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DIO POLICY INSTRUCTION (PI) N°: 2019/007

Title: MANAGEMENT OF LEGIONELLA BACTERIA IN DIO MAINTAINED INFRASTRUCTURE

DIO Sponsor: Head of Safety, Health, Environmental Protection & Sustainability (Hd SHEPS)

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Who should read this:

DIO Staff and Contractors; Public Private Partnerships / Private Finance Initiatives Project Managers/Commercial Officers; Commanding Officers / Heads of Establishment (CO/HoEs) and representatives; and Chief Environment and Safety Officers (CESOs) or equivalent.

When it takes effect: Immediately

Expires: When updated or rescinded

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Replaces: DIO Policy Instruction 2015-01 which is hereby withdrawn.

Health and Safety

Equality Analysis

This policy has been Equality and Diversity impact assessed in accordance with the Defence Equality Analysis Guidance 2017 up to:

Stage 2 Initial Equality Analysis only – **no impact found; full EA not required.**

RECORD OF CHANGES

Version	Summary of Changes Made	Authority	Date Issued	Author
1.0	First Issue	DIO CESO	10 Sep 2019	D Webber
2.0	Amended to clarify that the CO/HoE undertakes the duties of the "L8 duty holder" on behalf of the parent TLBH/EOC at establishment level with DIO/ Infrastructure Delivery Agents carrying out duties on their behalf for those assets/activities within the scope of the contract. Minor amendment to Annex A Para 3 to remove reference to a withdrawn USAFE Instruction.	DIO CESO	15 Dec 21	D Webber

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1.0 DOCUMENT AIM AND SCOPE

1.1 This document details the management arrangements and the roles and responsibilities placed on Defence CO/HoEs; and the Defence Infrastructure Organisation (DIO) and its contractors by the Health and Safety Executive (HSE) Approved Code of Practice L8¹; the HSE Technical Guidance document HSG 274 and MOD Policy² where there is a foreseeable risk of Legionellosis from DIO provided/maintained assets; including Service Family Accommodation. Requirements within are mandatory for all DIO Staff and Contractors.

1.2 It is not intended to provide a full explanation of the control of Legionella bacteria in water systems. The best source for that information is L8. Further guidance on identifying and assessing sources of risk, preparing a scheme to prevent or control risk, implementing, managing, and monitoring precautions, keeping records of precautions, and appointing a manager responsible for others can be found in HSG274³. Both documents can be downloaded free of charge from the HSE website – www.hse.gov.uk.

Where there is a conflict between this Instruction and a Regulation or HSE Approved Code of Practice or Guidance the DIO Chief Environment and Safety Officer (CESO) is to be advised.

2.0 DEFENCE AND STATUTORY REQUIREMENTS

2.1 MOD Policy and guidance on the management of legionella bacteria is contained within JSP 375 and must be complied with. This includes that:

- a. A site-wide Legionella Management Plan (LMP), that meets L8 and HSG274 requirements and guidance, is put in place and maintained for each establishment (see Annex A for SFA).
- b. That the LMP and associated risk assessments is communicated to all defence personnel, visitors and/or contractors etc. who may be exposed to the bacteria from water systems.

¹ Legionnaires Disease - The Control of Legionella Bacteria in Water Systems

² MOD H&S Handbook JSP 375 Part 2 Volume 1 Chapter 32

³ HSG274 – Legionnaires' disease: This guidance is for duty holders, which includes employers, those in control of premises and those with health and safety responsibilities for others, to help them comply with their legal duties.

c. The LMP (including supporting assessments and drawings) be subject to recorded review at least six-monthly to confirm information remains accurate and to monitor the effectiveness of the control scheme / actions taken.

d. Incidents which may or have resulted in an exposure to Legionella bacteria or persons contracting Legionellosis are to be reported to the HSE, the Local Authority Environmental Health Officer and Trade Union and employee safety representatives. Defence personnel, visitors and contractors who have/may have been exposed are to be identified and advised to be assessed by their Medical Officer or General Practitioner.

2.2 All cooling towers and evaporative condensers on the MOD estate, including those no longer in use, are to be notified to the relevant local authority i.a.w the Notification of Cooling Towers and Evaporative Condensers Regulations⁴. This duty rests with the “controller of premises” and therefore the Head of Establishment for MOD assets and the tenant or PFI provider for leased assets.

2.3 All suspected/confirmed cases of Legionellosis are to be immediately reported to the MOD employer/host in accordance with JSP 375 and TLB/EO instructions. For cases caused, or potentially caused, by Legionella in fixed infrastructure the MOD employer/host are also to notify the incident to the DIO Service Manager (or equivalent/representative). Confirmed cases of Legionellosis in relation to work⁵ are to be reported by the employer to the HSE as a notifiable disease i.a.w the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)⁶.

2.4 DIO policy is that all DIO staff, contractors, and their supply chain work in accordance with industry best practice and comply with all applicable legislative requirements; HSE ACOP; MOD/DIO mandated publications⁷ including this PI: and the HoE HS&EP policy both in the UK and overseas. For Legionella management this specifically includes compliance with HSG274 for DIO provided or maintained assets including SFA/Residential accommodation.

3.0 RISKS TO HEALTH

3.1 Legionellosis is normally contracted by inhaling small droplets of water (aerosol) containing the Legionella bacterium. Infection cannot be contracted by ingestion nor is it contagious. A Legionella outbreak is deemed by the Public Health Laboratory Service (PHLS) as where two or more confirmed cases of Legionellosis occur in the same locality within a 6-month period.

3.2 The incubation period ranges between 2 and 10 days and usually begins with a headache, muscular pain, and a general feeling of being unwell followed by high fever and shaking chills. Nausea, vomiting and diarrhoea may also occur. Two or three days after this a dry cough develops and is often accompanied by breathing difficulties or mental confusion.

3.3 Effective treatment may be achieved using antibiotics particularly if this is done in the early stages of infection but, if left untreated, Legionnaires Disease is potentially fatal. Everyone is at risk, but risks increase with age and some groups are more susceptible than others:

- People over 45 years of age.
- Smokers and heavy drinkers.
- People suffering from chronic respiratory or kidney disease, or impaired immune systems (e.g., such as those using Medical Centres).

