



**MANAGEMENT PROCEDURE & PERFORMANCE STANDARD FOR
THE CONTROL OF LEGIONELLOSIS INCLUDING LEGIONNAIRES
DISEASE**

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Title:

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DOCUMENT HISTORY

Issue	Date	Details
1.	January 2012	Legionella Operational Procedural Document including safe Hot Water, Cold Water, Drinking Water and Ventilation Systems supplied by Hydrop
2.	January 2017	New Document prepared by Tetra Consulting and re-titled: Management Procedure & Performance Standard for the Control of Legionellosis including Legionnaires Disease.
3	January 2018	Amendment to reflect changes to Water Management structure (Section 4)
4	February 2020	3.3 DRP, 4.0 as per 3.3 and Director title change, 10.0 PPM updates 12.0 records (App LEG09 3.9 and LEF 14 3.14 20L expansion PPM update.
5	June 2021	Reviewer name change, 4.0 Removed the Vacant note from the DRP, 6.0 Clarification of the Risk Assessment programme, 10.0 Volume and size of expansion vessels that need flushing clarified as above 10 litres and 10.0 annual testing of representative outlets changed to Black.
6	September 2022	Updates and specific inclusion of Head of Maintenance
7	February 24	Updated HoM name change

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1.0 Statement and Aim

The University of Kent (the University) recognises and accepts its responsibility under the Health and Safety at Work Act etc. 1974 and the Control of Substances Hazardous to Health Regulation 1999, to take all reasonable precautions to prevent or control the potential of Legionellosis to residents, staff and other persons working at or using its premises.

The University recognises its responsibility to implement, in full, the Codes of Practice and all other relevant and associated documentation, particularly The Health and Safety Commission's Approved Code of Practice – L8 (4th Edition)

This Management Procedure and Performance Standards document sits under the University's Health & Safety Policy. This procedure provides the management, operations and maintenance details of how the Domestic Water Systems; under the direct responsibility of the University, are maintained to ensure current best practice, complying with all current and relevant guidelines and legislation relating to the management and control of Legionellosis including Legionnaires Disease.

The University will:

- i. identify and assess sources of risk.
- ii. prepare a scheme for preventing, reducing or controlling the risk.
- iii. implement and manage precautions.
- iv. keep records of the precautions implemented and will do so for each of the premises within the University's control.

The University will use temperature as the primary method of Legionella control and water management.

Where required secondary treatment systems will be considered to assist in maintaining a good quality of water. Where installed these will be maintain as per manufacturers guidelines and current Legislation and Guidance.

2.0 General Responsibilities

2.1 Employer's Duties

The University as the employer has a general duty under The Health and Safety at Work Act etc. 1974 to ensure so far as is reasonably practicable, the health, safety and welfare of all its employees.

HSWA 2(1) requires employers to:

- i. provide and maintain plant and systems of work that are safe and free from health risks
- ii. make arrangements for ensuring safety and the avoidance of health risks in connection with the use, handling, storage and transportation of articles and substances (HSWA 2(2)b)
- iii. provide such information, instruction, training and supervision to ensure the health and safety at work of their employees [HSWA 2(2)c]
- iv. provide a safe working environment [HSWA 2(2)e]
- v. those in control of premises must ensure that they are safe and that any plant or substance does not endanger health of any persons at work or the general public (HSWA 4)

2.2 Employees' Duties

Employees have a duty under Section 7 of the Health and Safety at Work Act etc. 1974 to take reasonable care for their own health and safety and that of others who may be affected by their acts or omissions at work.

3.0 Delegated Responsibilities

3.1 Director of Commercial Services & Estates

- Overall responsibility for the quality of water in the properties that the University are responsible for.
- Nominate, in writing, the Legionella Responsible and Deputy Responsible Persons

3.2 Legionella Responsible Person

- Accept responsibility for Legionella control.
- Responsible for the implementation of this document across all properties that the University has responsibility for.
- Review this document when required.
- Ensure all water systems are designed in line with the L8 ACoP, HSG274 Part 2 and BS8558:2015.
- Manage the Deputy Responsible Persons

- Manage the Legionella Risk Assessment programme keeping records up to date.
- Ensure the Persons undertaking the Legionella Risk Assessments are competent.
- Ensure the Legionella Management programme is audited on an annual basis.
- Ensure the Deputy Responsible Persons and Water Hygiene Team have up to date training with complete records.

