

Control of Legionella Bacteria in GMP Buildings

Policy & Procedure

Greater Manchester Police

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1. Policy Statement

Legionnaire's Disease is a potentially fatal form of pneumonia which is normally contracted by inhaling a fine water mist/aerosol contaminated with a virulent strain of legionella bacteria. It can affect anyone, but principally affects those who are more susceptible due to age, illness, smoking or those with a compromised immune system. Other conditions include Pontiac fever and Lockgoilhead Fever.

The risk from legionella bacteria cannot be entirely eliminated because of its natural occurrence, but can be minimised by careful design of water services to prevent the bacteria multiplying.

In accordance with the Force Health and Safety Policy, the Chief Constable and the Police and Crime Commissioner recognise their responsibility to protect their employees and others from the potentially harmful effects of legionella bacteria and have put in place appropriate measures to ensure compliance with legislative requirements.

GMP will ensure arrangements are made to control risk to GMP employees, and others, of any water systems, plant and equipment which presents a risk from legionella and replace or upgrade such systems, equipment or plant wherever possible.

For buildings not under GMP's control, e.g. leased premises, shared accommodation agreements or those that are managed through the Private Finance Initiative (PFI) process, Business Support Services Branch will establish that similar standards to those outlined in this policy and procedure have been achieved, by ensuring that procedures are in place and by carrying out periodic checks of third party systems of compliance.

1.1 Aims

GMP is committed to providing a healthy and safe working place for our staff, visitors, the public and the environment with regard to water hygiene. We therefore require anyone involved with the control of legionella bacteria within GMP premises to fully understand their responsibilities and adhere to this policy and procedure.

The document describes the Greater Manchester Police Safe System of work for controlling and managing the risks associated with legionella bacteria within water systems. It defines how the Duty Holder manages the risk within Greater Manchester Police properties and what is expected of all personnel involved in the control of the risks associated with legionella bacteria within GMP premises.

2. Scope

This policy and procedure applies to anyone using GMP buildings, including:

- Police officers;
- Police staff;
- Contractors working for and on behalf of GMP;

- GMP volunteers;
- Visitors to GMP sites; and
- Detainees.

The document outlines GMP's responsibilities under the Health and Safety at Work Act 1974 and the Control of Substances Hazardous to Health regulations 2002, concerning the risk from exposure to legionella and the procedures in place to prevent or control this risk.

This document sets out in detail the measures GMP has taken, namely:

- To appoint a person to take management responsibility for the control of legionella bacteria in GMP buildings;
- To identify and evaluate potential sources of risk from legionella bacteria within GMP buildings;
- To draw up a written scheme for preventing or controlling that risk;
- To implement, manage and monitor precautions; and
- To maintain appropriate records.

3. Roles & Responsibilities

The Police and Crime Commissioner, as the 'duty holder', has overall responsibility for the Safe System of Work for the Control of Legionella Bacteria.

The Chief Constable is responsible for appointing the Branch Head of Business Support Services.

Branch Head, Business Support Services Branch is responsible for ensuring that appropriate systems and procedures are in place for the Forcwide management and control of risks from legionella bacteria and that adequate resources and training are made available.

Key responsibilities include ensuring:

- All persons are aware of their responsibilities and that clear lines of communication are established and maintained;
- The policy and procedure documents and control measures remain effective; and
- The policy and procedure documents are reviewed at least every two years or more frequently if there are significant changes, e.g. to the management structure or responsibilities or the control scheme for legionella bacteria.

Assistant Branch Head, Business Support Services Branch has been appointed by the Duty Holder as the 'Responsible Person (ABHSS)', and has responsibility for ensuring that the provision of resources and funding are available to meet the requirements, including ensuring:

- That the appropriate systems and procedures are in place to control any risks posed by legionella bacteria;
- That the management system and responsibilities for the control of legionella bacteria remain valid, and for ensuring that they are reviewed and updated as required, e.g. key personnel changes;

- The competence of any external contractors;
- The competence of internal staff and that training is undertaken and up to date;
- That the arrangements for the management and control of legionella are in place for PFI or any leased premises occupied by GMP staff; and
- That periodic audits/monitoring of the control mechanism are suitable and sufficient to maintain and manage the control of legionella. The Health and Safety Unit will carry out internal audits on the Safe System of Work.