⁴ The Notification of Cooling Towers and Evaporative Condensers Regulations 1992

⁵ A medical practitioner notifies the employer, and the employees current job involves work on or near water cooling systems or water services located in the workplace.

⁶ In Scotland, confirmed cases of Legionellosis are also notifiable under the Public Health (Notification of Infectious Disease) (Scotland) Regulations.

⁷ For contractors, where/as specified by the terms of the contract.

4.0 REASONABLY FORESEEABLE RISK

4.1 Legionella bacterium are common in natural water sources such as rivers, lakes, and reservoirs but normally at low levels and in conditions that do not present a risk to health. However, this widespread presence in the environment means the bacteria can find its way into man-made water storage and distribution systems where, if certain conditions exist, the bacteria multiply increasing the risk of Legionnaires disease should exposure to water droplets/aerosols occur.

4.2 There is therefore a reasonably foreseeable risk to persons from Legionella in any water system where:

- Water is stored and/or re-circulated as part of the system;
- The water temperature in all or part of the system may range between 20–45 °C;
- There are deposits that can support bacterial growth (e.g., rust, sludge, organic matters).
- It is possible for water droplets/aerosols to be produced and if so, dispersed;
- It is likely that any employees, SFA occupants, contractors, visitors, the public etc could be exposed to contaminated water droplets.

4.3 Risk elimination or control regimes are therefore focussed on introducing measures which do not allow proliferation of the organisms in the water systems and reduce, so far as is reasonably practicable, exposure to water droplets and aerosol.

4.4 Although not exhaustive, the following are known potential risk areas: Cooling towers; building hot and cold-water services; fire hose reels; sprinklers and hose reel systems; showers, emergency showers, and eye wash sprays; evaporative condensers; lathes and machine tool coolant systems; spa baths and pools in which warm water is deliberately agitated and re-circulated; vehicle wash systems; fountains and water features; and dental equipment.

4.5 A Legionella risk management flow chart is provided at Annex B for illustrative purposes.

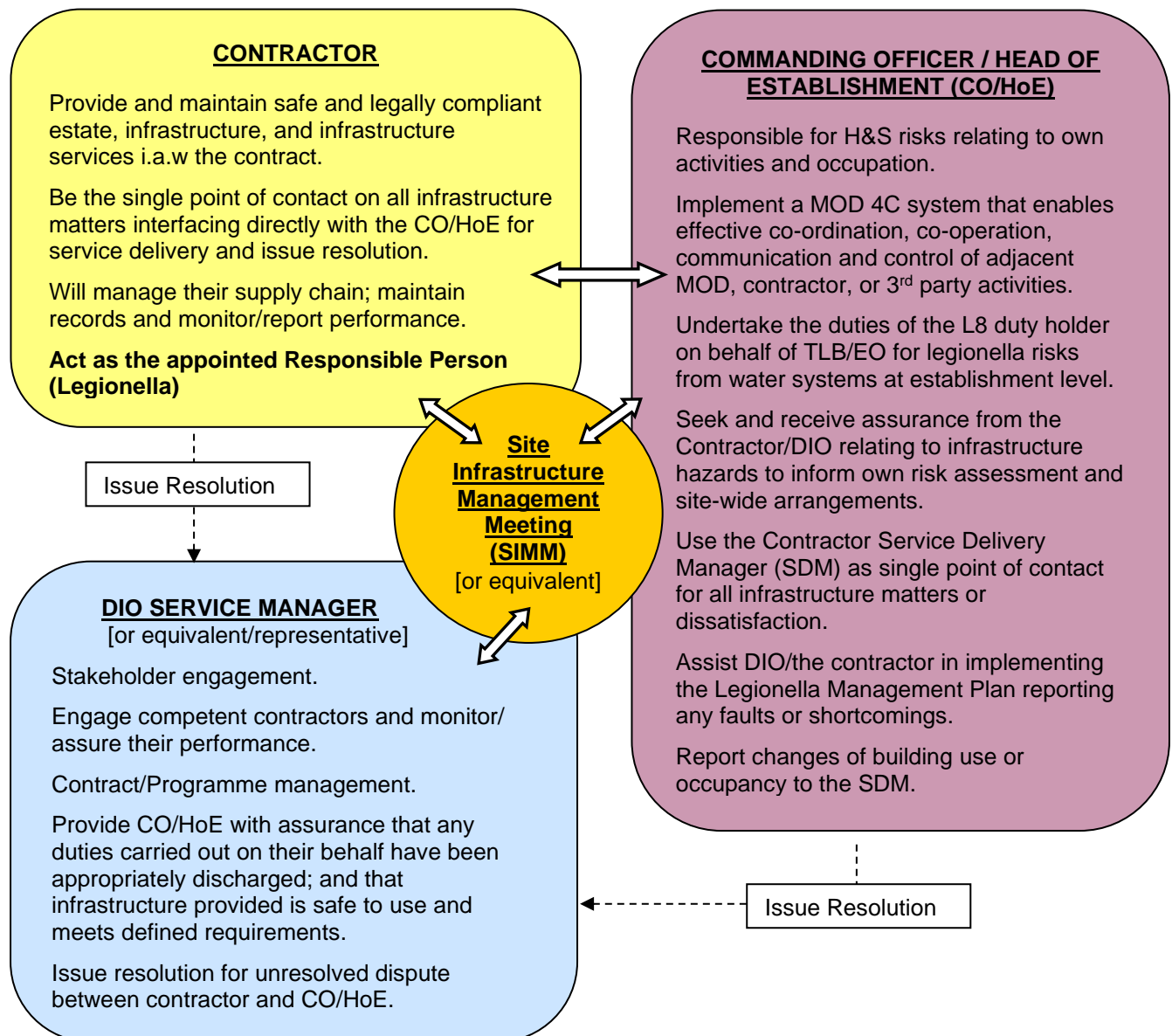
5.0 KEY STAKEHOLDERS AT ESTABLISHMENT LEVEL

5.1. As the TLB/EO's representative, the CO/HoE is responsible for having suitable management arrangements in place to ensure all "L8 duty holder" duties are adequately discharged at establishment level - whether that be by their direct employ, lodger units, etc. or those engaged to deliver certain duties on their behalf (e.g., DIO/Infrastructure Delivery Agents).

