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Property Survey Notes on the Legionella Risk Assessment of:

Name: Tarporley Community Centre

**Address: High Street
Tarporley
CW6 0AY**

Report Date: 08/08/18

Report Prepared by: S.Mount



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1.0 INTRODUCTION

This report relates to a water source risk assessment carried out by Stephen Mount of Steve Mount Associates, who visited site on 6th August 2018, on behalf of Tarporley Community Centre. During the course of the survey a total of 52 water sources within the building were risk assessed. These sources represent the overall water systems and outlets within the buildings.

1.1 Legal Drivers and Guidance

There are two main Acts of Parliament that apply – The Health and Safety at Work etc Act 1974 (HSWA) and The Control of Substances Hazardous to Health Regulations 2002 (COSHH). These enable secondary legislation and guidance to deal with specific requirements. The survey and risk assessment was undertaken in order to comply with the Health and Safety Commission - Executives requirements on- Legionnaires' disease -The Control of legionella bacteria in water systems Approved Code of Practice 2013 (ACoP L8) & Guidance 2014 (HSG274). The assessment has also been carried out to the requirements set in out in the BS8580:2010 BSI Standards Publication Water quality – Risk assessments for Legionella control – Code of practice (BS8580) and all other statutory and non- statutory documentation.

1.2 Risk Assessment Scope

The survey has been limited to the terms of reference agreed between Tarporley Community Centre and Steve Mount Associates Ltd. Observations relating to system condition and other factors applicable to the requirements of the ACOP (L8), HSG274 and BS8580 have been recorded during the survey and specific references are made to compliance with these guidance documents in the recommendations section of the report.

The recommendations section places responsibility on employers and others to prepare a scheme for preventing or controlling the risk from Legionellosis. Adoption of a written monitoring scheme or logbook in conjunction with a regime of preventative maintenance and associated record keeping will meet those requirements. A written monitoring scheme or logbook has been prepared for the purposes of this report.

1.3 Site Description

The Tarporley Community Centre site is accommodated in the ground and lower ground floor of a single unit block. The site contains hot and cold water outlets used for food preparation in kitchens and toilet facilities for approximately five volunteers servicing approximately eight hundred visitors per week.

The facility provides community services including social events, exercise classes and dramatic presentations and is open at various times throughout the week.

1.4 Background to Legionella

Legionella is the bacterium, which causes Legionnaires' disease. Of this genus, *Legionella pneumophila* is one species and is the species most commonly associated with disease outbreaks. Legionnaires' disease is identified as a pneumonia type of infection of the lower respiratory tract. The infection is most commonly acquired by the inhalation of airborne droplets or particles containing viable Legionella. Exposure to legionella can also cause a short feverish illness without pneumonia known as Pontiac Fever.

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Research and investigations indicate that the occurrence of legionella contamination is greatest in water cooling towers, evaporative condensers, hot and cold water services, water spray humidifiers, air washers, spa baths and pools etc where water is agitated and recirculated. The contamination from a cooling water tower will cover a far larger area than any other likely source.

Sediment, scale, and organic materials present in water systems, can provide nutrients and give protection for legionella. Legionella have been shown to colonise certain types of water fittings, pipe work and materials used in the construction of water systems.

The presence of these materials may provide nutrients for legionella and make eradication difficult. Other organisms in water systems such as bacteria, amoeba and algae can provide a suitable nutrient and habitat in which legionella can survive and multiply.

The formation of biofilms within a water system is undesirable and may provide a harborage and favourable conditions for legionella growth. Incorporation of legionella in biofilms and within protozoa can protect the organisms, which, in time can become freely suspended into water.

Legionella is most likely to proliferate in water systems which have a temperature between 20°C and 45°C. Human blood temperature of approximately 37°C is the most ideal temperature for proliferation. Stagnant water within the above temperature range appears to provide the most ideal conditions to promote colonisation by legionella.

Legionella will survive at temperatures below 20°C but is considered to be in a dormant state with no growth activity. The bacterium does not survive temperatures maintained consistently at 60°C or above.

