



Water Quality & Legionella Management Policy

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1.0 Introduction

1.1 The organisation where reasonably practicable, aims to control the risk of legionella bacteria and maintain water quality in water systems within properties owned by the Association.

2.0 Scope of Policy

2.1 This Legionella Policy will be implemented through all premises owned or managed by Southside Housing Association and its implementation will be encouraged throughout any premises which are used by its staff.

2.2 The mandatory requirements of this policy, along with the relevant regulations specifically apply to those premises where Southside Housing Association operates from, irrespective of the ownership of the building.

2.3 Arrangements must be put in place throughout the full estate so that all staff understand this policy along with their statutory obligations and implement the necessary measures in all areas. The resulting measures should ensure the arrangements include all Mandatory Requirements, contained within this policy. Any relaxation of the Mandatory Requirements must be agreed in writing by the Duty Holder and the Responsible Person.

All policies and strategies should be administered by those with responsibility for managing the buildings. Co-operation between persons with Legionella safety responsibilities in the above context is a fundamental requirement of this policy.

3.0 Legislation

3.1 Southside Housing Association acknowledges and accepts it's responsibilities under the

- Health and Safety at Work act 1974
- The Control of Substances Hazardous to Health Regulations 2002
- The Management of Health and Safety at Work Regulations 1999
- Health and Safety Commission's Approved Code of Practice and guidance document L8:2013
- The Complementary Health & Safety Guidance - HSG 274 part 2:2014

- 3.2** To comply with its legal duties the Association will:
- Identify and asses sources of risk
 - Implement a programme of regular checks and monitoring of its water systems
 - Ensure suitable and sufficient resources are available
 - Implement, monitor and manage all control measures identified
 - Keep records of all such measures
 - Nominate employees and others with responsibility for implementing this policy
 - Review this policy at least every 3 years

4.0 Definition of Legionella

4.1 Legionella is a naturally occurring bacterium and is common within environmental water sources such as rivers, lakes and reservoirs, usually in low numbers. These bacteria can survive under a wide variety of environmental conditions, but growth is more prolific between temperatures of 20°C and 45°C. Due to the fact that the bacteria are common within the environment, it is almost certain that at some time they will enter the majority of manufactured systems, such as water distribution pipe work. In order to reduce the possibility of creating conditions in which the risk of exposure to Legionella bacteria is increased, it is important to control the risk by introducing measures which do not allow the bacteria to breed

4.2 Legionnaire's disease is a potentially fatal form of pneumonia which can affect anybody, but which principally affects those who are susceptible because of age, illness, or have a pre- existing lung condition. Contracting Legionella can be fatal or cause serious illness.

4.3 The disease is normally contracted by inhaling deep into the lungs, the Legionella bacteria, either in tiny droplets of water in the form of aerosols, or in droplet nuclei which are particles left after water containing the Legionella bacteria has evaporated. Not everyone who is exposed will develop symptoms of the disease.

The incubation period is between 2 – 10 days

5.0 Policy Statement

5.1 Southside Housing Association will comply with all statutes and guidance mentioned within this policy to manage and control the risks of legionella in all buildings which they own or manage from which any tenants or staff may come in contact with the water systems.

5.2 Although Legionella prevention is generally assumed to relate to cooling towers and water storage systems, ventilation systems can have similar problems and should be considered as part of the risk assessment along with air conditioning systems.

The mechanical common extract systems within the Association's properties are considered a low legionella risk. Likewise the heating and cooling system within the office of Southside House

5.3 Southside Housing Association will ensure, where possible, all hot water systems are designed so that they do not store water and can achieve a minimum temperature of 50°C at the outlets within 1 minute of opening any tap. Where hot water is stored for multiple users, the units installed must be capable of storing their entire contents at 60°C and be of a circulating type that can achieve a minimum return temperature of 50°C and provide water to any outlet at 50°C within 1 minute of opening any outlet.

5.4 Ensure where possible, all cold water systems are designed, so that they do not store water and can provide water at a maximum temperature of 20°C at the outlets within 2 minutes of opening any tap.

