

Policy and Procedures for the Management and Control of Legionella Risks



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1.0 Policy for the Management of Legionella Risks

In recognition of its statutory duty under the Health & Safety at Work etc. Act 1974 (HASWA), the Management of Health and Safety at Work Regulations 1999 (MHSWR) and the Control of Substances Hazardous to Health Regulations (COSHH) Shropshire Council undertakes to identify and assess the risk of legionella infection to its employees, contractors and visitors arising from the manner in which the water systems, over which the Council has day to day control, are operated, managed or designed.

Shropshire Council undertakes to at all times comply with the Health and Safety Executive's Approved Code of Practice L8 (Fourth edition), Legionnaires' disease: The control of legionella bacteria in water systems (ACOP) and HSG274.

The Council will prevent its employees, building users and any person it owes a duty of care from respiratory exposure to legionella bacteria within its premises so far as is reasonably practicable.

2.0 Understanding Legionnaires' Disease

Legionellosis is the term used for infections caused by *Legionella pneumophila* and other bacteria from the family Legionellaceae. Legionnaires' disease is a pneumonia that principally affects those who are susceptible due to age (over 50), illness, immuno-suppression, smoking, lack of fitness etc. and may be fatal. Legionellae can also cause less serious illnesses which can affect all people.

Infection is attributed to inhaling legionella bacteria, in water droplets or aerosol which are small enough to penetrate deeply into the lung. Symptoms include myalgia and headache followed by fever and chills. Infection with legionella bacteria can be fatal in approximately 12% of reported cases. On average there are approximately 400 reported cases of Legionnaires' disease each year in the UK.

Legionella bacteria are widespread in natural sources of water. They may enter man-made systems where, under favourable conditions, they can multiply. Legionella bacteria can survive under a wide variety of environmental conditions and have been found in water at temperatures between 6 °C and 60 °C. Water temperatures in the range 20 °C to 45 °C seem to favour growth. The organisms do not appear to multiply below 20 °C and will not survive above 60 °C. They can remain dormant in cool water and multiply only when water temperatures reach a suitable level.

Legionella bacteria also require a supply of nutrients to multiply. The presence of sludge, scale, sediment, algae and biofilm play an important role in harbouring and providing favourable conditions in which the legionella bacteria may grow.

If water droplets are created and dispersed into the atmosphere from systems containing Legionella bacteria, then people in the vicinity may be at risk.

A number of factors are required to create a risk of legionellosis:-

- The presence of legionella bacteria
- Conditions suitable for the proliferation of those bacteria
- A means of creating and disseminating an aerosol
- The presence of susceptible individuals

Conditions favouring the proliferation of legionella are:-

- Moisture
- Temperature between 20 °C and 45 °C
- Presence of nutrients and biofilm

The elimination of as many of these conditions as possible forms the basis for control of the risk. The prevention of risk requires elimination of the possibility of exposure to water spray.

3.0 Legislation and Guidance

In implementing this policy Shropshire Council will use as a general source of practical help, the documents listed below:-

- HSE Approved Code of Practice L8 (Fourth edition) The control of legionella bacteria in water systems (ACOP)
- HSG274 Part 2: The control of legionella bacteria in hot and cold water systems
- BS 8558 Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages
- BS 8580 Water Quality- Risk Assessments for Legionella Control.
- The Control of Substances Hazardous to Health Regulations (COSHH)
- The Water Supply (Water Fittings) Regulations
- The Water Supply (Water Quality) Regulations
- The Health and Safety at Work etc. Act 1974
- The Workplace (Health, Safety and Welfare) Regulations
- The Management of Health & Safety at Work Regulations
- Notification of Cooling Towers and Evaporative Condensers Regulations
- Reporting of Injuries, Diseases & Dangerous Occurrences Regulations (RIDDOR)
- CIBSE TM13 Minimising the risk of Legionnaires' disease
- The Public Health (Notification of Infectious Diseases) Regulations
- The Building Regulations Approved Document G – Sanitation, Hot Water Safety & Water Efficiency

4.0 Managing the Risk: Responsibility Structure

The Head of Paid Services shall:-

Ensure that adequate resources are available for the formulation, monitoring and recording of appropriate procedures which comply with the ACOP.

Ensure that adequate resources are available to provide appropriate information, instruction, training and supervision to employees identified as having a role to undertake in the implementation of legionella management procedures.