5.2. DIO, as a Defence enabler and, where applicable, CDM⁸ Client is responsible for provision of statutory compliant infrastructure⁹ and has a significant role in discharging L8 duty holder requirements. However, DIO cannot discharge this duty without input from CO/HoEs and the Contractor as the task of managing Legionella on the Defence estate requires input, sharing of information and co-operation by all parties.

5.3. The diagram below illustrates the general inter-relationships for Health, Safety and Environment Protection (HSEP) management at a typical Establishment level.

5.4. Specific details of Legionella roles and responsibilities are detailed in Section 6.0, or at Annex A "Differences in Implementation" for other contractual/delivery arrangements.



⁸ CDM – Construction (Design and Management) Regulations.

⁹ With the exception of 'retained areas' where another party retains control.

6.0 ROLES AND IMPLEMENTATION

6.1 OVERVIEW

6.1.1 There is no specific Regulation covering the control of Legionella bacteria, statutory duties are instead placed on employers and persons in control of premises (e.g., a landlord where this is not the employer) through the Control of Substances Hazardous to Health Regulations (COSHH), general H&S law (e.g., The Management of H&S at Work Regs and Sections 2,3 and 4 of the HASAW Act) and HSE's document "L8 Legionnaires Disease. The Control of Legionella Bacteria in Water Systems Approved Code of Practice and Guidance" and the Technical Guidance referred to within.

6.1.2 **TLB Holders/EO CEs:** Within Defence, the SofS for Defence role as "L8 duty holder¹⁰" is delegated to the controlling TLBH/EOC and then down through their respective chains of command to the CO/HoE who discharges associated duties on their behalf at establishment level. As such the TLBH/EOC will be responsible for ensuring the CO/HoE:

- a. Has appropriate information, instruction and training and access to competent advice in the delivery of their duties.
- b. Has the resources, funding and authority needed for the acceptance or escalation of risk, to implement agreed mitigation measures and to stop activities/prevent asset use where risks exceed acceptable levels.
- c. Has management arrangements in place to ensure all "L8 duty holder" duties are adequately discharged at establishment level, whether that be by direct employ, lodger units, etc. or those engaged to deliver duties on their behalf (e.g., DIO/Infrastructure Delivery Agents).
- d. Has identified all delivery agents on sites and arrangements are in place for the effective identification, communication, and management of arising risks or matters effecting (e.g., incidents, change of infrastructure use/occupancy, etc).

6.1.3 **DIO / Infrastructure Delivery Agents:** DIO and their contractors (or any other Infrastructure Delivery Agent) are legally responsible for their employer duties under COSHH/L8, and accountable to the HoE/TLB/EO for the L8 duties they discharge on their behalf. As such DIO are responsible for:

- a. Providing the HoE with evidence-based assurance that any L8 duties carried out on their behalf have been appropriately discharged and that infrastructure and infrastructure services provided are safe to use and meet defined operating requirements.
- b. Ensuring the HoE/building users are informed immediately where the above assurance cannot be provided, or an infrastructure-based hazard is identified.
- c. Supporting HoE/TLB/EO in understanding how arising infrastructure risks impact on the safe operating envelope and deciding short and long-term infrastructure solutions.
- d. The provision of expert advice as it relates to infrastructure and associated risks/delegated duties.
- e. Ensuring sufficient resources to discharge their responsibilities to the TLB/HoE, including ensuring that agreed tasks are given the appropriate priority.

Duties within the typical DIO Regional Delivery arena are as follows; see Annex A for contract or other stakeholder variations; including Service Family Accommodation.

¹⁰ In this document, the term duty holder is taken in the context of the L8 ACOP and is **not** to be confused with appointments made under the MOD Duty Holder construct (DSA 01.2 Chapter 3).

6.2 CO / HEAD OF ESTABLISHMENT

6.2.1 The CO/HoE¹¹ is responsible for site-wide hazard management and emergency arrangements including the co-ordination and cooperation elements of the MOD 4C system. This includes responsibility for relevant employer obligations where non-infrastructure/non-DIO managed legionella risks form part of site activities.

6.2.2 As the TLB/EOs representative, the CO/HoE is to have in place a suitable monitoring regime to ensure “L8 duty holder” duties and MOD mandated requirements have been assigned to competent persons and are being adequately discharged on their behalf (e.g., infrastructure, functional equipment, vehicles, etc). Namely to:

- a. Identify and assess sources of risk
- b. Prepare a written scheme for preventing or controlling any identified risk
- c. Implement, manage, and monitor precautions (the written scheme).
- d. Keep records of the risk assessment, the written scheme and its implementation and the results of any monitoring, inspection, test, or check carried out
- e. Appoint a competent person (known as the L8 Responsible Person) with sufficient authority and knowledge of the installations to help take the measures needed to comply with the law.