Where cold water is stored for multiple users, the cistern itself should comply with all current regulations and should store no more than 24 hours' worth of water; this volume will vary depending on the number of outlets fed and the amount of use of these outlets.

Where cold water requires being stored and is the only source of potable water for the premise then further measures must be taken to ensure the quality of the water. In addition to measures taken for other cold water storage tanks access will be restricted to these tanks and microbiological monitoring shall be carried out on a six monthly basis

5.5 All water systems shall be constructed of materials that comply with the Scottish Water Bylaws 2004 as amended, and fittings shall be listed in the Water Regulatory Advisory Council Materials and Fittings Directory.

5.6 Every premise type Southside Housing Association owns or manages shall have a written risk assessment for the prevention of Legionella. This assessment must be carried out by a competent Risk Assessor. The frequency of risk assessment reviews will be prioritised as follows;

- **Communal water systems containing showers – every 2 years** (communal areas that contain showers, not within flats)
- **Communal water systems containing no showers – every 3 years**

- **Non-communal water systems** – only when water systems are “significantly” changed. i.e. replacing a hot water boiler system with a combi boiler or following significant changes of occupancy and/or services installation that could affect the risk rating of the property.

5.7 All Risk Assessments will be checked, accepted and signed by the Responsible Person, without this acceptance the assessment is not valid.

5.8 Every premise type shall have a list of the necessary control measures written, to ensure the measures specified in the premise risk assessment are being carried out. This schedule will be held by the responsible person and audited annually to ensure it has been followed. This could be in the form of a desktop audit by running an annual report from the electronic recording system.

5.9 Where buildings are provided by means of a third party, i.e., the premise is leased to but managed by the Association. It is essential that the arrangements for the management of legionella comply with this policy and are monitored by a representative who is qualified and competent to recognise weaknesses in the arrangements and results. Third party provision should ensure that it meets the conditions of this policy. Where failures are identified these should be detailed in writing to the owner. Where there is no common water system, the management responsibility would be fulfilled by carrying out a risk assessment to 1 x of a flat type

5.10 In the case of analysis of water testing results no person other than a UKAS Accredited Lab will carry out microbiological testing

The water hygiene specialist will make a determination on the seriousness of a result and remedial actions required following an elevated result.

The Water Hygiene company must advise on any remedial actions required

5.11 Management must implement a programme of staff training to ensure that they have an overall appreciation of the practices affecting water hygiene and safety. The rate of change in building service technology is not great, but management should ensure suitable refresher training should be given periodically; records of training attendance would need to be maintained. Where it is relevant to their work, staff should have refresher training as follows

- **Legionella Awareness – every 3 years**
- **Responsible Persons – every 2 years**

Training for all those involved in the management and control measures of buildings will have training carried out appropriate to their level of involvement. This may be from simple ‘tool box talks’ up to formal classroom / e-learning training courses.

5.12 It is also important that where a sub-contractor (Water Hygiene Contractor) is appointed, that the Association operate a training and audit plan to ensure that those designated to carry out control measures on behalf of Southside Housing Association are appropriately

- Informed, instructed and trained
- Assessed as to their competency
- Accreditation is relevant, current and not expired

The sub- contractor will be required to provide evidence of suitable training and competence for their staff, evidence of refresher training and be members of the Legionella Control Association which has additional competency requirements.

Although training is an essential element of ensuring competence, it should be viewed within the context of experience, knowledge and other personal qualities that are needed to work safely.

Competence is dependent on specific needs of individual installations and the nature of risk.

6.0 Employees Responsibilities

6.1 Employees have responsibility to ensure they implement the Association's Policies and Procedures in the management of Water systems and Legionella Control

7.0 Training

7.1 All staff, where it is relevant to their job, must attend the appropriate training provided by their employer, whether this is an accredited or practical course designed to provide competency to carry out specific tasks

Refer to paragraph 5.11

8.0 Managing Risks

8.1 The purpose of risk management is to identify, eliminate, reduce and control risks

8.2 Southside Housing Association carries out risk assessments of water systems in order to categorise the level of risk to residents, staff and visitors, from Legionella bacteria, both in domestic and in the communal parts of sheltered and general needs properties with stored cold water.