Appoint the Strategic Asset Manager as the 'Responsible Person' to manage the necessary procedures for the prevention of Legionnaires' disease.

The Responsible Person shall:-

Accept management responsibility for all aspects of Legionella control.

Ensure suitable arrangements are in place to identify all water systems managed by the Council and assess them for the potential risk of legionella infection.

Establish suitable arrangements to manage identified risk areas, including identification of management responsibilities, training and competence.

Ensure that adequate resources are available to address any needs identified in the risk assessments and that the risk assessments are acted upon.

Review the risk assessments and remedial measures implemented every two years.

Ensure that the established procedures are brought to the attention of all persons affected by them.

Appoint the Statutory Compliance Officer (Asbestos & Legionella) as 'Deputy Responsible Person (non-housing)' and the Shropshire Towns and Rural Housing Limited (STaR Housing) Project Manager as 'Deputy Responsible Person (housing)' to implement and coordinate the procedures for the prevention of Legionnaires' disease.

The Deputy Responsible Persons shall:-

Arrange for Risk Assessments to be carried out on water systems and plant, for each non-housing property and for the communal areas of housing properties. The Risk Assessments shall be reviewed every two years and when the original assessment may no longer be valid.

Keep permanent records of all Risk Assessments in the Strategic Asset Management Team or STaR Housing office as appropriate.

Arrange for remedial work to be carried out as highlighted by the Risk Assessment. This work is to be recorded on a Remedial Action Sheet.

Keep permanent records of all the remedial work with the Risk Assessments and also in the relevant property file in the Strategic Asset Management Team or STaR Housing office. A copy shall be held in the on-site water services logbook with respect to non-housing properties. The records will be kept for 5 years and will be readily available for inspection.

Put in place water temperature monitoring, cleaning, disinfection and certification routines on water systems and plant, for each non-housing property and for the communal areas of housing properties.

Arrange for any water temperature monitoring, cleaning, disinfection, certification routines and non-conformance to be fully recorded.

Arrange for remedial work to be carried out as highlighted by water temperature non-conformance reports when the control limits are exceeded, where applicable.

Keep permanent records of all the remedial work in the on-site water services logbook, where applicable, with the Risk Assessments and also in the relevant property file. The records will be kept for 5 years and will be readily available for inspection.

The Duty Holder

The Council will identify a Duty Holder for each of its buildings (e.g. Headteacher, Service or Premises Manager).

The Duty Holder shall familiarise themselves with the on-site water services logbook, which contains the Risk Assessment, Schematic Drawing of the water system and details of completed remedial work.

The Duty Holder shall make themselves known to the temperature monitoring contractor at his monthly visit, as they may be aware of reasons for a

temperature non compliance e.g. water heaters turned off in infrequently used areas, water heater fault already reported & awaiting attention, system drained down etc; this local knowledge may save an unnecessary attendance by a contractor.

Listed below are a number of control measures that Duty Holders should adopt where appropriate:-

- A temperature regime where:-
Hot water is stored at temperatures above 60 °C. This can be reduced to 50 °C at local small storage water heaters e.g. Santon or Heatrae Sadia oversink or undersink water heaters no greater than 15 litres.
Cold water is stored at temperatures below 20 °C.
- Avoidance of water stagnation by:-
Draining down any systems that are not in regular use. Where draining down is not practical, flush through any outlets that are not used at least once per week, for several minutes on a weekly basis, e.g. showers, outside taps, outlets in disabled facilities, outlets in outbuildings
- Thermal disinfection following plant shutdowns and holiday periods of over one weeks duration, by raising the temperature of the centralised hot water system to 60 °C for more than one hour and running each outlet for five minutes, working back from the most remote outlet to the water heater. Cold outlets shall be run with the respective hot outlet.
- Flushing of all WCs, with lids closed, following system shutdowns and holiday periods of over one weeks duration.

All Shropshire Council employees shall, in undertaking their work activities, comply with this Policy and perform their duties in accordance with any information, instruction and training received.

5.0 The Estate

The Estate comprises all properties and buildings owned or occupied by Shropshire Council, for which Shropshire Council has responsibility for the planned maintenance.

Where Council owned properties are maintained by outside agencies then the Deputy Responsible Persons shall be available to advise the person in control of the building.

Where Council employees occupy leased properties then the Deputy Responsible Persons shall be available to advise the person in control of the employees.