Principal Facilities Manager has been appointed as the 'Responsible Person (PFM)', and has responsibility for ensuring that management and control requirements are implemented and monitored, including:

- Ensuring information is provided to appointed contractors so that suitable and sufficient risk assessments are undertaken on behalf of GMP;
- Ensuring that adequate records are maintained and are readily accessible for inspection;
- Arranging appropriate training to relevant staff, that training is undertaken and up to date;
- Ensuring management and control procedures are implemented in a safe and competent manner;
- Ensuring adequate records are maintained and readily accessible;
- Reviewing risk assessments where changes to the building use/occupancy are identified, or at least on the second anniversary;
- Arranging a programme of internal audits to prove effectiveness in accordance with the Force Health and Safety Policy; and
- Checking policy and procedures implemented by landlords of leased buildings to ensure compliance with legislation where GMP staff are accommodated, in conjunction with the Health and Safety Unit.

Facilities Manager – Mechanical has been appointed as the 'Responsible Person FM mech)' and has responsibility for implementing the procedures and managing processes and contractors, including:

- Ensuring the day-to-day operation, control and monitoring of the water system contract;
- Confirming operations are carried out satisfactorily;
- Monitoring 'log books' (see *terms and definition*) including undertaking regular routine sampling of the contractors work;
- Ensuring that an auditable system is in place for nominated staff to carry out the flushing of infrequently used showers and taps on a weekly basis under the direction of the relevant Facilities Manager;
- Holding/monitoring and managing the water risk assessments and signing them off as accurate and acceptable;
- Monitoring works and monthly checks carried out by the Water Hygiene Contractor ensuring comprehensive records are maintained and up to date;
- Ensuring any remedial works identified are reported through the facilities helpdesk and completed; and
- Updating of action plans and risk assessments.

Project Managers, Business Support Services Branch are responsible for:

- Ensuring that any proposed design changes to water systems are communicated to the 'Responsible Persons' in writing, so that any implications for the risk

assessment and written scheme can be considered. They will inform the 'Responsible Persons' in writing of any changes to building room use where it will affect the water assets i.e. reduce the water turnover to the site which will encourage legionella growth. Project Managers will ensure that any actual changes made are noted on the schematics immediately on completion so that they constantly remain up-to-date.

Private Finance Initiative (PFI) Contract Manager will, with the PFI contract provider:

- Ensure adequate records are maintained and readily accessible;
- Ensure management and control procedures are implemented in a safe and competent manner; and
- Arrange a programme of internal audits to prove effectiveness in accordance with the Force Health and Safety Policy.

Facilities Managers, Business Support Services Branch will:

- Provide day-to-day assistance, acting as the point of contact for the specialist contractors for preventative maintenance and water hygiene programmes;
- Provide feedback to the 'Responsible Persons' in writing on any faults or issues reported or identified with the system or the maintenance programme;
- Identify any infrequently used outlets, and any changes to the building room use which will affect the water assets within their buildings and inform the 'Responsible Persons' in writing; and
- Be responsible for monitoring the weekly flushing of the infrequently used outlets and ensuring that all actions are recorded.

Assistant Branch Head (Transport), Business Support Services Branch, is responsible for:

- Providing information to the 'Responsible persons' on any existing or new vehicle wash systems (or any other equipment or system which uses/ stores water or generates an aerosol) in use throughout GMP controlled buildings so that a risk assessment can be undertaken and an appropriate maintenance regime arranged.

Divisional/Branch Commanders are responsible for:

- Ensuring that consultation takes place with the relevant FM prior to introducing any equipment, system or feature (including for operational purposes or deployment) that may use/store water (e.g. portable air-conditioning units), or generate a spray/aerosol, so that a risk assessment can be undertaken;
- Ensuring that water condensing type portable air-conditioning units are not permitted for use within GMP premises; and
- Complying with instructions from Business Support Services in relation to water systems and their operation (e.g. disruption to supply for system cleaning).