For the frequency of risk assessment reviews, see paragraph 5.6

High Risk: This generally applies to hospitals or buildings with cooling towers.

Medium Risk: Communal parts of sheltered housing schemes and accommodation with cold water storage, and hot water supplied via a separate cylinder.

Control Measures

- Review Risk Assessments every 2 years
- Chlorination to be carried out by a specialist water quality consultants
- Monthly temperature monitoring to be undertaken by individual site managers. (A Temperature monitoring process map is shown in Appendix D)
- The inspections of stored water tanks every six months to be carried out by a water quality specialist.
- A log to be kept on site for recording results of temperature monitoring and inspections. The log will be validated during each inspection by the specialist water quality consultant

Low Risk: Domestic premises including blocks of flats with self - contained living units. Typically the water systems are of the domestic type with high turnover, i.e. with a cold water gravity-feed tank to a conventional copper storage cylinder or mains water system with a combination boiler.

Control Measures

- Generally these systems will only be dealt with when they become void.
- Renew or sterilize shower heads prior to re occupation
- Drain down and flush stored water systems
- Provide tenants with advice note on water safety

Refer to the Void Management Procedure Appendix C

8.3

It is recognized that the Association has Tenants who are more vulnerable to Legionnaires disease, such as those who are elderly, or are already ill. The Association will provide information and an advice note to all Tenants on the risks of Legionella.

9.0 Thermostatic Mixer Valves (TMV's)

9.1 There is a wide range of TMV's throughout the Association's properties. Where identified, TMVs in vulnerable groups such as supported accommodation will be maintained as part of the control measures for that specific site. General housing units which have TMVs present will be inspected and maintained when properties become void or are reported to be working incorrectly

10.0 Actions in the event of a positive result for Legionella

10.1 Sampling for legionella would occur where

- TVC results were very high and this had raised concerns or
- where someone is suspected of having contracted Legionnaires disease and an investigation is under way

10.2 The water quality consultant will notify the relevant Responsible Person at Southside Housing Association as soon as the test results are known.

10.3 Action Required for Legionella Bacteria

- More than > 100 but Less than < 1000 cfu/litre

If only one or two samples are positive, the system will be re sampled. If a similar count is found, a full review of the control measures and risk assessment will be carried out to identify any remedial actions.

10.4 If the majority of samples are positive, the system may be colonized, albeit at a low level, with Legionella.

Disinfection of the system will be considered and an immediate review of control measures and risk assessment will be carried out to identify any other remedial measures to be carried out.

10.5 More than > 1000 cfu/litre

- The systems will be re sampled and an immediate review of control measures and risk assessment will be carried out to identify remedial actions including possible disinfection of the system

11.0 Action to be taken in the event of a Legionella outbreak

11.1 An outbreak is defined by the Public Health Laboratory Services as two or more confirmed cases of Legionellosis occurring in the same locality within a six month period

11.2 In the event of a suspected outbreak within the Association's properties, the following procedure will be followed:

The Association's Responsible Person will immediately arrange for the premises to be sampled as per the procedure in paragraph 10.5 above and an urgent review of control measures and risk assessment will be carried out to identify any other remedial action required.

12.0 Drinking (Potable) Water Quality

12.1 Microbiological Sampling & Total Viable Count (TVC)

The water utility companies provide mains water which is potable i.e. of a standard which is suitable and safe to drink. The responsibility of the water utilities for the water they supply ends at the point when this water enters any commercial premises. There are a number of factors which could affect the quality of the water inside the building: dead-legs, pipework corrosion, biofilm build-up, tanks etc.