6.0 Managing the Risk: Control Regime

Shropshire Council will, where appropriate, adopt the following control measures:-

- Controlling the release of water spray.
- A temperature regime where:-
Hot water is stored at temperatures above 60 °C & distributed above 50 °C. Consideration shall be given to the installation of thermostatic mixing valves where occupants may be at risk from scalding. The valves shall be sited as close to the point of use as possible and be approved by the Water Regulations Advisory Scheme (WRAS) under the TMV3 scheme.

Cold water is stored at temperatures below 20 °C.

- Avoidance of water stagnation by:-
 - Utilising mains pressure systems
 - Utilising pumped secondary returns
 - Utilising local small storage water heaters
 - Utilising un-vented water heaters and calorifiers
 - Minimising the volume of cold stored water to < 24 hours water use
 - Removal of dead ends
 - Regular flushing of dead legs, low use outlets and low use showers
 - Utilising steam humidifiers in preference to air washers
- Avoidance of the use of materials that harbour bacteria and other micro-organisms. All materials specified shall be approved by the Water Regulations Advisory Scheme (WRAS).
- Maintenance of the cleanliness of water systems and the water in it. Cleaning & disinfection shall only be carried out by specialist contractors according to the recommendations of the system manufacturer or HSG274 Part 2, as appropriate.
- Use of Type 1 biocide treatment techniques; The application of low concentrations of chlorine or chlorine dioxide, to a level allowed by drinking water standards, to not only kill off legionella and other bacteria but also the biofilm.
- Thermal disinfection following plant shutdowns and holiday periods of over one weeks duration, by raising the temperature of the distribution system to 60 °C for more than one hour and running each outlet for five minutes, working back from the most remote outlet to the calorifier. Cold outlets shall be run with the respective hot outlet.
- Flushing of all WCs, with lids closed, following plant shutdowns and holiday periods of over one weeks duration.

Routine sampling and microbiological monitoring of hot and cold water systems is not necessary since systems are supplied with potable water. However, microbiological investigation shall be carried out when taste or odour problems are reported and when a Legionella outbreak is suspected or has been identified. Analysis of water samples shall be undertaken by a laboratory accredited by the United Kingdom Accreditation Service (UKAS).

Water Risk Assessments will be carried out, as described in Section 7.

To ensure precautions remain effective, the condition and performance of the water systems will be monitored, as described in Section 8.

7.0 Water Risk Assessments

The Deputy Responsible Persons shall arrange for Risk Assessments to be carried out on water systems and plant for each non-housing property and for the communal

areas of housing properties. In order to comply with the ACOP it may be necessary to employ outside consultants with specific training and expertise in legionellosis risk assessment. During the tender process, a questionnaire will be used to determine the Consultants': resources, experience, expertise, trade body membership, insurance cover, quality system, and number of staff, their experience and qualifications.

The Risk Assessments shall be reviewed every two years and when the original assessment may no longer be valid.

The water services risk assessment shall be carried out according to the provisions of the ACOP.

The water risk assessment shall identify all water related systems which could potentially create a risk to health. It shall include a numerical assessment of the risks associated with each system using a two factor 'likelihood' and 'severity' rating system as below:

Likelihood	3	Harm is certain or near certain to occur
	2	Harm is likely to occur
	1	Harm is unlikely to occur
	0	Harm will not occur
Severity	3	Death, major injury (as defined in RIDDOR)
	2	Injuries where people may be off work
	1	All other injuries

The products of likelihood & severity are summated to determine the Property Risk Classification, as below:

Property Risk Classification	Total Risk Rating
LOW RISK	< 60
MEDIUM RISK	61 – 180
HIGH RISK	> 181

The summary sheet is shown at Appendix A.

The risk assessment shall comment upon the sufficiency and completeness of records required by the ACOP, including the following documents held at each site:-

- The water services logbook
- The current water system risk assessment report

The risk assessment shall comment on aspects of the system design and installation which affect the legionellosis and health risk with reference to the ACOP and BS8558:2011 'Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages'. This shall include general layout of pipework and components, quality of installation, storage, segregation, backflow prevention devices, labelling of outlets, avoidance of dead legs & dead ends etc.

The risk assessment shall comment on the use of materials which affect the legionellosis and health risk. In particular the risk assessment shall highlight the use of non-approved materials in domestic and drinking water systems.

The risk assessment shall comment on all aspects of the water systems insofar as they affect the legionellosis and health risk with reference to the ACOP. This should include routine operation, controls, maintenance, cleaning, water treatment and periodic disinfection as well as provisions for extended plant shutdown and restart.