6.2.3 For Legionella risks associated with infrastructure or infrastructure services that fall within the scope of a DIO Estates Contract, the DIO RD Regional Head will discharge these duties on behalf of the CO/HoE through delivery of the contract, including the appointment of the contractor as the L8 Responsible Person. **However, the CO/HoE will be required to:**

- a. Ensures a suitable¹² LMP is prepared, implemented, and maintained through the compilation and review¹³ of legionella management arrangements put in place by the HoE, the Contractor and any 3rd party tenants. If it is found that no LMP or Legionella Risk Assessment (LRA) is in place, or it is considered that material changes have taken place that could undermine the validity of the LMP or LRA, the HoE must immediately arrange for an LMP or LRA to be carried out by the Contractor.
- b. As MOD controller of premises, co-sign the LMP in respect to risks generated by, and requirements placed on, the user community and ensure these are communicated to, and complied with, by own and all lodging TLB/EO units.
- c. Notifies the relevant local authorities of all cooling towers and evaporative condensers on his/her establishment, including those no longer in use, to the relevant local authorities in accordance with the Notification of Cooling Towers and Evaporative Condensers Regulations. (Note: This duty sits with the tenant or PFI provider for leased assets).
- d. Ensure Legionella risks relating to fixed water systems and specified control measures are considered when assessing own/site user activities or occupation.
- e. Engage with the DIO Service Manager, Contractor and, where necessary, parent TLB to decide on submissions for additional works/funding received from the Contractor. Responsibility for any risks associated with decisions not to fund rest with the CO/HoE or Parent TLB/EO.
- f. Co-ordinate and inform the Contractor of building occupancy and use, including planned/ arising changes, so that Legionella risks due to user activities can be evaluated and managed

¹¹ Note: The MOD HoE responsibilities may rest with a DIO employee where he/she has been appointed/nominated – e.g., as in the case of service housing, accommodation, sites in disposal and the training estate.

¹² That meets the requirements of Section 2.0.

¹³ At least six-monthly and recorded.

(e.g., so contractor is aware of and can introduce additional flushing regimes where little used outlets are created due to deployment, leave, etc).

g. Communicate the LMP and other relevant risk information to Building Managers/Area Custodians, site users, staff, and Trade Unions (where appropriate).

h. Ensure that the LMP and tasks placed on the user community are communicated across his/her area of responsibility and complied with.

i. Notify the L8 Responsible Person and DIO Service Manager's representative of any Legionella-related concerns raised by the user community.

j. Notify the L8 Responsible Person and DIO Service Manager's representative of any suspected case of Legionellosis and participate in/support any subsequent investigation.

k. Ensure the user community do not interfere with Legionella management controls without the agreement of the L8 Responsible Person (e.g., turning water heater thermostats down).

l. Uses the risk escalation and referral process to address unresolved SHEP issues.

6.3 **DIO SERVICE MANAGER** [or equivalent¹⁴]

6.3.1 The DIO Service Manager (e.g., DIO Regional Head) has responsibility to ensure that competent contractors have been engaged to deliver and maintain a safe and legally compliant estate.

6.3.2 For infrastructure assets and services covered by a DIO Estates Contract, the DIO Service Manager will undertake the following duties on behalf of the CO/HoE and remains accountable for them where these are sub-delegated through their chain of command to the delivery manager.

a. Appoint the Contractor organisation as the L8 Responsible Person (RP) to advise DIO and the CO/HoE on the discharge of their Legionella duties and take day-to-day managerial responsibility for the identification of associated risks and implementation of the control scheme for all water systems within the scope of the contract¹⁵.

Guidance: Whereas specialist contractors used to undertake aspects of the operation, maintenance and control regime have legal responsibilities of their own, ultimate responsibility for the provision and maintenance of safe and legally compliant water systems rests with DIO as the infrastructure delivery agent and with the CO/HoE as Controller of premises for its safe operation.

b. Ensure that a suitable, sufficient, and up to date LMP is put in place, maintained and subject to recorded review (at least 6-monthly) for every establishment. If no LMP is in place, or is considered unsuitable, the Regional Head is to arrange for an LMP or its review to be carried out by the Contractor.

c. Agree and co-sign the LMP on behalf of DIO.

d. Put systems in place via the assurance process to monitor and assure contractor performance and competence in managing Legionella.

e. Provide assurance to the CO/HoE that the LMP is being implemented and controls remain effective.

¹⁴ DIO Service Manager is a term used within DIO NGEC/NTEP arrangements as the post with overall contractual accountability. For varying methods of delivery with DIO involvement, refer to Annex A - 'Differences in Implementation'.

¹⁵ See Annex C: Sample Letter of Appointment – L8 Responsible Person

- f. Engage with the HoE (and where necessary parent TLB) to advise and decide on submissions for additional works/funding received from the Contractor. Responsibility for any risks associated with decisions not to fund rest with the CO/HoE or Parent TLB.
- g. Seek advice from the DIO Regional H&S Support Team as required in the delivery of his/her duties and funding decisions.
- h. Undertake contract/programme management and facilitate resolution of issues elevated by the CO/HoE or Contractor.

6.4 CONTRACTOR

6.4.1 The Contractor organisation is appointed by DIO as the L8 Responsible Person (RP), as defined by L8, to advise DIO and the CO/HoE on the discharge of their Legionella duties and to take day-to-day responsibility for identifying and controlling Legionella risks and managing the practical application of RP duties for water systems within the scope of the contract. As such, the Contractor is responsible for:

- a. The provision, review, and maintenance of a suitable and sufficient¹⁶, establishment specific LMP for all MOD controlled fixed infrastructure water systems including demarcations with the Aquatrine Service Provider or other non-MOD users or DIO contracts including the National Housing Prime Contract for SFA assets.
- b. Ensuring the LMP and supporting Legionella risk assessments are kept up to date to reflect any change in legionella risk being managed by the establishment; and that the LMP is subject to recorded review by the Contractor and CO/HoE at least six-monthly to confirm information remains accurate and to monitor effectiveness of the control scheme / actions taken.
- c. Ensuring those persons/supply chain members it engages to carry out and review Legionella risk assessments and draw-up/ implement the Control Scheme are competent and have the required information, training, and resources.
- d. For each establishment, will conduct a site survey and put in place an asset register of all infrastructure water systems and associated component parts including up-to-date schematic diagrams of the layout of the plant or system.
- e. The undertaking of Legionella risk assessments; devising appropriate written, control schemes and completion of necessary monitoring and assurance activities to ensure they are implemented and remain effective or that any elevated risks are appropriately mitigated.
- f. Reviewing the risk assessment forthwith if it is believed to be no longer valid (e.g., system change or change of use of the building; sampling indicate measures no longer effective; suspected outbreak, etc) and periodically to confirm nothing has changed (e.g., building use).

