by the nominated person, or other duty holder as appropriate. The Responsible Person's contact details are in Appendix 3.
- 2.** In the event of an outbreak the authority will follow the guidance presented in Appendix 2 of the Health and Safety Commission Approved Code of Practice and Guidance L8: "Legionnaires disease - The control of Legionella bacteria in water systems".
- 3. Medical Advice** is available if exposure to Legionella bacteria has occurred.

The Council's employees who may be affected or involved will be offered an appointment with the Council's Occupational Health Service (OHS). The purpose of this appointment is to:

- establish an Occupational Health Record. This must be retained for 50 years by the Council's OHS;
- document the type and level of exposure for each employee exposed. A written summary should be provided for the OHS to attach to the records; within 14 days of the exposure.
- establish a baseline medical record of health;
- provide an opportunity for employees to discuss risks and concerns in confidence;
- ensure that employees' general practitioner (GP) services are informed, via the OHS, so that GPs can monitor the individuals concerned.

Background information relating to Legionella risks and infection routes;

Legionellosis is the collective name given to pneumonia illnesses caused by Legionella bacteria; the most serious is Legionella's disease. Similar but less serious illnesses include Pontiac fever and Lochgoilhead fever. To date over 50 species of Legionella bacteria have been identified.

The disease first came to prominence in July 1976 following an outbreak of a typical pneumonia among the delegates of the 1976 Legionnaires convention in Philadelphia. 221 people developed symptoms and of these, 34 died. The syndrome became known as "Legionnaires' disease", and was at first thought to be caused by a virus, a commonly held misconception that is still reported in most newspapers following outbreaks.

In January 1977 the causative agent, a hitherto unknown gram-negative bacterium was identified by the Centre for Disease Control in Atlanta. This was isolated from the lung tissue of the victims; and significantly, from a condensate tray in the hotel's air-conditioning system. It was dignified with the name Legionella pneumophila, "pneumo" relating to the lungs and "phila" from Philadelphia. As more information became known about the micro organism it became apparent that it may have been responsible for previous outbreaks of fatal pneumonia, as revealed by diagnostic tests conducted on deep-frozen post mortem tissue from cases of atypical pneumonias dating from the 1940s.

There have been numerous high-profile outbreaks throughout the world; in the UK, the BBC and Stafford General Hospital and more recently, the Barrow-in-Furness outbreaks have all received major press coverage. Other European outbreaks include a flower show in Amsterdam, where 28 out of 242 people infected died; Alcala de Henares and Murcia in Spain. These major outbreaks caused widespread concern and increased the profile of the disease, leading to heightened awareness and the introduction of legislation aimed at controlling Legionella.

Legionnaires' disease is a relatively recently discovered condition, but Legionella have probably been present unrecognised in the natural environment for aeons, and it was only when they interacted with the built environment in such a catastrophic way that they had any recognised impact on human activities.

The organism occurs widely in nature where it exists in soil, streams, lakes and rivers and other fresh surface waters. It does not grow actively at temperatures below 20°C, but can remain dormant for many months, surviving in ice. It is rapidly killed at temperatures above 60°C. Its favoured growth range is between 32 and 41°C and it has a nutritional requirement for iron and for cysteine. Growth is slow compared to many other water borne

pathogenic bacteria such as *E. coli* or the salmonellae. Legionellae are also resistant to short term acid exposure down to pH 2.

Bacteria exist in water in two principal forms: planktonic (free living), and sessile, (attached to surfaces). Research has shown that the sessile mode is preferred in natural and in reasonably clean built water systems (i.e., having low levels of nutrients), with typically only 0.1% being present in the planktonic form (Geesey et al, 1978). This is a significant finding as it implies that a degree of caution should be taken on interpreting the counts obtained for *Legionella* in domestic water systems. It is the view of both AEC and the HSC that random sampling for *Legionella* in water systems is not recommended, but that selective *Legionella* sampling can be beneficial as part of a management plan in a high risk system, to demonstrate the effectiveness of an existing control strategy. *Legionella* monitoring is a requirement in the management of cooling towers and evaporative condensers.

The preference for a sessile existence confers a high degree of protection to Legionellae, enabling them to exploit environments that would otherwise be too harsh. They are particularly successful in their ability to exist in biofilm, the slimy layers found on submerged surfaces of a variety of materials. Biofilms are complex miniature ecosystems composed of a range of bacterial, algal and protozoan species, which coexist and interact. Micro organisms within the biofilm matrix are protected from a range of chemicals and to some extent heat and sunlight, by the layer of slime.