The risk assessment will comment on all aspects of water usage insofar as they affect the legionellosis and health risk. This shall include the relationship between stored volumes of water and usage patterns, frequency of use of outlets, effective dead legs & dead ends etc.

The risk assessment shall include temperature measurements taken on cold water supply, cold water storage and hot & cold water service systems throughout the site to assess water flow patterns.

The risk assessment formal report shall contain the following:

- ✓ A header page dated and signed by the Assessor.
- ✓ A brief description of the site, its activities and structure.
- ✓ A summary sheet listing all systems found and inspected for legionellosis risk. To include the numerical assessment of the risks associated with each system, the Total Risk Rating and the Property Risk Classification.
- ✓ The results of all inspections, temperature measurements and other tests undertaken including the time and date of measurements or sampling.
- ✓ Survey Sheets as below:
 - Cold water storage tank survey – domestic
 - Cold water storage tank survey – non domestic
 - Calorifier survey
 - Electric water heater survey
 - Domestic water services temperature survey, incorporating showers and thermostatic mixing valves (TMV)
 - Ducted air handling units, incorporating humidifiers
 - Drinking water survey
 - Incoming mains cold water survey
- ✓ Photographs to highlight specific points.
- ✓ Schematic drawings of the water systems – example shown at Appendix J.
- ✓ A general evaluation of management procedures and compliance with the ACOP.
- ✓ A specific evaluation of the existing written scheme for minimising the risk of legionellosis including recommendations for additional provisions.
- ✓ A prioritised list of detailed recommended remedial works.

Upon receipt of the water risk assessment the Deputy Responsible persons shall consider all of the recommendations, then where necessary, appoint suitable contractors to undertake the remedial works. The remedial works, nominated contractor, order number and confirmation of completed remedial works shall be recorded on the 'Remedial Action Sheet'. The Remedial Action Sheet shall be filed with the risk assessment; Copies are to be retained with the on-site water services logbook and in the property file. The Strategic Asset Management / Landlord Services databases shall also be populated with appropriate data and information.

Examples of the Summary Sheet, Survey Sheets, schematic drawing and Remedial Action Sheet are provided as appendices.

8.0 Water Services Monitoring

The Deputy Responsible Persons shall put in place water temperature monitoring, cleaning, disinfection and certification routines on water systems and plant, for each non-housing property and for the communal areas of housing properties. At newly constructed properties monitoring shall commence upon occupation. In order to comply with the ACOP it may be necessary to employ outside contractors with specific training and expertise in water temperature monitoring. During the tender process, a questionnaire will be used to determine the Contractors': resources, experience, expertise, trade body membership, insurance cover, quality system, and number of staff, their experience and qualifications.

The following tasks shall be completed at the stated frequencies:-

Cold water tank inspection	annually	
Cold water tank certification	annually	
Cold water tank disinfection	as required	
Shower disinfection and descale	quarterly or as required	
Shower inspection certification	quarterly	
Temperature checks		
sentinel* hot taps	monthly	to be >50 °C after 1 minute
sentinel* cold taps	monthly	to be <20 °C after 2 minutes
other taps on rotational basis	annually	
calorifiers	monthly	store >60 °C, return > 50 °C
CW tanks	annually	store < 20 °C
Flushing dead-legs**	monthly	
TVC E.Coli / Legionella testing	as required	
Log book completion	monthly	

Records of the above are to be fully recorded.

Non conformity of temperature or cleanliness shall be reported to the Deputy Responsible Persons, who shall take the necessary remedial action, which shall be recorded and filed with the risk assessment & property file. The Strategic Asset Management / StaR Housing databases shall also be populated with appropriate data and information.

At properties having hydrotherapy pools or spa baths the following sampling and monitoring procedures shall be adopted, organised and carried out by the in house staff:-

Chemical testing of the chlorine, alkalinity and pH on a daily basis, or in line with the manufacturer's recommendation, whichever is the more frequent. Guidance can also be obtained from the Health Protection Agency's booklet 'Hygiene for Hydrotherapy Pools' and Part 2 of the ACOP.

Biological monitoring, checking for Coliforms, E.Coli, pseudomonas and Legionella, on a weekly basis or in line with the manufacturer's recommendation whichever is the more frequent. Analysis of the water

samples shall be undertaken by a UKAS accredited laboratory, typically the Pathology laboratory at the local hospital.