Microbiological contamination of potable water, although rarely hazardous to health through drinking the water, can cause taste and odour problems. It is therefore important to ensure the quality of the drinking water within a building in order to ensure that an optimal supply is provided

Potable Water Sampling

- Regular sampling is important as the analysis of a single water sample only gives an indication of the condition of the water at the particular point in time in which sample is taken. Information gained over time through regular sampling will provide an overall picture of the quality of any particular water supply system. It is possible to trend results, particularly on TVC (total viable count), an upward trend in results will indicate the need for further investigation and may point to problems in a system.
- If the system is supplying vending machines or other mains fed water coolers these should also be part of the sampling regime. High results may indicate that these are not being cleaned thoroughly or that the cleaning regime needs to be carried out more regularly.

Interpretation of Microbiological Results

- TVC 22°C: This test is carried out to give the number of live bacteria per ml of water. The temperature of the test will represent general background temperatures so bacteria which are in the environment will grow at this temperature. This is therefore a measure of mainly harmless bacteria that are just present in the water.

- TVC 37°C: Again this test is carried out to give the number of live bacteria per ml of water but at a temperature for the test which is the same as body temperature. The bacteria that grow therefore are more likely to cause some harm. .

Coliforms

- Coliforms are a group of environmental bacteria that have originated from the intestines of animals. They can generally grow in the environment also and are known as indicator organisms i.e. they are used as a guideline of possible contamination. In the majority of cases when coliforms are picked up in water samples taken from a tap the cause is the fact that the tap needs cleaning.
- Acceptable levels - not detected in 100ml.

E. coli

- E. coli itself is a coliform bacterium. Again it is used as an indicator organism, but E. coli does not live for very long in water so is an indication of recent contamination. The E. coli species found in water are generally harmless bacteria but are used as an indication of the possibility of other similar bacteria being present which may cause problems.
- Acceptable levels - not detected in 100ml.

12.2 Action to be taken for positive / high TVC results

Where water storage systems are tested for TVC, coliform and e-coli the water hygiene contractor will be responsible for reporting any non conforming results and the corrective actions required to remedy the situation i.e.

- Re-sample at same outlet
- Sample another outlet
- Clean & disinfect the cold water storage tank

13.0 Managing, Monitoring and Review

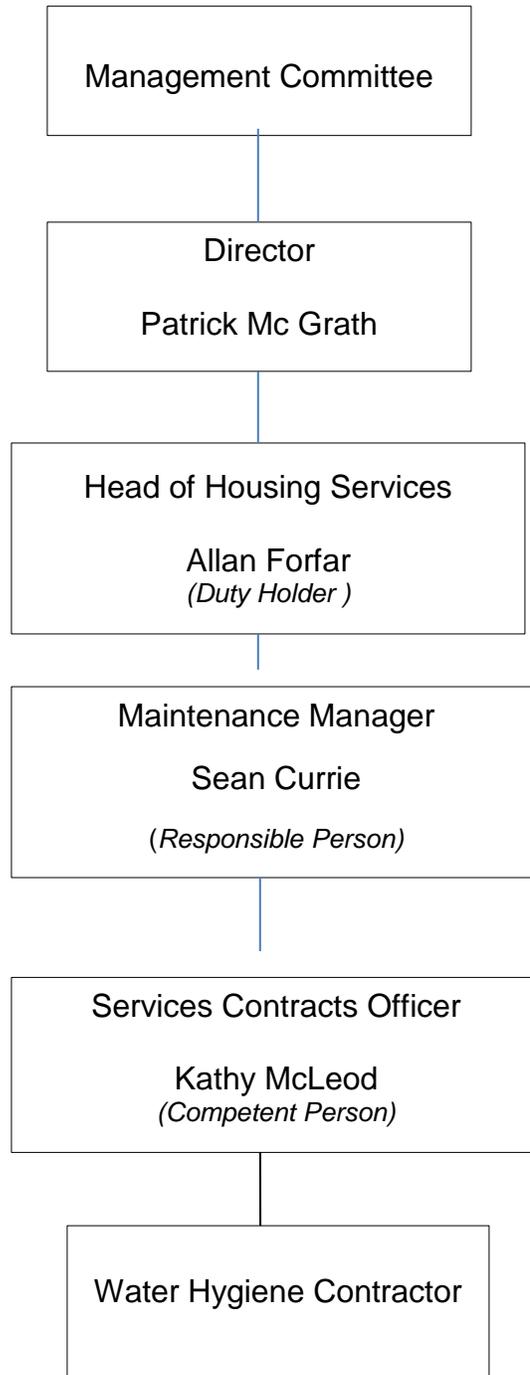
13.1 This policy will be reviewed every 3 years

13.2 An annual audit report will be carried out and retained by the responsible person to evidence compliance with this policy and procedures document.