The frequency between periodic reviews is to be risk based but must not exceed 24 months.

- g. Providing assurance to the DIO Service Manager and CO/HoE that the LMP and control schemes within it are being delivered and remain effective.
- h. Ensuring all works, inspections, sampling regimes, etc on water systems under their control are carried out in accordance with the requirements of L8.
- i. Complying with any host arrangements for the control of visiting workers (e.g., the MOD 4C's system).

¹⁶ Meets the requirements of Section 2.0.

- j. Keeping and maintaining of records as required by L8.
- k. Ensuring Legionella management regimes are promptly adapted with regard to new or demolished infrastructure/systems or change of use/occupancy as notified by DIO or the Co/HoE
- l. The flushing of little used outlets created due to changes in occupancy/use where so notified by the user.
- m. Producing structured and coherent submissions to the DIO Service Manager for the allocation of resources and funding for Legionella prevention/mitigation works.
- n. Upon notification/discovery of an incident which may/has resulted in an exposure to Legionella Bacteria or persons diagnosed as having contracted Legionellosis; the RP shall immediately inform the DIO Service Manager and HoE.
- o. Recording, investigating, and reporting any confirmed case of Legionellosis to the HoE and DIO Service Manager in accordance with JSP 375 Volume 1 Chapter 16; taking the lead where DIO has employing TLB responsibility, or otherwise in conjunction with the HoE to mitigate the risk. This may include isolating supplies or services; and taking facilities or assets out of use until declared safe and L8 compliant. The Contractor is to report any non-cooperation from the HoE or his agent in this regard to the DIO Regional Head / Accommodation Service Manager [or nominated representative] by fastest possible means¹⁷.
- p. Advising and making recommendations to the CO/HoE and, where contract conditions require, the DIO Service Manager's representative for actions required on Legionella related issues including: the need to amend testing or sampling processes; or following the discovery of elevated bacteria levels.

6.4.2 The **Contractor** shall also ensure that all control measures, products, and services (including consultancy and water treatment services) provided by itself or supply chain:

- a. Are so designed and implemented that they will be compliant, effective, safe and without risks to health when used at work.
- b. Highlight any deficiencies or limitations which they identify in the duty holder's systems or Control Schemes.

6.4.3 **Contractor / Designer:** Any person who designs, manufactures, imports, supplies, installs, or modifies water systems that may create a risk of exposure to Legionella bacteria, must ensure this is done so in accordance with L8 and HSG 274. Requirements summarised below:

- a. The water system is so designed and constructed that it will be safe and without risks to health when used at work and compliant with the Construction, Design and Management (CDM) and Building Regulations.
- b. Adequate information is provided to the user/maintainer on the correct use of the water system; the associated risks; and any control measures or maintenance regimes necessary.
- c. Water systems are properly installed and commissioned as appropriate considering the source of water supply (e.g., supply from a bore hole or water tower, etc may make it a "complex water system" under HSG 274).
- d. The equipment is designed and constructed to enable safe and easy operation, cleaning, and maintenance.

¹⁷ The clear authority for the L8 Responsible Person to isolate/make safe originates from an HSE recommendation following a site investigation and resulting Fee for Intervention.

- e. They take account of and comply with the Water Supply (Water Fittings) Regulations; Scottish Water Byelaws and Water Regulations Advisory Scheme (WRAS).
- f. Stored cold water is reduced to the minimum needed to meet peak needs.
- g. Designs are sustainable and aid future cleaning, flushing, disinfection and disposal (e.g., by providing suitable access points in the system).
- h. They minimise heat gain/loss (e.g., hot, and cold-water pipes and storage tanks should be insulated).
- i. They comply with relevant British Standards or their European/International equivalents.

7.0 LEGIONELLA MANAGEMENT PLAN (LMP)

7.1 To avoid duplication and potential for gaps in Legionella management, a single LMP is to be implemented at each Establishment, incorporating all relevant Legionella aspects, named appointments/ nominated persons and responsibilities. The LMP is to signpost any relevant demarcations where water assets are controlled by another party or contract (e.g., Aquatrine leased/licensed assets; DIO Accommodation for SFA or 3rd Party tenants, encroachments, etc.).

7.2 Contract-wide templates are permitted provided they are made “establishment-specific” (e.g., accurately articulate the local Contractor representatives and deputies, etc) and agreed with the relevant DIO Service Manager (or equivalent).

8.0 DIO ASSURANCE

DIO Service Manager (or equivalent)

8.1 The contractor’s ability to deliver the Responsible Person role has been assessed at an organisational level as part of the contract award process. The DIO Service Manager must make reasonable checks to assure the following at the “working” level:

- a. A site-specific LMP is prepared, agreed, and implemented for each establishment in their area of responsibility (AoR) and clearly explains local lines of communication and responsibility.
- b. Any organisation or supply chain member undertaking work related to the LMP (e.g., conducting risk assessments; drawing up the control scheme; water treatment companies, etc.) are competent to undertake such works, including sufficient knowledge of the installation.

Guidance: An industry ‘Code of Conduct’ for organisations providing water treatment services has been jointly developed by the British Association of Chemical Specialities (BACS) and the Water Management Society (WMS). Although the Code has no legal status, it does provide a degree of assurance about the standards of service that shall be provided to customers.

- c. Contractor representatives on site have suitable and sufficient information and cooperation from the HoE and other stakeholders (e.g., users, PFI’s, Aquatrine, third party users, etc) to discharge their legal or contracted obligations.
- d. Arrangements for the notification of little used outlets due to change of facility occupancy or use are established, recorded in the LMP, and working effectively.

Guidance: Buildings taken temporarily out of use. In general, subject to any assessed risk of freezing, burst pipes, etc, systems can normally be left filled with water and not drained down as moisture will remain within the system enabling biofilm to develop where there are pockets of water or high humidity. The water in the system also helps to avoid other problems associated with systems drying out, including failure of tank joints and corrosion in metal

pipework. The systems should be recommissioned as though they were new (i.e., thoroughly flushed, cleaned, and disinfected) before returned to use without the need for continuous flushing during the period of non-occupation.

e. Contractor representatives on site have sufficient authority and knowledge of water installations to ensure the control scheme can be carried out in a timely and effective manner.

f. Records maintained by the RP demonstrate that all infrastructure water systems maintained by DIO have been assessed for Legionella risks and written control schemes prepared and implemented as required.