Other at risk systems, not presently owned or operated by Shropshire Council, shall be inspected at the frequencies recommended in the ACOP. e.g. open cooling towers, indoor fountains & water features and car/bus washes.

** Sentinel taps are the first and last taps on a recirculating system, or the nearest and furthest taps from the storage tank.*

*** Dead-leg is a little used outlet.*

9.0 New Installations and Refurbishments.

New installations and major refurbishments shall be designed in accordance with:-

- BS 8558 Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages
- The Water Supply (Water Fittings) Regulations
- The Water Supply (Water Quality) Regulations
- HSE Approved Code of Practice L8 The control of legionella bacteria in water systems (ACOP)

Certain aspects of the system will also have to comply with the appropriate Building Regulations.

The overall choice of system depends upon the size and configuration of the building and the needs of the occupants.

Hot and cold water systems should be designed to aid safe operation by preventing or controlling conditions which permit the growth of legionella and to allow easy access for cleaning, temperature monitoring and disinfection. In particular the following points should be considered:-

- Materials and fittings acceptable for use in water systems are listed in the directory published by the Water Research Centre.
- The use of point-of-use hot water generators, with minimal or no storage for remote low use outlets.
- Showers should not be fitted where they are likely to be used less than once per week.
- Thermostatic mixing valves should be sited as close as possible to the point of use. The mixed water pipework should be kept as short as possible. TMVs should not be used with low volume spray taps.

Hot Water Systems:-

- The calorifier storage capacity and recovery rate should be selected to meet the normal daily fluctuations in hot water use without any drop in the supply temperature of 60 °C. Temperature gauges should be fitted to indicate the storage, flow and return temperatures. The vent pipe should discharge to a tundish. A drain valve should be fitted at the lowest point of the vessel.
- Calorifiers and water heaters should be sited to allow easy access for maintenance, temperature monitoring and cleaning, in a well lit area.
- The hot water circulating loop should give a return temperature of 50 °C or above. The secondary pipework should be sized to enable hot water to reach the outlets at 50 °C within one minute of running the outlet.
- Hot water distribution pipework should be insulated.

Cold Water Systems:-

- The volume of cold water storage should be minimised and not normally be greater than one day's water use. Consideration should be given to using a mains pressure system.
- Water storage tanks should be insulated, have tight fitting lids with screened vents and have insect screens fitted to pipework open to atmosphere. They should be sited to allow easy access for maintenance, temperature monitoring and cleaning, in a well lit area. Multiple linked tanks should be avoided.
- Water storage tanks should be sited in a cool place and protected from extremes of temperature. Pipework should be insulated and kept away from hot pipework and ductwork.
- Potential low use outlets should be installed upstream of higher use outlets to maintain a frequent flow of water through the associated pipework.

10.0 Action in the Event of an Outbreak

Legionnaires' disease is notifiable under Public Health legislation in England and Wales. An outbreak is defined as two or more confirmed cases of legionellosis occurring in the same locality within a six month period.

It is the responsibility of the Proper Officer for the declaration of an outbreak. The Proper Officer is appointed by the Local Authority and is usually a Consultant in Communicable Disease Control (CCDC). The Health & Safety Executive (HSE) or the Local Authority Environmental Health Officer (EHO) may be involved in the investigation of outbreaks, their aim being to pursue compliance with health and safety legislation.

The Local Authority, Health & Safety Executive, CCDC or EHO may make a site visit in their search for the source of the outbreak. The Responsible Person and Deputy Responsible Person shall co-operate fully with the outbreak investigation team, who may make the following requests:-

- ✓ Shut down processes or plant capable of generating and disseminating airborne water droplets and keep them shut down until sampling and remedial cleaning is complete.
- ✓ Provide water samples from processes or plant before emergency disinfection is undertaken. Where necessary, chemical and thermal disinfection shall be carried out in accordance with the ACOP.
- ✓ Make operational records available for scrutiny.

Final clearance from the outbreak investigation team may be required to restart the water system.

11.0 Periodic Audit and Review

When the Legionella control regime is fully implemented, periodic audits shall be conducted to confirm that the objectives are being achieved and to review any changes in the control regime or systems that need to be made.