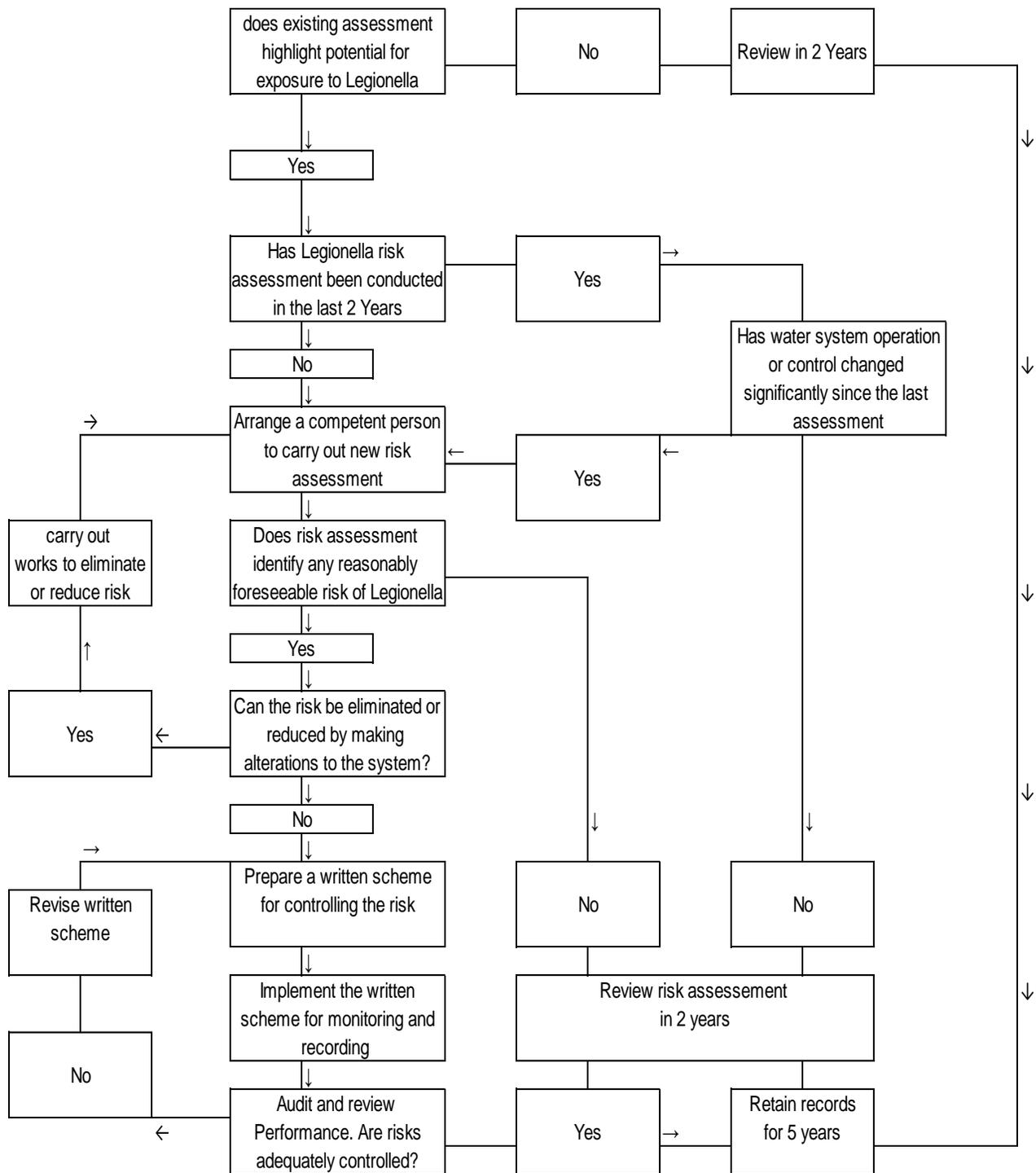
13.3 Details of the Association's organizational structure is given in Appendix A, showing the duty holder and responsible persons