Water Hygiene Contractor is responsible for:

- Measuring and recording monthly sentinel hot and cold water outlets;
- Recording monthly calorifier flow and return temperatures;
- Monitoring, chlorination and cleaning of water services;
- Carrying out monthly temperature and water sampling; and

- Carrying out annual control measures i.e. calorifier inspection/blowdown.

Risk Assessment Contractor is responsible for:

- Carrying out legionella risk assessments to all water services in all police buildings and producing schematic diagrams and written schemes of work.

Janitors will:

- Carry out the weekly flushing of the infrequently used outlets identified, ensuring that all actions are recorded;
- Provide feedback to the 'Facilities Manager' on any faults or issues reported or identified with the system or the maintenance programme; and
- Support the Facilities Managers by providing information on any changes to the building room use which will affect the water assets within their buildings.

4. Terms and Definitions

Log Book is a term used to describe the records held on the Integrated Water Services (GMP appointed contractor) web based document and record store (IWS ORT) Portal. Previously these would have been in the form of paper records.

Sharepoint is GMPs central document library [Risk Assessments](#)

Concept is the Facilities Management Help Desk software system Concept Evolution

5. Procedure

5.1 General Precautions

The following outlines the general precautions GMP has adopted to control the levels of legionella bacteria in water systems and services in accordance with the Approved Code of Practice L8 and HSG274 Part 2 and 3, (Part 1 does not apply to any GMP controlled locations):

Controlling the Release of Water Sprays

GMP will control or minimise the release of bacteria through aerosol by careful design of equipment.

Temperature Control

Legionella bacteria will multiply in temperatures of between 20°C – 45°C. It is GMP's policy that water systems shall be operated in accordance with the building's risk assessment and at temperatures that do not favour the growth of legionella.

- 60°C is the minimum temperature for hot water storage with a distribution temperature of at least 50°C within one minute of reaching an outlet and a return temperature to the calorifier of at least 50°C.
- Cold water storage and distribution is maintained below 20°C.
- Hot water outlets shall be labelled 'Caution Hot Water!'
- Hot water storage calorifiers shall be subject to annual inspection and operated in a way which does not allow the storage of water at below 60°C in any part of the calorifier.
- Where there is a risk of scalding, thermostatic mixing valves should be installed so that they do not ideally feed more than one outlet and that the blended length is no more than 2 meters.

Use of Materials

Some materials provide nutrients for microbiological growth. GMP will ensure that the use of such materials in water systems is avoided. Low corrosion materials will also be avoided wherever possible.

Avoidance of Stagnation

GMP will ensure that hot and cold water storage facilities are designed and operated so that stagnation potential is not present in any components of the water systems.

Dead legs are part of the system which have not been completely isolated from the main system or connections to redundant plant. Dead legs and other parts of a water system such as redundant water tanks, which can provide a reservoir for legionella bacteria (and hence infection) shall be identified and eliminated from the water system at the earliest opportunity.

Blind ends are to be avoided at all costs. Where any changes are made to the water systems, it is the responsibility of the project manager/facilities manager to ensure that the contractor cuts back as far as reasonably practicable, any redundant pipework as close to the main distribution as possible.

Corrosion, scale deposition and the build-up of bio-films and sediments, which can harbour legionella bacteria, shall be controlled.

5.2 Action in the Event of an Emergency

The Responsible Person (FM mech), will organise the immediate shut down of any system where an immediate high risk has been identified or notified by the specialist water maintenance contractor and will keep the system shut down until water samples have been taken and remedial measures implemented prior to restarting the system. The Responsible Person (FM mech) will notify site administration staff of any adverse results and any action required at the time it is known.

Up-to-date contact information is maintained by the Facilities Helpdesk and will be provided to specialist contractors.

All the Responsible Persons and the Force Health and Safety Manager must be notified immediately if a legionella outbreak is suspected or confirmed. Contact will be made with the relevant authorities (e.g. HSE, Public Health, and Environmental Health) and any assistance or information required to aid their investigation will be

provided. Information and instruction will be provided to staff regarding the nature of the outbreak and any risks to staff or others.

5.3 Maintenance, Monitoring and Inspection Programme

The Responsible Person (ABHSS), on behalf of the Duty Holder, has established a programme of remedial maintenance, monitoring and inspection to ensure that the water systems operate under optimum conditions and those precautions remain effective in line with current legislation.