3.3 Legionella Deputy Responsible Persons

- Accept responsibility for Legionella control.
- Responsible for the day-to-day implementation of this document across all properties that the University are responsible for.
- Implement and maintain the Pre-Planned Maintenance and Monitoring regime (See section 10)
- Ensure the electronic records, from the monitoring, are maintained complete and up to date.
- Manage the faults reported, by the Water Hygiene Team, as part of the Pre-Planned Maintenance and Monitoring regime, keeping full records
- Manage the Water Hygiene Team
- Manage the Recommendations made as part of the Risk Assessments keeping full records.
- Prepare Monthly Defect Reports from the Monitoring schedule.
- Ensure all equipment used by the Water Hygiene Team is in good order, within calibration with up-to-date records.

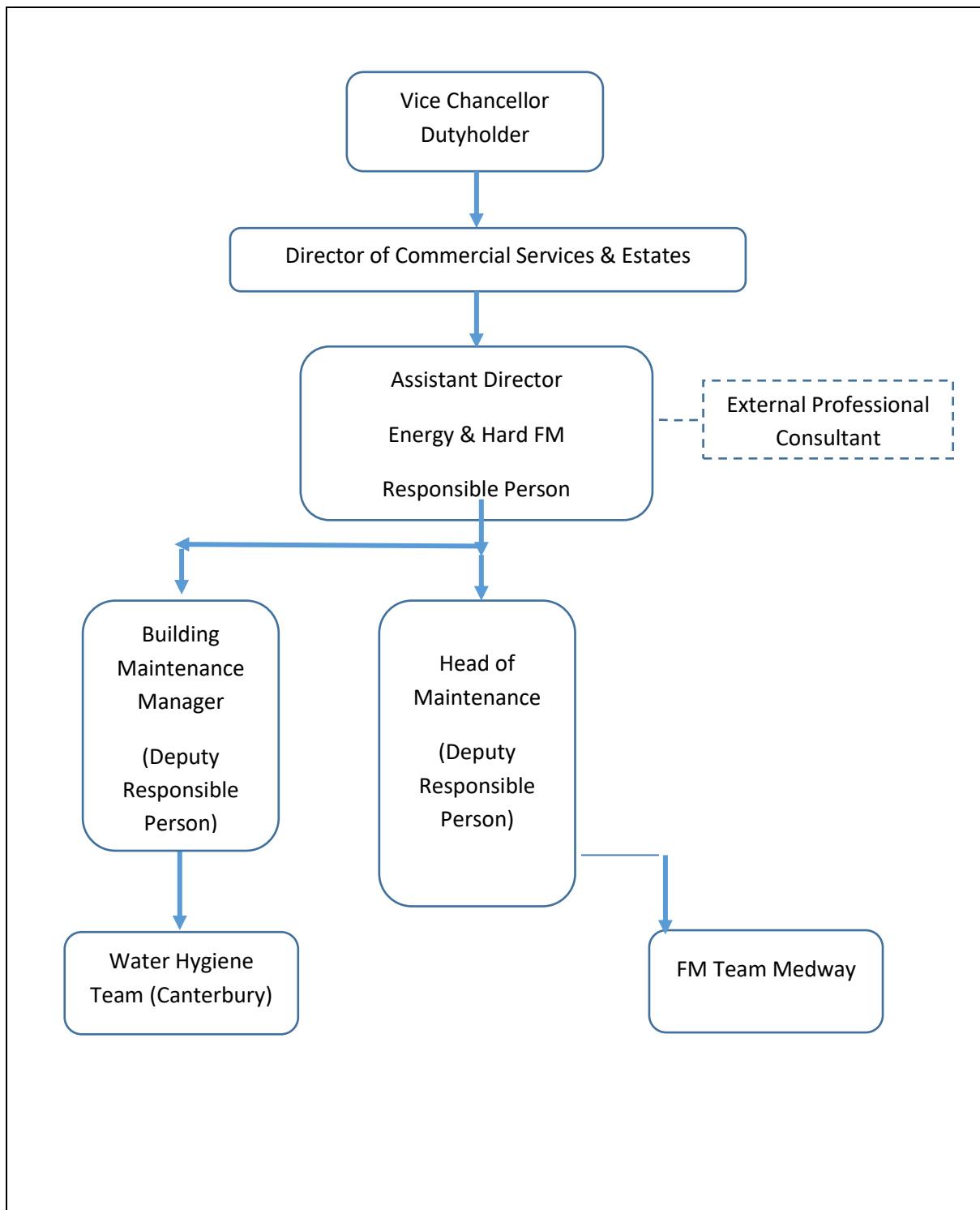
3.4 Water Hygiene Team

- Responsible for carrying out the Pre-Planned Maintenance and Monitoring regime (See section 10).
- Maintain the electronic records up to date from the monitoring programme.
- Report all faults, out of specification results and problems to the Deputy Responsible Persons in a timely manner.