Guidance: Records must be retained for the period they remain current plus two years. Records kept for monitoring and inspection shall be kept for at least five years. All records should be signed, verified, or authenticated by a signature or other appropriate means.

g. Each LMP is subject to recorded review at regular intervals, and at least six-monthly, to ensure it remains up-to-date and that tri-party agreements and demarcations within are clear, being followed and remain effective.

h. New water system builds, or modifications carried out by the contractor comply with L8 and all relevant British Standards or their European/International equivalents.

8.2 The requirements of the paragraphs above are to be met through the day-to-day interface with the Contractor and CO/HoE; and as demonstrated by reported performance against contracted Statutory/ Mandated targets; any reported elevated bacteria levels or legionellosis case; and contract assurance programme (e.g., EM02 Work Order, Asset File and Management Process checks).

8.3 Table 1 below provides some guidance on the standard “core” checks to be made although frequency can be less or more frequent dependant on local risks.

Ser	Check	Details/Standard	Frequency
1	Legionella Management Plan (LMP)	Plan is to agreed format, is signed by all parties and has been reviewed at least on a 6-monthly basis.	Annually
2	Risk Assessment (RA) and Written Scheme (WS)	Ensure both have been carried out for all risk systems; include detail of all parties; subject to regular review (as per L8); are appropriate for building and population; identifies/evaluates sources of risk; includes schematic; identifies sentinel outlets; TMV; Flexible connections, expansion vessels; remedial works/management regime and that recommendations have been completed.	3 Monthly (Sample 3 buildings in rolling review prioritising high risk systems).
3	Monitoring, inspection, tests i.a.w RA/WS	Check monitoring: inspection & test (e.g., monthly temperature readings, shower head disinfection, microbiological testing) is being carried out i.a.w RA/MS. Records are to be retained for 5 years. Check for trends e.g., recovery rates. Check that records are signed, and remedial actions are addressed.	3 Monthly (As Ser 2)
4	Transient occupancy/little used outlets	Check that the management system detailed in the LMP is operating; ensure transient occupancy/little used outlets are identified; check procedures used; check records.	3 Monthly (As Ser 2)

8.4 HSG 274 Part 2 provides detailed guidance on L8 requirements for hot and cold-water system design, operation and inspection and provides a suitable check list for those carrying out L8 duty holder duties.

8.5 The DIO Regional H&S Support Team will be available to the Service Manager and their representatives for H&S advice and carrying out of their Assurance programme. The H&S Team will also undertake additional monitoring /assurance activities where directed by the DIO Heads SHEPS to verify DIO HSEP Management Systems are adequate; being implemented and address arising risks.

9.0 INFORMATION, INSTRUCTION, TRAINING AND COMPETENCE

12.0 Anyone or any organisation required to carry out work in connection with Legionella must know what they must do and be able to do it safely. Duty holders and employers are responsible for ensuring that adequate information, instruction, and training is given to their employees.

12.1 Annex D sets out the DIO approach to training, awareness, and competence with minimum requirements for the various roles in managing Legionella for the MOD estate.

Further advice and assistance on matters pertaining to this Policy Instruction can be obtained from the document sponsor or point of contact detailed on the front page. It is the responsibility of the user to ascertain if they have the most up to date version of the document. Advice on Legionella related matters can also be obtained from Defence Infrastructure Organisation through local Health and Safety Advisors.

ANNEX A: DIFFERENCES IN IMPLEMENTATION

1. **Projects:** For Major and Capital Works Projects, DIO Major Programmes and Projects (MPP) operate Regional and National frameworks to deliver projects across a wide range of asset types. The assigned DIO Project Manager is responsible on behalf of Director MPP:
 - a. For making reasonable checks to confirm that L8 and HSG 274 requirements relating to water system design/installation and the provision of information to system users, maintainers, cleaners, etc are met. Such information should include a statement as to whether assessed Legionella risks at design have been eliminated or, if not, how remaining risks are to be controlled.
 - b. Shall advise and consult with DIO Regional Delivery teams on any planned builds or other projects requiring future water system adoption and to confirm compatibility with existing infrastructure before work commences.
 - c. Project **SLAM**: Under Project SLAM, the SLAM contractor retains maintenance and therefore L8 Responsible Person responsibility for the duration of the 7-year Compliance Period.
2. **Disposals.** For Sites-in-Disposal or Acquisitions, DIO Regional Delivery will discharge the (nominal) CO/HoE role. Where sites are passed to the Land sales Delivery Partner to manage disposal, they are the L8 duty holder and responsible for managing Legionella hazards and risks and compliance with L8/HSG 274.
3. **United States Visiting Forces (USVF)**
 - a. On MOD sites utilised by the US Visiting Force, Legionella is managed through the USAF Civil Engineering organisation. US Air Force in Europe Command level (as USVF executive agent for such issues in the UK) have come to agreement with the DIO US Forces Division (DIO USF) that USVF assume the L8 duty holder's responsibilities in respect of UK Control of Legionella requirements. USVF do this not out of compliance with UK legislation, but out of compliance with their own Legionella management standards and local arrangements.
 - b. These standards and arrangements cover similar requirements to appoint a Nominated Person (similar to the L8 Responsible Person); to produce an establishment written Legionella Risk Prevention/ Mitigation Program (Legionella Management Plan) to identify, risk assess, manage, and communicate information about Legionella in facilities, and to mitigate proliferation of the bacteria.
 - c. Where DIO USF is contracted to maintain USVF fixed infrastructure assets, DIO USF co-operates closely with USVF as 'duty holder' in Legionella management matters and ensures MOD contractors do likewise and comply fully with UK legislation & guidance for those elements and systems under their contract.
 - d. The USVF currently fund Legionella risk assessment, maintenance, and remedial works.
4. **Private Finance Initiatives (PFI)**
 - a. For DIO managed PFIs, the water systems are deemed not under MOD control and the PFI Contractor is the L8 duty holder responsible for managing Legionella risks and securing compliance with L8, HSG 274 and any MOD mandated requirements where stipulated in the contract. The DIO PFI representative (DIO Commercial) shall ensure contract documents and arrangements clearly articulate this.