The following team members shall meet at the stated frequencies:-

Responsible Person with the Deputy Responsible Persons, at twelve monthly intervals, to consider:-

- The efficacy of the control regime
- The adequacy of available resources
- The risk assessments
- The remedial actions
- The water temperature monitoring
- Training requirements
- New legislation

Deputy Responsible Persons with appropriate outside contractors, at six monthly intervals, to consider:-

- The preparation of the risk assessments, program, performance and competence
- The water temperature monitoring procedures, programme, performance and competence
- The up-keep of the site logbooks
- The cleaning, disinfection and certification routines
- The completion of remedial works and remedial action sheets
- The technical and commercial aspects of the contract generally

Deputy Responsible Persons with Council Procurement staff, pre tender, to consider:-

- The contract duration
- The call for competition
- The questionnaire
- The tender evaluation

The Policy and Procedures shall be reviewed and updated appropriately following changes in legislation.

12.0 Further Advice – contact details

Shropshire Council Deputy Responsible Person	01743 281036
Shropshire Council Health & Safety Team	01743 252819
StaR Housing Project Manager	01743 210216
StaR Housing Contract Officer	07807 228190

Appendix A

SUMMARY SHEET – Risk Assessment Rating & Property Classification					
Report Section	Potential Risk	Y / N	Likelihood	Severity	Risk Rating
Cold Water Storage Tanks	Tank compliant with L8 Bio-fouling present Sludge / Sedimentation present Corrosion present Stagnation present <20°C (25°C max.) Regular clean / disinfection				
Risk Rating Total					
Calorifiers & Water Heaters	Storage at 60°C Return at 50°C Stratification present Suitable drain point Sludge / Sedimentation present Scale present Regular flushing / disinfection				
Risk Rating Total					
Domestic water Services	Cold water outlets at <20°C (25°C max.) Hot water outlets at >50°C Dead legs / Low flow areas present Showers present Regular descale, clean & disinfection Used regularly Thermostatic mixer valves present Common blending > 2m Set at maximum 43°C				
Risk Rating Total					
Drinking Water	Mains fed Tank fed Outlet temperatures <20°C (25°C max.) Outlets labelled				
Risk Rating Total					
Water Softeners / Water Treatment	Brine tank clean & stocked Spare salt stock Regular servicing Supplying soft water				
Risk Rating Total					
Ducted Air Handling Units / Humidifiers	Intake protected from rainwater ingress Surfaces free from slime, algae, scale & corrosion Fans & pumps in satisfactory condition Air filters poor condition / coated with biofilm Humidifier in satisfactory condition Pond / tank water operating above 20°C Water ponding in AHU Suitable water treatment regime present Management programme Regular clean & maintenance				
Risk Rating Total					
Records	Logbooks present Records of monitoring maintained Responsibility structure present Procedures for dealing with emergency incidents Risk assessment present Records of works including clean & disinfections Records of personnel training				
Risk Rating Total					
Bacteriological Analysis	Legionella pneumophila present E.coli / Coliforms present Total viable count acceptable				
Risk Rating Total					
Public Exposure	Presence of susceptible individuals Risk of aerosol generation				
Risk Rating Total					
Total Risk Rating					
Property Risk Classification					

Cold Water Storage Tank Survey Sheet - Domestic

Asset number:	
Tank location:	
Is tank safely accessible:	
Size of access door:	
Size / type of ladder needed to inspect tank:	
Is the tank room in a satisfactory condition:	
Does the tank room allow bird / rodent infestation:	
Is there adequate lighting:	
Distance to nearest power supply:	
Distance to nearest drain point:	
Tank serves / supplies:	
Is the tank labelled:	
Materials of construction:	
Is the tank lined:	
Is it connected to other tanks & how:	
Dimensions cm (L x W x H):	
Actual water capacity:	
Type of insulation:	
Is the associated pipework lagged / type of lagging:	
Is the associated pipework labelled:	
Corrosion level:	
Sediment level:	
Are there visible signs of stagnation / pin mould:	
Size & position of tank drain:	
Are inlet & outlet pipework situated on the same side:	
Condition of tank lid:	
Are screened vents fitted:	
No. & size of vent pipework:	
No. & size of overflows:	
Is there a sufficient air gap:	
Are insect screens fitted:	
Ambient air temperature °C:	
Inlet water temperature °C:	
Stored water temperature °C:	
Additional comments / notes:	