Appendix A

Organisational Structure



Appendix B
Risk Assessment Process Map



Appendix C

Legionella Management in Void Properties, Little Used Outlets & Access

| | |
|-----|---|
| 1.0 | Void Properties |
| 1.1 | <p>Legionella can be inhaled via an aerosol, where a water outlet has lain unused for a period of time.</p> <ul style="list-style-type: none"> • Where the void time is unknown, the property should undergo a flushing regime by the Association's Water Hygiene contractor before staff or contractors turn on any water outlet including flushing of the toilet. • If it is known that the property will lay empty for some time, any storage tanks should be drained for the duration of the period. The system re-instated including a clean and disinfection by the Association's Water Hygiene Contractor and flushed prior to contractors carrying out void works in preparation to let • Should the void property exceed 7 days a temporary flushing regime should be put in place until all works are complete. • As part of any void property inspection, all identified cold water storage tanks must have a tank inspection report completed inclusive of internal condition photos. This will also identify any areas which are not compliant with Scottish Water by-law 30 (2004) regarding the tank design and layout. • Shower heads in all void flats should be renewed or sterilised as part of the void works • TMVs will be inspected and maintained when properties become void • The contractor should leave the new tenant an Advice Note on completion of works |
| 1.2 | <p>Void properties include</p> <ul style="list-style-type: none"> • Void Flats • Decant Flats • Void Shops |
| 2.0 | Little Used Outlets |
| 2.1 | <ul style="list-style-type: none"> • Are where there is a water outlet, tap, sink or toilet that is not used on a weekly basis. • A weekly flushing programme can be carried out in house by on site staff and the regime recorded either manually or electronically. |
| 2.2 | <p>Little Used outlets include any area where there is a water outlet, tap, sink or toilet</p> <ul style="list-style-type: none"> • Storerooms • Caretaker's offices • Cleaner's cupboards • Community rooms • Offices • Bin stores • Garden hose taps • Car parks |
| 3.0 | Access to potable (drinking) water storage tank rooms |
| 3.1 | <ul style="list-style-type: none"> • Padlocks have been added to the common CWST as a safety feature to ensure the drinking water can not be contaminated. • Access to the water tanks should only be given to the Association's Water Hygiene Contractor • Plumbers whether they are the Association's approved contractors or private plumbers employed by owner/occupiers should not at any time be allowed access to this area. If access is required they should liaise with the Association's Water Hygiene Specialist |

Appendix E

Legionella Risk Control Action Plan

| No | Description | Deadline | Lead Officer |
|-----------|---|-----------------|---------------------|
| 1. | Clarify Duty Holders training to ensure that they are aware of their duties, and have suitable competence and training. | | |
| 2. | Agree information to be sent out to the most vulnerable Tenants regarding the risks of Legionella | | |
| 3. | Agree general information to be sent out to all Tenants regarding the risks of Legionella | | |
| 4. | Establish a comprehensive list of all properties where risk assessments are required | | |
| 5. | Establish a programme for regular analysis of stored water systems. | | |
| 6 | Establish a programme of training for on site staff to carry out regular checks for record purposes. | | |
| 7. | Implementation of a programme of carrying out regular checks | | |
| 8 | Review Void Management Policy to include Legionella risk control | | |
| 9. | Establish a procedure for maintaining records of actions taken to mitigate risk of Legionella | | |

Appendix D

Temperature Monitoring Process Map