Legionellae are known to be ingested by protozoa such as amoebae, where they exist in a vacuole or cyst within the amoeba, evading digestion and are thus protected from environmental difficulties. This is a major factor in the survival of the bacteria. The cysts are very hardy, remaining intact following the death of the amoebae. They can sometimes re-seed water systems following cleaning and disinfection.

The principle infection route is via inhalation of atomised droplets of infected water (the higher the concentration the higher the risk). Aspiration of infected drinking water is also a possible (but unusual) route for infection.

Water can be atomised into an aerosol in various ways, the most commonly found in buildings are; showers, spray taps, hose heads, spa baths etc although the action of water impacting on basins, sinks, baths etc via standard taps can also produce aerosols.

Responsible Person Contact Details;

Mr Phil Webb

Housing Services Property Manager

01823 356505.

Deputy;

Mr Steve Esau

Property Manager - Maintenance

01823 356593.

Appendix 2 Control Measures at TDBC Properties

Frequency	System	Check	Carried Out By
Weekly	Hot and cold distribution pipe work	Flushing of all deadlegs* identified on risk assessment	Appointed Contractor
Monthly	Communal Hot water storage vessel(s)	Check flow and return temperatures. Flow should be 60°C and return 50°C	Appointed Contractor
	Communal Cold water storage tanks	Check make up and stored water temperature. Stored water temperature should be below 20°C. Carry out visual inspection of tanks	Appointed Contractor
	Communal Hot and cold water outlets	Check sentinel+ hot and cold water outlets. Hot water outlet should be between 50 and 60°C within 1 minute of opening. Cold water below 20°C within 2 minutes of opening	Appointed Contractor
	Communal Hot and cold water outlets	Check 10% of non-sentinel hot and cold water outlets on rotational basis. Hot water outlet should be between 50 and 60°C within 1 minute of opening. Cold water below 20°C within 2 minutes of opening	Appointed Contractor
	Communal Hot outlets fitted Thermostatic Mixing Valves (TMVs)	The water supply to the TMV temperature should be at least 50°C within a minute of running the water. The outlet temperature should be no more than 46°C	Appointed Contractor
	Communal Showers	Remove shower head and hose and descale and disinfect.	Appointed Contractor
Annually	Hot water storage vessel – Dukes Court	Drain down vessel and inspect the internal conditions. Descale if required.	Water Treatment Consultant / Maintenance Contractor
As required	Hot and cold water storage and distribution system - Dukes Court & Chertsey House	Drain down and clean cold water storage tanks. Disinfect cold water storage tanks, hot water storage vessel and associated services.	Water Treatment Consultant

* Pipes leading to a fitting through which water only passes when there is draw-off from the fitting, includes low use outlets

+ For a hot water services - the first and last taps on a recirculating system. For cold water systems (or non-recirculating hot water systems), the nearest and furthest taps from the storage tank. The choice of sentinel taps may also include other taps which are considered to represent a particular risk.

Non- Compliance and Escalation Procedures;

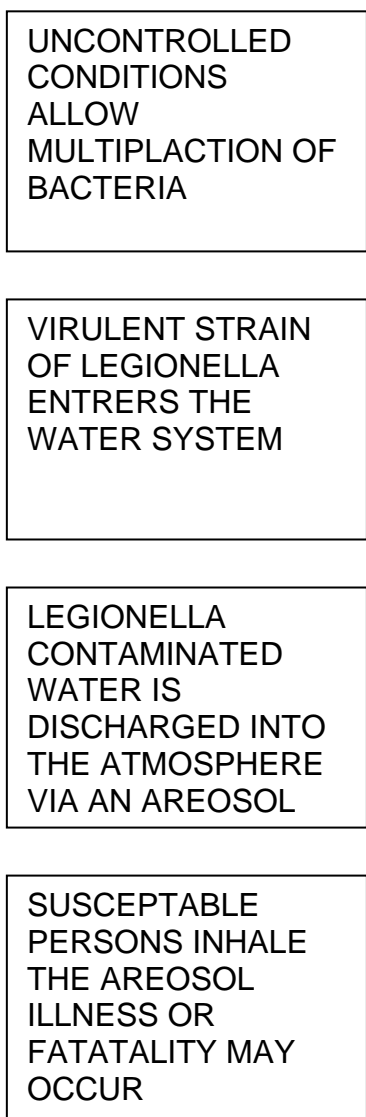
Should any task result fall outside the designated control criteria then the defects / non-compliance section of the logbook shall be completed and the Site/Premises Manager and the Property Services Manager shall be informed of the nature of the non-compliance. The Site / Premises Manager shall take the appropriate steps, as reasonably practicable, to resolve the non-compliance and ensure that the system has been returned to a safe condition within the specified control limits.