3.5 External Professional Consultant

- Undertake the annual independent Audit as detailed in section 8.0.
- Available for ongoing consultancy and advice.
- Oversee the Legionella Risk Assessments Programme.

4.0 Water Management Structure



5.0 Water Hygiene Compliance Meetings

These meetings are held on approximately a 4 monthly basis with the aim to hold 3 per year.

The formal meetings are chaired by the Responsible Person and attended by the Deputy Responsible Persons. Minutes are prepared for each meeting.

6.0 Legionella Risk Assessments

The 4th Edition of the L8 ACoP states that a suitable and sufficient assessment must be carried out to identify and assess the risk of exposure to legionella bacteria from work activities and water systems on the premises and any precautionary measures needed.

The assessment will be reviewed every two years with new, full Risk Assessments undertaken for the residential properties (apart from Parkwood and Darwin Houses) and Review reports for all other properties. New properties or ones with significant changes to the water services have new, full Risk Assessments undertaken.

The Legionella Risk Assessment programme will be managed by the Responsible Person and Deputy Responsible Person with full records kept.

The remedial works resulting from the Risk Assessments will be managed by the Deputy Responsible Person with full records kept of all actions undertaken.

The Risk Assessments status table will be regularly updated by Tetra Consulting and reproduced in the annual independent audit report.

7.0 Training Requirements

An ongoing training programme is in place with a 3 yearly refresher frequency unless there is a major change to Legislation or Guidance or the Responsible Person deems extra training as being necessary.

The Responsible and Deputy Responsible Persons will complete at least an accredited and tested course.

The Water Hygiene Team will attend a Half Days General Awareness Course with an exam included.

8.0 Auditing

The Responsible Person will procure an annual independent audit of the Legionella and Water management programme in the summer of each year or as soon as possible thereafter. A report will be produced with the findings and recommendations arising from the audit which will also detail the Risk Assessment status table.

The report will be presented at the first Water Hygiene Compliance Meeting after the audit at which time the recommendations will be reviewed and an action plan agreed with timescales for completion. The action plan will be reviewed at the subsequent

quarterly meetings with updates from the Responsible Person and Deputy Responsible Persons on actions completed and outstanding.

9.0 Little Used Outlet Flushing

The local users of the water services will be encouraged to flush all known little used outlets on a weekly basis. If an outlet is not required they are to advise the Estates Department so removal of the outlet can be considered.

10.0 Pre-Planned Maintenance, Monitoring Regime and Control Parameters

The following programme is in operation to help maintain the safe operation of the water services.

Cold Water Storage Tanks

Task	Task Frequency	Parameters	Responsibility
Temperature monitoring	6 Monthly	Less than 20°C	Water Hygiene Team and Medway FM Team
General visual inspection	6 Monthly	Clean internal surfaces	Water Hygiene Team and Medway FM Team
Clean /Disinfection	As required	L8, HSG274 Part 2 and BS8558:2015	Deputy Responsible Person
Microbiological Sampling (TVC's)	As Required	No increase compared to mains supplies	Responsible Person

Hot Water Calorifiers

Task	Task Frequency	Parameters	Responsibility
Flow / return	Monthly	Above 60°C for Flow and above 50°C for Return	Water Hygiene Team and Medway FM Team
General visual inspection	3 Monthly	Good condition with no leaks or damage	Water Hygiene Team and Medway FM Team
Clean / disinfection	As required	Clean internal surfaces	Water Hygiene Team and Medway FM Team
Drain flushing	3 Monthly	Clean water	Water Hygiene Team and Medway FM Team
Microbiological analysis	As required	BS7592	Responsible Person

Task	Task Frequency	Parameters	Responsibility
Drain water condition	3 Monthly	Clean water	Water Hygiene Team and Medway FM Team
Expansion vessels	3 Monthly	Vessels greater than 10L flushed to ensure contents s replaced.	Water Hygiene Team and Medway FM Team

Electric Water Heaters, including Cistern Water Heaters (>15 litres)