Cold Water Storage Tank Survey Sheet – Non-Domestic

Asset number:	
Tank location:	
Is tank safely accessible:	
Size of access door:	
Size / type of ladder needed to inspect tank:	
Is the tank room in a satisfactory condition:	
Does the tank room allow bird / rodent infestation:	
Is there adequate lighting:	
Distance to nearest power supply:	
Distance to nearest drain point:	
Tank serves / supplies:	
Is the tank labelled:	
Materials of construction:	
Dimensions cm (L x W x H):	
Is the tank lined:	
Corrosion level:	
Type of insulation:	
Is the associated pipework lagged / type of lagging:	
Condition of tank lid:	
No. & size of vent pipework:	
No. & size of overflows:	
Is there a sufficient air gap:	
Are insect screens fitted:	
Additional comments / notes:	

Calorifier Survey Sheet

Asset number:	
Location of calorifier:	
Is calorifier safely accessible:	
Size of access door:	
Size / type of ladder needed to inspect calorifier:	
Is the calorifier room in a satisfactory condition:	
Is there adequate lighting:	
Distance to nearest power supply:	
Distance to nearest drain point:	
System calorifier serves / supplies:	
Is the calorifier labelled:	
Are calorifiers linked & how:	
Materials of construction:	
Dimensions (cm):	
Capacity (Litres):	
Normal method of heating:	
Any supplementary method of heating:	
Period of heating:	
Is the system pumped & circulated:	
Is there an anti-stratification pump:	
Are there any signs of temperature stratification:	
Size of drain:	
Condition of drain water:	
Is there an inspection hatch:	
Has the calorifier been inspected internally:	
Type & condition of calorifier insulation:	
Type & condition of pipework lagging:	
Is the associated pipework labelled:	
Are temperature gauges fitted:	
Thermostat set temperature °C:	
Water flow temperature °C:	
Water return temperature °C:	
Additional Comments / Notes:	

Electric Water Heater Survey Sheet

Asset number:	
Location of water heater:	
Is water heater safely accessible:	
Make & model:	
Instantaneous or storage type:	
Hot water storage capacity (litres):	
Direct or cistern type:	
Cold water storage capacity (litres):	
Outlets served:	
Thermostat set temperature °C:	
Initial water temperature °C :	
Additional comments / notes:	

Asset number:	
Location of water heater:	
Is water heater safely accessible:	
Make & model:	
Instantaneous or storage type:	
Hot water storage capacity (litres):	
Direct or cistern type:	
Cold water storage capacity (litres):	
Outlets served:	
Thermostat set temperature °C:	
Initial water temperature °C :	
Additional comments / notes:	

Asset number:	
Location of water heater:	
Is water heater safely accessible:	
Make & model:	
Instantaneous or storage type:	
Hot water storage capacity (litres):	
Direct or cistern type:	
Cold water storage capacity (litres):	
Outlets served:	
Thermostat set temperature °C:	
Initial water temperature °C :	
Additional comments / notes:	

Ducted Air Handling Units Survey Sheet

Parameter Measured	Result	Result
Asset number:		
Location of AHU:		
Is AHU safely accessible:		
Area AHU serves / supplies:		
Unit make & model:		
Is unit operational:		
Period of operation:		
Is operation seasonal:		
Internal access gained during survey:		
Method of chilling:		
Method of heating:		
Ventilation only:		
Humidification type:		
Water ponding in ductwork:		
Drip tray present:		
Correct fall to drain:		
Drip tray clean:		
Corrosion present:		
U-Bend present:		
Material of U-Bend:		
Condition of drain assembly:		
Water condition (visual):		
Intake protected from rainwater:		
Intake wet:		
Water pooling in AHU:		
Overall condition:		
Regulations compliant:		
Additional comments / notes:		

Incoming Mains Cold Water Survey Sheet

Incoming Rising Mains Supply	
Describe exactly the location of the incoming mains supply:	
Materials of construction & pipe size:	

Incoming Sub Mains Supply	
Describe exactly the location of the incoming sub mains supply:	
Materials of construction & pipe size:	

Incoming Sub Mains Supply	
Describe exactly the location of the incoming sub mains supply:	
Materials of construction & pipe size:	

Water Meters	
Location of any water meter fitted:	
Type & size of water meter:	