b. Assurance that Legionella management systems are in place and functioning should be reported by the PFI Contractor through the DIO PFI Representative and verified by the DIO H&S Team assurance programme.

c. **Aquatrine:** The DIO PMO shall have in place suitable and sufficient regimes to check that: incoming water supply meets regulatory Water Quality and L8 requirements; that Service Provider (ASP) leased/licensed assets do not put MOD water systems at risk; and that the ASP collaborate with establishment stakeholders in the management of Legionella and provision of assurance for aspects which they control.

<p>Note: The above is in summary only, where this conflicts with the Terms and Conditions of the contract the latter takes precedence.</p>

5. **Reserve Forces and Cadets Association (RFCA):** Where the RFCA owns the establishment; the RFCA Head of Estates has accountability for managing Legionella, with the duties cascaded down to the RFCA Works Officer to oversee and maintain compliance. Where the RFCA is a lodger unit on a MOD establishment, Legionella will be managed in accordance with the procedures relevant to the establishment and contractual arrangement; typically, by the standard MOD tri-party arrangement involving DIO, the Contractor and the Head of Establishment; or PFI as appropriate.

6. **Overseas.** For overseas locations, outside of UK territorial waters, a suitably competent local contractor may be engaged to carry out the works. To be deemed competent, a contractor must be able to demonstrate the skills and experience as laid down in the relevant Host Nation standards and to the UK HSE ACOP, a record of the assessment should be retained. In such cases, the party engaging those carrying out the work is responsible for assessing their competence and monitoring their performance. Support is available from the DIO Regional Health and Safety team.

7. **Service Family Accommodation (SFA).**

a. For all SFA, the CO/HoE is the DIO Head of Accommodation (Hd Accn), and assets are thus excluded from the establishment CO/HoE's control and responsibility. For this reason, Regional Delivery Accommodation (RDA) operate their own Legionella Management Plan (LMP) which Head Accn signs and may be countersigned by the DIO Service Manager. This LMP sits above the Contractors LMP and details RDA Policy. As a result, RDA do not co-sign the numerous Establishment LMPs, even for Service Family Accommodation behind the wire. Misappropriated housing that is not under DIO RDA control will need to be managed by the body in control of maintenance.

b. RDA Policy and Contractor delivery must require and ensure compliance with L8 and HSG274.

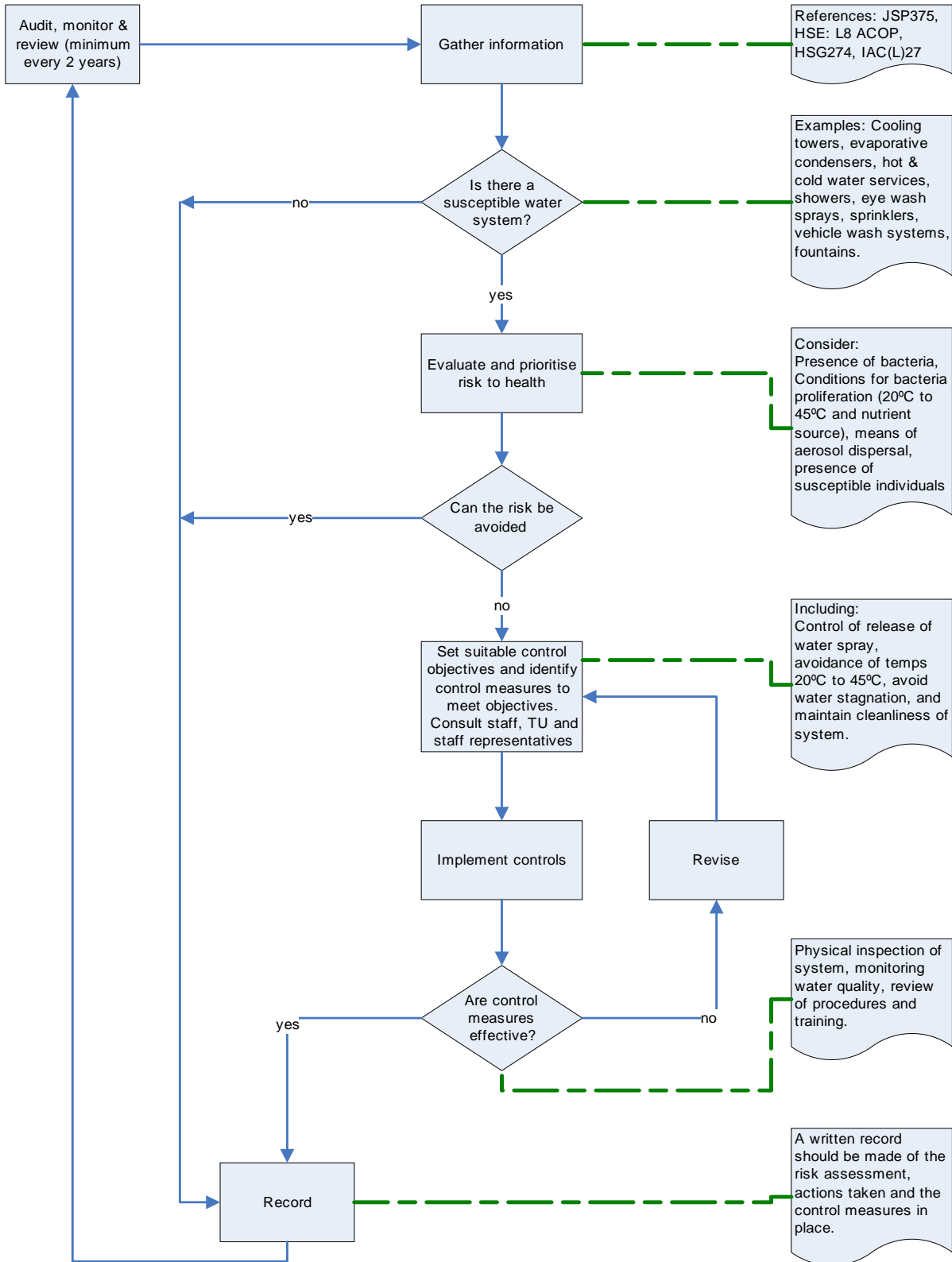
8. **Tenants.** DIO Land Management Services shall where possible ensure that third parties occupying MOD premises/estate for commercial purposes do so under a full maintenance and repair lease/arrangement and thus will be responsible for ensuring full compliance with the Regulations and HSE approved code of practice, including:

a. Operating their own Legionella appointment, management, and visitor induction programme, and

b. Where relevant, cooperating with the CO/HoE and the DIO contractor as necessary to ensure site-wide Legionella management arrangements remain suitable and sufficient, including population and revision of the relevant parts of the site LMP regarding demarcations and shared responsibilities. A key part of the CO/HoE engagement process at establishment/unit level is the Site Infrastructure Management Meeting (SIMM); this is the primary mechanism for DIO and User engagement and provides a regular forum to share Legionella information/updates.

9. **British Forces Germany (BFG):** BFG are required to comply with the Supplementary Agreement (SA) to the Status of Force Agreement (SOFA) that clearly states all visiting forces are to comply with German Law and this includes compliance with German Health and Safety Law in respect to activities undertaken on their land (Article 53.1 SA). This general obligation is subject to certain exemptions, but these are rarely applied (e.g., where MOD personnel work in strict isolation).
- a. This obligation is underpinned in the Health & Safety and Environmental Protection for Defence Policy Statement issued by the Secretary of State for Defence which states: “Overseas, we apply our UK arrangements where reasonably practicable and, in addition, respond to host nations’ relevant HS&EP expectations.”
 - b. BFG therefore, is to comply with German Health and Safety standards (in line with the SA) and only to apply a different standard (i.e., UK) where it is reasonably practicable to do so. Reference to “Reasonably Practicable” in the SofS statement means that where there is a measurable reduction of risk in the level of safety this must be proportional to the difficulty and cost of taking the measure.
 - c. Despite BFG’s primary obligation to comply with German Health & Safety Standards, it is important to ensure that safety measures taken in BFG which could affect our military, civilian and dependent members of the community are not inferior in principle to those which would be applied in the UK, so that they are provided, in so far as is reasonably practicable, with the same degree of HS&EP support, training and protection that would be afforded to them in the UK.
 - d. During the operation of this Policy Instruction there may be variations identified where Host Nation legislation and/or guidance (in relation to inspection and maintenance frequencies of ACMs or equipment) may fall short in meeting UK/MOD Standards. In these cases, a judgement needs to be made by the DIO RDO(E) HQ – SME Focal Point (Legionella), where reasonably practicable, to include additional UK/MOD Standards or guidance if/when considered appropriate.
 - e. Host Nation compliance checks are carried out by the German regulatory authorities (KFB) and/or the Accident Insurance Carriers (UVB). Both have statutory powers to take enforcement action in the event of breaches of German health & safety law. BFG are required to ensure full compliance with the HN regulators including any remedial actions recommended.

ANNEX B: LEGIONELLA RISK MANAGEMENT FLOW CHART



ANNEX C: SAMPLE LETTER - APPOINTMENT OF L8 RESPONSIBLE PERSON

Dear

LEGIONELLA APPOINTMENT OF RESPONSIBLE PERSON

1. As laid down in the L8 Approved Code of Practice, I hereby formally appoint *[organisation]* as L8 Responsible Person for the Management of the Legionella risk in those water assets for which the *[contract]* is responsible.

2. Please confirm your acceptance in writing and provide the names, contact details and declaration(s) of competence/training of those persons who will discharge this role on your behalf and the specific establishments/area for which they will be responsible, and any subsequent amendment.

Yours sincerely

DIO Service Manager

ANNEX D: MINIMUM TRAINING REQUIREMENTS

The Table below sets out the minimum training requirements (see **Notes 1 and 2 below**) for the various roles in managing Legionella for **DIO staff or appointed contractor**.

Ser	Role	Minimum Requirements	Comments
1*	DIO Service Manager (or equivalent) or his/her nominated representative.	Legionella Awareness and ACOP L8 (BS6) Training Course [or equivalent].	1-day course incorporating C&G assessment and accreditation (401 Legionella Appreciation). Delivers an understanding of Legionella health effects and how risks are controlled (including legal compliance) for persons who need to monitor precautions and keep appropriate records.
2*	DIO CO/HoE		
3	L8 Responsible Person and deputy	Legionella: Role of the Responsible Person/Duty Holder/Landlord (BS1) Training Course.	1-day course incorporating C&G assessment and accreditation (400 Role of Responsible Person). For the person identified as being responsible for implementing the requirements on L8 and HSG274 for the control of Legionella bacteria in Water Systems.
4*	DIO Regional H&S Advisor	Legionella: Role of the Responsible Person/Duty Holder/Landlord (BS1) Training Course [or equivalent].	
5*	4C Duty holder and Area Custodian(s)	Legionella Awareness and ACOP L8 (BS6) Training Course [or equivalent].	
6	Building occupants (not SFA)	Awareness of site documents (location and content)	Familiarisation with establishment Legionella Management Plan.

Notes:

- The training requirements set out above are in addition to any set out in the Regulations and ACOP.
- * For Serials 1,2,4 and 5 “or equivalent” includes a training package delivered by the DIO Regional Health and Safety Support team. Such training is to be authorised by the Assistant Head RHSST who is responsible for ensuring the course meets statutory requirements; is subject to independent peer review, and that those presenting the course deliver to an appropriate standard.