The Responsible Person (PFM) will ensure that each remedial maintenance activity is properly planned with a safe system of work put in place to ensure the health and safety of those undertaking the work and anyone else who may be affected.

Completion of remedial maintenance will be recorded in the risk assessment to indicate risk reduction by the Responsible Person (FM mech). Records of work completed on water systems will be recorded in the Facilities Helpdesk software "Concept".

5.4 Information, Training and Selection of Competent Persons

All staff appointed under the Safe System of work shall receive appropriate instruction, information and training to discharge their responsibilities for the effective management and control of legionella in GMP buildings.

Reasonable enquiries are to be made to check the on-going competence of the specialist contractors engaged to undertake the risk assessments and identify the precautionary measures needed to prevent or control the risk of exposure to legionella bacteria. Records will be requested and copies held on SharePoint.

This is to be reviewed every two years. Should there be any changes to personnel, they should inform the Responsible Person (PFM) so that records can be updated. This includes both GMP staff and external contractors.

Training records are to be held in SharePoint for both contractors and GMP staff and will be reviewed every six months by the Responsible Person (FM mech).

5.5 Review and Audit

The Branch Head, Business Support Services will ensure that the policy and procedure documents are reviewed at least every two years or more frequently if there are significant changes, e.g. to the management structure or responsibilities or the control scheme for legionella bacteria.

The Responsible Person (ABHSS) will ensure that periodic audits/monitoring of the control mechanism are suitable and sufficient to maintain and manage the control of legionella. The Health and Safety Unit will carry out internal audits on the Safe System on the Control of Legionella in Water Systems in GMP Controlled Buildings.

5.6 Risk Assessment

It is a legal requirement under the Control of Substances Hazardous to Health Regulations (as amended) to carry out a risk assessment where there may be a foreseeable risk from legionella bacteria. It is also the responsibility of the Duty

Holder to ensure that they have competent help in carrying out any risk assessments. These assessments should be conducted in accordance with BS 8580:2010 Water quality – Risk assessments for Legionella Control Code of Practice.

The Duty Holder has engaged the services of a specialist contractor to carry out a forcewide risk assessment to identify and evaluate any potential sources of risk from legionella bacteria arising from the work activities or water systems in GMP premises. In forming this assessment the specialist contractor has undertaken a site survey of each building and compiled an inventory of any relevant plant and equipment and has taken into account the following risk factors:

- The presence of legionella bacteria;
- The conditions which the bacteria favour to multiply, e.g. temperatures between 20°-45°C, evidence of water stagnation (signs of scale, rust, algae);
- The means of generating an aerosol;
- The number and susceptibility of people who could potentially be exposed; and
- The cycles of operation of the system, including the effects of any system breakdowns or abnormal operations.

The risk assessment shall be reviewed at least every two years or more frequently if there is reason to believe the assessment is no longer valid. This will be carried out by the Responsible Person (PFM), for example if:

- There is a significant change in the water system or its use;
- There is a change in the use of the building where the water system is installed;
- The results of monitoring or inspection show that the control measures are no longer effective; or
- There is a case of Legionellosis associated with the system.

5.7 Written Schemes

Where the risk assessment indicates a foreseeable risk from the use of a water system, plant or work practice, and it is not reasonably practicable to avoid exposure completely, the specialist contractor, engaged by the Duty Holder, has prepared a written scheme specific to each building for preventing or controlling the risk of exposure to legionella bacteria. This information is kept in the form of an electronic 'log book' for each building held on SharePoint, and contains the following:

- Water system overview – description and schematics;
- Plant identification, e.g. showers, tanks and calorifiers;
- Remedial work required to reduce risks; and
- Maintenance, monitoring and inspection procedures.

The works will be carried out by the water hygiene contractor in accordance with the written schemes of work. Records of his/her work will be sent to the 'Deputy Responsible Person' for action via the contractors' electronic portal. Remedial work will be carried out by a maintenance contractor and Risk Assessments will be updated accordingly via the electronic system.

6. Associated Documents

GMP Health and Safety Policy

[The Health and Safety at Work, etc. Act 1974](#) places a general duty on GMP to provide a safe place of work for its employees and others which extends to protecting against the risk from legionella bacteria.