2.0 RECOMMENDATIONS

2.1 Management Procedures Management Monitoring and Maintenance Issues

| RAR / Survey Results Reference | Comments and Action Required |
|--------------------------------|---|
| <p>Medium</p> | <p>.A written scheme for preventing or controlling the risks from Legionellosis identified in the risk assessment must be maintained to provide a monitoring function for the relevant management, equipment and water systems.</p> <p>A control and record-keeping logbook document should be maintained for the premises and the scheme contained within the logbook requires monitoring in order to meet the requirements of the Approved Code of Practice (ACoP).</p> <p>A logbook system of control documentation will best achieve the requirement for maintaining records of precautions implemented. The logbook or scheme of control documentation should include:</p> <ul style="list-style-type: none"> (a) names and positions of people responsible, and their deputies, for carrying out the various tasks under the written scheme. (b) a risk assessment and a written scheme of actions and control measures. (c) schematic diagrams of the water systems. A schematic drawing is provided in this risk assessment report. (d) details of precautionary measures that have been applied/implemented including enough detail to show that they were applied/implemented correctly, and the dates on which they were carried out. (e) any remedial work required and carried out, and the date of completion. (f) a log detailing visits by contractors, consultants and other personnel. (g) cleaning and disinfection procedures and associated reports and certificates. (h) results of any biological monitoring (if appropriate). (i) training records of personnel. (m) the name and position of the person or people who have responsibilities for implementing the written scheme, their respective responsibilities and their lines of communication. Such a structure was not in place for this site. (n) records showing the current state of operation of the water system, eg when the system or plant is in use and if not in use, whether it is drained down. (o) either the signature of the person carrying out the work, or other form of authentication where appropriate. <p>Site records are not in place for this site and as such a number of areas of potential non compliance were noted, which are dealt with below:</p> <p><u>General/Management</u></p> <ul style="list-style-type: none"> • Documented management responsibility structure was not evident on site. The structure requires to be implemented and fully documented. |

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| | |
|--|--|
| | <ul style="list-style-type: none">• All management responsibilities and contact details must be defined and documented. All staff involved in legionella management should have defined documented responsibilities which should be acknowledged and accepted in writing.• Up to date training and competence records should be evident for the responsible and competent persons, including internally/externally employed technicians who are involved with management of the water systems. Regular refresher training should be implemented for all staff involved in Legionella management.• No documented defined lines of communication for when control results are out of specification were evident on site and who should act to remedy the situation.• <u>Water Heaters</u> No procedures relating to the cleaning, maintenance and monitoring of the water heaters were evident on site.• <u>Cold water cisterns</u> No procedures relating to the cleaning, maintenance and monitoring of the cold water cisterns were evident on site.• <u>General monitoring procedures</u> No monitoring of water heater temperatures was evident.• From the areas assessed the monitoring procedures and records for this site was deemed to require implementation.• No documented standard operating procedures for monitoring tasks was evident for technicians carrying out the works.• All temperature monitoring devices/thermometers used should be calibrated on an annual basis. <p><i>For further guidance see:</i></p> <ul style="list-style-type: none">• <i>Legionnaires' disease The control of legionella bacteria in water systems Approved Code of Practice and guidance on regulations. L8 (Fourth edition) Published 2013.</i>• <i>BS 8580:2010 BRITISH STANDARD Water quality – Risk assessments for Legionella control– Code of practice.</i>• <i>Legionnaires' disease: The control of legionella bacteria in hot and cold water systems. HSG274 Part 2 Published 2014.</i> |
|--|--|

2.2 Systems Conditions Hot Water Services

| RAR / Survey Results Reference | Comments and Action Required |
|--------------------------------|--|
| <p>Medium</p> | <p>In healthcare and care home facilities, there is a risk of scalding for vulnerable patients, young and older people and mental health patients. Therefore it is recommended that type 3 TMV's should be fitted to wash hand basins, baths and shower hot water outlets used by vulnerable patients. The TMV strainers or filters should be inspected, cleaned, descaled and disinfected annually.</p> <p>Safe hot water and delivery devices are summarized as follows:</p> <ul style="list-style-type: none"> • No vulnerable service users use the facility. • TMV's are located on site which may be unnecessarily located. A review for the need for TMVs should be made, taking into account the relative risks of scalding. Remove the TMV's if considered appropriate. • The TMV's located in Lower Ground Floor Boiler Room RHS and LHS feed blended hot water to outlets located on site. The outlets fed by a TMV should be located as close as possible to the TMV (less than 3m). • If removed, all installations require a hot water hazard warning sign. • Thermostatic Mixing Valves are fitted to service-user access area wash hand basins to lower the hot water temperature to 41°C. Given a ± 2°C temperature tolerance, the 3.1 Survey Results Recommendations Reference / Comments section of the report identifies TMV's that do not comply with these parameters (*). • Access to hot water pipe work supplying the TMV and the TMV itself was not available for the WHB outlet located in the Ground Floor Committee Room & Bar. <p><i>For further guidance see:</i></p> <ul style="list-style-type: none"> • <i>Legionnaires' disease: The control of legionella bacteria in hot and cold water systems. HSG274 Part 2 Published 2014.</i> • <i>HTM 04-01 Part A - Safe water in healthcare premises Part A: Design, installation and commissioning 2016.</i> • <i>HTM 04-01 Part B - Safe water in healthcare premises Part B: Operational management 2016.</i> • <i>Health and safety in care homes. HSG220 (2nd edition) Published 2014</i> |