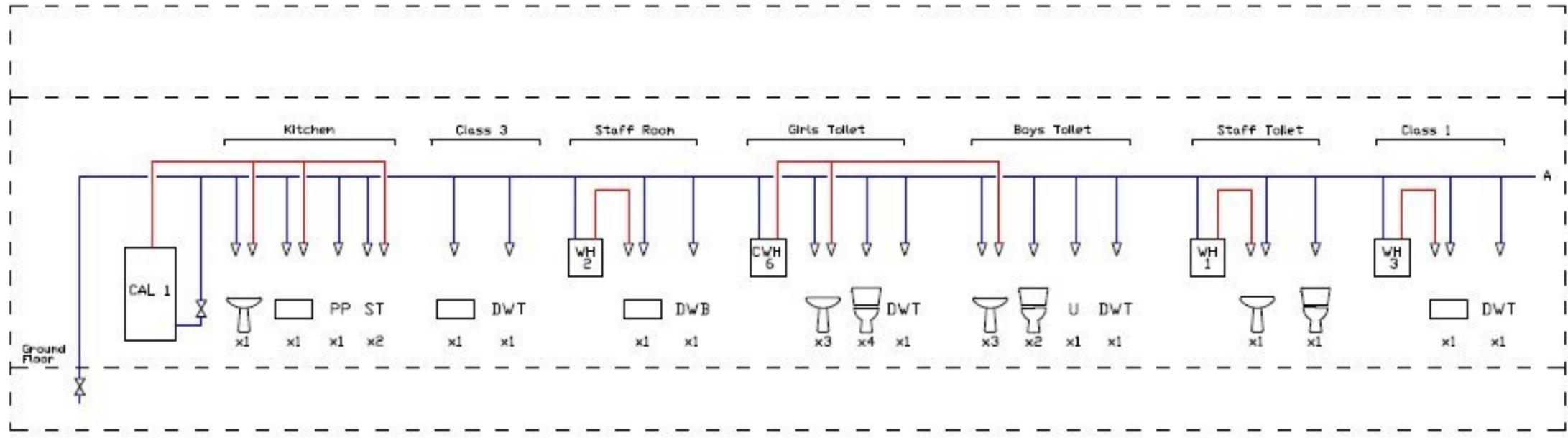
Water Meters	
Location of any water meter fitted:	
Type & size of water meter:	

Water Meters	
Location of any water meter fitted:	
Type & size of water meter:	

Remedial Action Sheet

0260 - Baschurch Primary					
	Action Taken	Contractor	Order No	Order Date	Date Action Completed
Company 'X' Non Conformance Report	CAL 2: set control stat to store water at 60C Boys/Girls toilets: strip, clean & reset TMV's to 43°C	Contractor 'Y'	13455	01/05/2007	16/05/2007
Company 'X' Non Conformance Report	CHW2 (class2) & CWH3 (class 4) - set control stats to store hot water at 50°C	Contractor 'Y'	29237	15/12/2008	21/01/2009
Company 'X' Non Conformance Report	Class 6 - set control stat on EWH to store hot water at 50C	Contractor 'Y'	36821	17/06/2009	15/07/2009

Main School



- LEGEND**
- BA BATH
 - BI BIDET
 - CAL CALORIFIER
 - CWH CISTERN WATER HEATER
 - CWS COLD WATER SERVICE
 - CWST COLD WATER STORAGE TANK
 - DF DRINKING FOUNTAIN
 - DW DISH WASHER
 - DWT DRINKING WATER TAP/UNIT
 - DWB DRINKING WATER BOILER
 - FC FUME CUPBOARD
 - FW FOOT WASH
 - HUT HOSE UNION TAP
 - MWS MAINS WATER SERVICE
 - PP POTATO PEELER
 - STZ STERILISER
 - STM STEAMER
 - U URINAL
 - VM VENDING MACHINE
 - WD WASTE DISPOSAL UNIT
 - WH WATER HEATER
 - WMC WASHING MACHINE
 - △ WATER OUTLET
 - ⊗ ISOLATION VALVE
 - ⊘ VALVE NORMALLY CLOSED
 - ⊚ NON-RETURN VALVE
 - ⊙ PRESSURE REDUCING VALVE
 - ⊖ EXPANSION VESSEL
 - ⊕ TMV or SHOWER MIXER
 - ⊞ PUMP
 - ⊟ WATER METER
 - ⊠ SOLENOID
 - ⊡ FILTER
 - ⊢ TOILET
 - ⊣ SINK
 - ⊤ WASH HAND BASIN
 - ⊥ SHOWER
- MWS MAINS WATER SERVICE
 — CWST WATER SERVICE
 — HOT WATER SERVICE
 — MIXED WATER FLOW

Shropshire Council
 - Moreton Say Primary School
 1370 - WC13131

30/04/2012	SD	HJD	
DATE	DRAWN	CHKD	