Task	Task Frequency	Parameters	Responsibility
Check temperatures	Monthly	Above 60°C for Flow	Water Hygiene Team and Medway FM Team
General visual Inspection-Including integral cold tank section	3 Monthly	Clean internal surfaces	Water Hygiene Team and Medway FM Team

Point of Use Water Heaters (1-15 litres)

Task	Task Frequency	Parameters	Responsibility
Check temperatures	6 Monthly	Above 50°C for First draw	Water Hygiene Team and Medway FM Team
General visual Inspection	6 Monthly	Good conditions with no leaks	Water Hygiene Team and Medway FM Team

Cold and Hot Outlets

Task	Task Frequency	Parameters	Responsibility
Temperature monitoring (sentinel) See section 10.0 Note 1 and 3	Monthly	Below 20°C after a 2-minute flush for cold. Above 50°C after a 1-minute flush for Hot	Water Hygiene Team and Medway FM Team
Temperature monitoring (representative) See section 10.0 Note 1 and 2	12 Monthly	Below 20°C after a 2-minute flush for cold. Above 50°C after a 1-minute flush for Hot	Water Hygiene Team and Medway FM Team
Clean / disinfection	As required	Clean and scale free	Deputy Responsible Person
Legionella	3 Summer Months (20)	Less than 100cfu/litre	Responsible Person

Task	Task Frequency	Parameters	Responsibility
E. coli and Coliforms	Monthly (20)	0 cfu/100ml of either organism	Responsible Person
Microbiological analysis (TVC's)	Monthly (20)	No increase compared to mains supplies	Responsible Person

Thermostatic Mixing Valves

Task	Task Frequency	Parameters	Responsibility
Temperature monitoring	12 Monthly	Maximum of 43°C	Water Hygiene Team and Medway FM Team
General visual inspection	12 Monthly	TMV in good condition	Water Hygiene Team and Medway FM Team
Clean / disinfection	As required	Strainers clean and scale free	Water Hygiene Team and Medway FM Team
Fail-safe testing	12 Monthly	Immediate outlet flow stops when cold feed turned off	Water Hygiene Team and Medway FM Team

Showers with (thermostatic mixing valves fitted)

Task	Task Frequency	Parameters	Responsibility
Temperature monitoring	12 Monthly	Maximum of 41°C	Water Hygiene Team and Medway FM Team
General visual inspection	3 Monthly	Clean shower head, scale free	Water Hygiene Team and Medway FM Team
Clean / disinfection	3 Monthly	Clean shower head, scale free	Water Hygiene Team and Medway FM Team
Microbiological analysis	As required	BS7592	Deputy Responsible Person

Chlorine Dioxide Plant (Keynes College)

Task	Task Frequency	Parameters	Responsibility
General Plant Inspection	Monthly	Plant in good condition, running normally and with good chemical stock levels	Responsible Person
Chemical Level Checks in System	Monthly	0.1 – 0.5ppm	Responsible Person
Legionella Sampling	Monthly	Less than 100cfu/litre	Responsible Person

Note 1 – Where Chlorine dioxide biocides are used as primary control measure the hot water temperature may be reduced below that of 50°C however additional Lp samples will be taken.

Note 2 – Additional sentinel outlets have been identified in complex buildings to be tested at a 6 monthly interval to provide a temperature profile of the building. Additional sentinels are identified on records for buildings.

Note 3 – Domestic systems at Parkwood and Darwin houses have had the sentinel checks reduced to 3 monthly due to high turnover and no stored water.

11.0 Legislation and Guidance

The University, in implementing this Management Procedure & Performance Standard will use, as a general source of practical help, the documents listed below:

- Health & Safety Executive Approved Code of Practice 2013 - The Control of Legionella bacteria in water systems (L8)
- Health & Safety Executive Guidance (HSG 274 Parts 2 and 3)
- Health and Safety at Work etc., Act 1974, Sections 2, 3 and 4 (HSW)
- The Management of Health and Safety at Work Regulations 1992 and The Health and Safety (Miscellaneous Amendments) Regulations 2002
- Control of Substances Hazardous to Health Regulations 2002, Regulation 6 (COSHH)
- The Water Supply (Water fittings) Regulations 1999
- The Water Supply (Water Quality) Regulations 2000
- BS 8580:2010 – Water Quality – Risk assessments for Legionella Control
- BS 8558:2015 - Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages.

12.0 Record Keeping

Records relating to the tasks and defects at the Canterbury and Medway Campuses are kept on the Healthy Buildings International – Records for Buildings web-based software which can be accessed in the Campus Estates management offices.