Should the Site / Premises Manager be unable to resolve the non-compliance or the system is still outside the control limits they will inform the TDBC Responsible Person who will authorize the use of additional resources outside the remit of the Site / Premises Manager

Once the non-compliance / control failure has been resolved it will be closed off in the defects / non-compliance section the site water hygiene logbook and signed by the Site / Premises Manager and/or Responsible Person.

Appendix 3

CAUSATION CHAIN OF EVENTS THAT LEAD TO LEGIONELLA OUTBREAKS



**TAUNTON DEANE BOROUGH
COUNCIL**

Housing Property Services

Electrical Condition Testing Policy

Policy	
Policy Number	
Title	Electrical Condition Testing
Author	Steve Esau
Responsible Officer	Phil Webb
EQIA Date	
Date Agreed by TSMB	
Date agreed by Housing Portfolio Holder	
Next Review Date	
Version	1.1

1.0 Introduction

The policy sets out the aims and objectives of the organisation and outlines responsibilities for managing the Electrical Condition Inspection Report programme.

The policy covers all activities under the control of Housing Property Services (HPS) and includes all the properties that it owns, occupies or where it acts as landlord. Where properties do not come under the direct responsibility of the Housing Revenue Account, this Policy and Code of Practice will be commended to them. Housing Property Services has obligations under the Health & Safety at Work Act 1974, The Electricity at Work Regulations 1989, that electrical installations are inspected and tested.

Housing Property Services recognises and accepts its responsibility for providing a safe and healthy environment for its employees and the public who may be affected by its facilities and services. This statement is an expression of the Housing Property Service's commitment to managing risks arising from any activities under its control.

The Housing Property Services will, so far as is reasonably practicable take all reasonable steps to protect the health and environment of:

- Employees
- Contractors (employed directly or indirectly)
- Clients and tenants
- Other persons

2.0 Intention

Housing Property Services recognises its duties in law, to safeguard the health and safety of its employees and of others affected by its actions. The policy has been drawn up to set out clearly the systems and procedures, which will be implemented to manage the risk from electrical systems. It therefore:

- Puts procedures in place to control and minimise these risks; and
- Ensures work is to higher standards than the minimum required by law, where reasonably practicable; and
- Provides information, guidance and training for managers responsible for premises and other key managers to ensure they are aware of their role with regard to this policy; and
- Promotes good system design to reduce the risk to stakeholders.

3.0 Responsibilities

The Housing and Communities Director has responsibility for Housing Property Services Electrical Testing Regime procedures and ensuring their implementation and proper compliance through the Housing Property Services Manager who is responsible for health and safety issues relating to the Housing Revenue Account properties. The Housing Property Services Manager will be the “responsible person” for ensuring adequate systems are in place to ensure compliance and control of the risks from electrical systems in the housing stock.

The nominated deputy is the “Housing Property Manager (Maintenance)” The theme manager will ensure that sufficient time and resources are provided to implement the policy and procedures within the Housing Property Services, through their services’ management systems. They are responsible for ensuring full compliance with the procedures through their managers and staff.

The responsibilities of staff and others involved in the control regime are as follows:

The Housing Property Services Manager is responsible for:

- Implementing this policy, for the delivery of the programme and for monitoring to ensure that recommendations arising from testing are carried out.
- Instructing the maintenance contractors to undertake any improvement and adaptation works necessary following an unsatisfactory test for properties where the service holds the central building maintenance budget.
- Responsible for promoting good design practice and operating procedures to reduce as far as is reasonably practical the risk of harm from premises, equipment under the services control;
- Ensuring arrangements are in place in their areas of control for the effective management of the testing programme. In particular they are responsible for ensuring that this policy is implemented and managed.
- Ensure the competence of the staff employed to manage and administer the programme and ensure that appointed contractors are competent by ensuring that;
 1. The contractor’s professional registration (NICEIC, NAPIT etc) is current.
 2. Copies of public and employee liability insurance certification are suitable and current.
 3. There have been no improvement or enforcement notices issued by the HSE to the contractor, or if there have been suitable action has been taken to negate this.
 4. The contractor has in place sufficient and suitable; health & safety policy, site specific risk assessments, method statements, lone working procedures etc.