The Management of Health and Safety at Work Regulations 1999 places a general duty on GMP to undertake risk assessments and for ensuring there is an effective management system in place for health and safety.

[The Control of Substances Hazardous to Health Regulations 2002 \(as amended\)](#) covers biological agents such as harmful legionella bacteria and requires GMP to carry out a risk assessment, to take steps to prevent exposure, to have in place appropriate maintenance, examination and testing regimes and to provide information and training.

[The Approved Code of Practice and Guidance, Legionnaires' Disease Part 2: The Control of Legionella Bacteria in hot and cold water systems](#), is the principle guidance relating to the control of legionella bacteria.

[BSEN806 2012 The Control of Legionella bacteria in water systems](#)

BS 8580:2010 Water quality – Risk assessments for Legionella control – Code of practice

BS 7592:2008 Sampling for Legionella bacteria in water systems. Code of practice

GMP Risk Assessments (see 5.6)

GMP Written Schemes (see 5.7)

7. Statutory Compliance & Consultation

7.1 Statutory Compliance

7.1.1 Equality Act (2010)

This Policy and Procedure ensures that GMP acts in a lawful, reasonable, proportionate and consistent manner to control legionella bacteria. This aim is the same regardless of the age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex or sexual orientation and marital/ civil marriage status of any person working within a GMP controlled building.

7.1.2 Data Protection Act (1998)

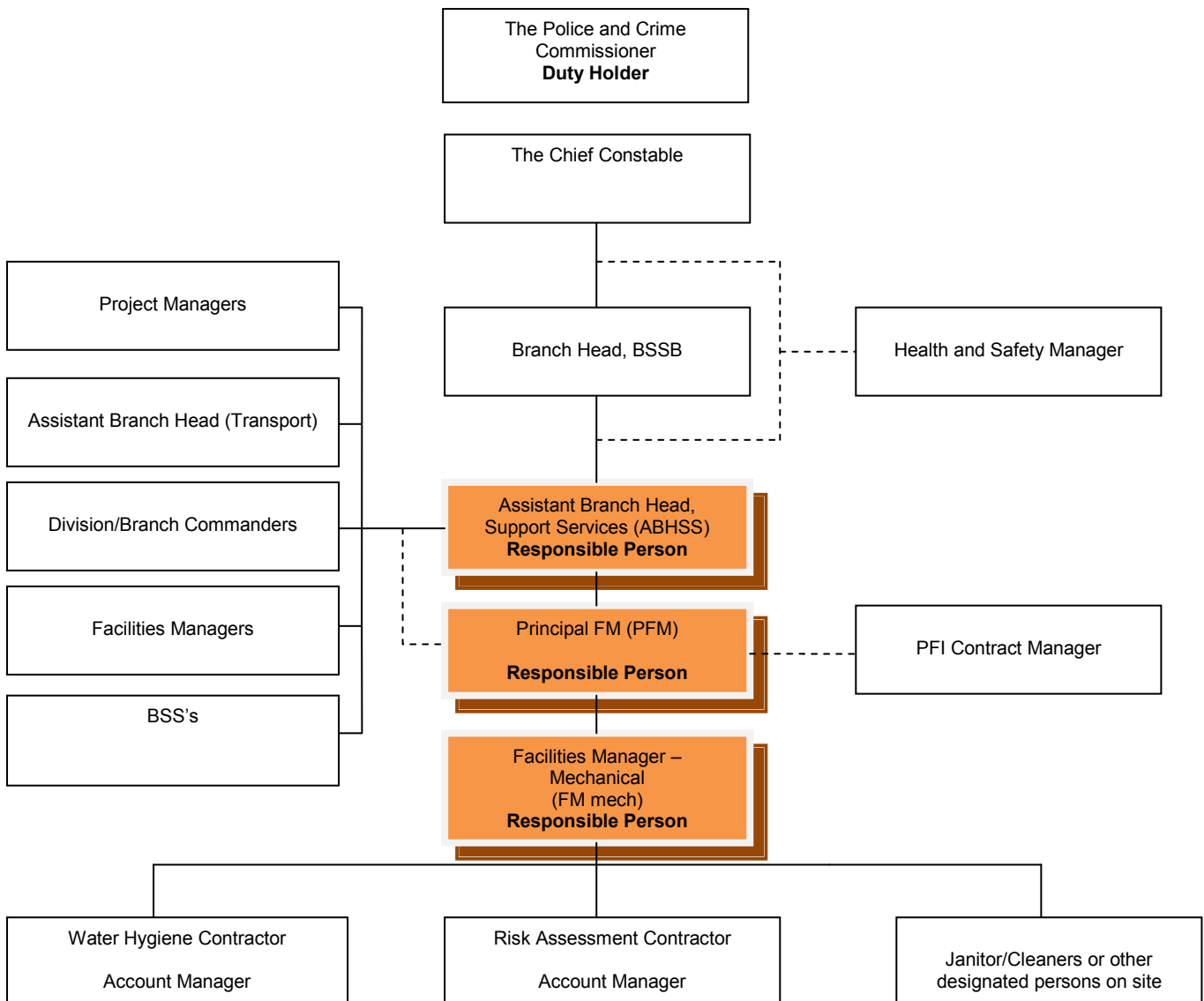
This policy and procedure does not involve the processing or storage of personal data and therefore is not affected by the Data Protection Act.