Taunton Deane Borough Council

- A proportion of the inspections are quality and cost audited to ensure compliance with the HPS specification, Health and Safety at Work Act Regulations, A competent employee has day to day responsibility for the testing programme

The Housing Property Services Manager is responsible for monitoring the implementation of the authority's policy. They are responsible for:

Ensuring that a person is identified (the Responsible Person) for the housing stock and there is clearly identified line management regime established with responsibility for ensuring that duties are carried out;

Distributing this policy throughout the service;

Arranging appropriate training and ensuring competence for those staff identified as requiring training;

Scheme Managers and site personnel are responsible for ensuring that contractor access is available to complete tasks in line with this policy.

Managers in the housing service are responsible for:

- Ensuring that this policy is complied with.
- Have available, and keep up to date, all information supplied for the operation and management of their premises, including a copy of all the relevant records, schematic diagrams for the properties under their control;
- Arrange for the testing of electrical systems as detailed in the programme.
- Establish and implement appropriate controls for any maintenance or modification work to be done by contractors, service engineers, volunteers and own staff (e.g. Site maintenance staff);
- Ensure safe systems of work are effectively implemented;
- Know what action to take if a condition report identifies unsatisfactory or dangerous installations;
- Ensure, where there is information known about the electrical system that this is drawn to the attention of the maintenance contractor and those who do maintenance work etc. **before** they commence work.
- Close consultation and co-operation with contractors, staff and tenants will assist managers in meeting this obligation;
- Update the premises' records and schematic diagrams where they have ordered any changes to the electrical systems in their properties.
- Co-operate and co-ordinate with other managers on shared premises.

Taunton Deane Borough Council

- Staff are responsible for advising the Housing Property Services Manager on any issues relating to their premises that may affect the safe use of the building or electrical installation in premises under their control:

All staff have a duty for their own health and safety and a duty to co-operate with Housing Property Services in the implementation and maintenance of its arrangements to satisfy its statutory duties for health and safety.

Employees therefore have a responsibility to:

- Understand the risks associated with electrical systems
- Report any defective equipment or systems;
- Use any electrical equipment or system in a safe manner; and
- Attend training and read briefing documents as required.

Contractor(s) are contracted to deliver test and inspections to sites where the authority holds the maintenance budget.

4.0 References

British Standard 7671, Health and Safety at Work Act 1974, Management of the Health and Safety at Work Act 1999, Chartered Institute of Building Services Engineers, National Inspection Council for Electrical Installation Contractors, Electrical Contractors Assn, Guidance etc.

5.0 Monitoring and review

Monitoring and review of this statement, ongoing assessments and control precautions will be reviewed at intervals as appropriate, and at least annually. Revisions will be made as necessary to reflect organisational, technical or legislative changes. The authority will obtain further competent advice as required.

A copy of this policy will be made available to employees. It will be reviewed, added to and modified as appropriate to sustain its effectiveness, and such changes will be brought to the notice of employees. It may be supplemented in appropriate cases by further amendments relating to the work of particular departments or groups of workers. The policy will be reviewed every three years.

Appendix 1 - Process.

To comply with the obligations and legal duties Housing Property Services (HPS) will appoint contractors to complete a programme of testing;

The contractor will be asked to provide a Periodic Inspection and Test Report to BS 7671: 2008 for the electrical installation in each building.

The specification information for contractors is herewith attached in appendix 1.

The report will state if the installation is **satisfactory** or **unsatisfactory**. If the report states that the installation is unsatisfactory arrangements will be made for remedial works to be carried out to ensure a satisfactory certificate is available. Following any remedial works the contractor should provide an electrical installation certificate. A copy of the certificate will be held on file in the Housing Property Services office.

It is not necessary for the installation to comply with all aspects of the current standard (BS7671 2008) for the system to be safe hence it may not be necessary to repair all the non-compliances listed in the report.

The reports are not necessarily a specification from which a contractor can produce a competitive tender for any necessary repair work. Liaison between the contractor and the designated HPS surveyor may be required for some properties. However, a reliable contractor should be asked to advise and give an estimate for the work required to make the installation safe.

A registered electrical contractor should do any repair work that is required. It is a legal requirement that electrical work in dwellings and associated properties be done by a registered contractor. Confirmation that the work has been completed to current building regulations standards and has been self certificated under an "approved persons" scheme will be required along with a minor works certificate.

Appendix 2 – Responsible Person.

Mr Phil Webb

Housing Services Property Manager

01823 356505.

Deputy;

Mr Steve Esau

Property Manager - Maintenance

01823 356593