7.1.3 Freedom of Information Act (2000)

The content of this policy and procedure is not restricted however, staff contact numbers should be removed before providing this as part of any Freedom of Information requests.

8. Appendices

8.1 Structure for Legionella Control



8.2 Quick reference Guide

| <u>Task</u> | <u>Responsibility of</u> |
|--|--|
| Overall responsibility of the risk | Duty Holder |
| Provide adequate resources | Branch Head, Business Support Services |
| Confirm all persons aware of their responsibilities | Branch Head, Business Support Services |
| Establish and maintain clear lines of communication | Branch Head, Business Support Services |
| Ensure safe system of work remains effective, reviewing at least every 2 years | Branch head, Business Support Services |
| Confirm appropriate systems and procedures in place to control any risks posed by legionella bacteria | Responsible Person (ABHSS) |
| Confirm competence of any external contractors | Responsible Person (ABHSS) |
| Confirm competence of internal staff | Responsible Person (ABHSS) |
| Arrange appropriate training to relevant staff | Responsible Person (ABHSS & PFM) |
| Ensure management and control procedures are implemented in a safe and competent manner | Responsible Person (PFM) |
| Ensure adequate records are maintained and readily accessible | Responsible Person (PFM) |
| Review risk assessments where changes to the building use/occupancy are identified, or at least on the 2 nd anniversary | Responsible Person (PFM) |
| Arrange a programme of internal audits to prove effectiveness in accordance with the Force Health and Safety Policy | Responsible Person (ABHSS) /Health and Safety |
| Arrange for PFI or leased sites to be audited to ensure effective control | Health and Safety/ PFI Contract Manager/Responsible Person (PFM) |
| Monitor works and monthly checks carried out by Water Hygiene Contractor ensuring comprehensive records are maintained and up to date | Responsible Person (FM mech) |
| Ensure any remedial works identified are reported through the facilities helpdesk and confirm completion, updating of action plans and risk assessments | Responsible Person (FM mech) |
| Update the Responsible Person (PFM) on the identification of any infrequently used outlets and any changes to the water assets (i.e. carwash installation, removal/ addition to water system, decommissioning or emptying of any parts of GMPs buildings which will affect the water turnover.) Through the Estate Design Group aspects should be addressed i.e. effects of water management of the buildings | Janitors/Facilities Manager/Transport/Project Managers/BSS's/Divisional Commanders/Health and Safety |

| | |
|--|--------------------------|
| e.g. occupancy move/changes | |
| Confirm weekly flushing of infrequently used outlets and record action | Facilities Managers |
| Carry out weekly flushing of infrequently used outlets and record action | Janitors |
| Measure & Record monthly sentinel hot and cold water outlets | Water hygiene contractor |
| Record monthly calorifier flow and return temperatures | Water hygiene contractor |
| Carry out monthly dip sampling | Water hygiene contractor |
| Carry out Annual control measures i.e. calorifier inspection/blowdown | Water hygiene contractor |