2.3 Systems Conditions Hot Water Storage

| RAR / Survey Results Reference | Comments and Action Required |
|--------------------------------|--|
| <p>Low</p> | <p>There are two water heaters located on site. WH 1 is located in the Lower Ground Floor Plant Room (see photo 1). WH 2 is located in the Ground Floor Disabled WC (see photo 2).</p> <p>The following remedial work should be undertaken to WH 1 and WH 2:</p> <ul style="list-style-type: none"> • The water heaters should be regularly cleaned and maintained on an annual basis according to the ACoP (L8) and manufacturer's instructions and records kept. • The hot water flow temperature from WH 1 was recorded at 58.9°C, this should be raised to at least 60°C. The outlet temperature from the water heater must be kept at 60°C or above leaving the water heater and at least 50°C prior to the outlets or thermostatic mixing valve(s) as fitted. • Investigations should be made to assess and rectify the reason why the hot water temperature did not attain the recommended 50°C to the TMV located in the Ground Floor Ladies WC. • WH 1 flow and temperatures should be monitored and recorded on a monthly basis. • It is understood that WH 1 is approaching end of life. It is recommended that consideration should be given to replace WH 1 with a combination type water heater. • WH 1 should be checked on a monthly basis to confirm the heater is producing hot water (>50°C) at sentinel outlets. In a non-circulating (single pipe), the sentinel points would typically be the taps furthest (far sentinel) and the nearest (near sentinel) to the hot water heater (calorifier) (see 4.4 Hot and Cold Water Service Outlets). • WH 2 should be checked regularly on a monthly basis to confirm the heater operates at between 50°C - 60°C, or check the installation has a high turnover. Water heater flow temperatures to the sentinel or farthest outlet (Ground Floor Committee Room & Bar Sink)) should be monitored and recorded on a monthly basis (see 4.4 Hot and Cold Water Service Outlets). • All monitoring procedures and remedial actions taken must be recorded within the sites log book. <p><i>For further guidance see:</i></p> <ul style="list-style-type: none"> • <i>Legionnaires' disease: The control of legionella bacteria in hot and cold water systems. HSG274 Part 2 Published 2014.</i> • <i>BS 8580:2010 BRITISH STANDARD Water quality – Risk assessments for Legionella control– Code of practice.</i> |

2.4 Systems Conditions Cold Water Storage

| RAR / Survey Results Reference | Comments and Action Required |
|--------------------------------|---|
| <p>Medium</p> | <p>There are two Cold Water Storage Cisterns (CWST) located on site used for domestic purposes. CWST 1 and CWST 2 are located in the Roof Space above the Ground Floor Gents WC.</p> <p>It is recommended that the following remedial work is undertaken to CWST 1 and CWST 2 (see photo 3):</p> <ul style="list-style-type: none"> • It is recommended that the CWST's are visually inspected on an annual basis and if deemed necessary, drained down, cleaned and or disinfected. All monitoring procedures and remedial actions taken must be recorded within the sites log book. • There is medium sediment present within both cisterns. The cisterns should be visually inspected within the next six months, and if deemed necessary, drained down, cleaned and or disinfected. • The pipe work insulation is incomplete and should be insulated to comply with BS 5970 2012 and BS EN 806 (2) 2005. • The cisterns are configured and linked in a manor that does not comply with The Water Supply (Water Fittings) Regulations 1999. <ul style="list-style-type: none"> ➢ Water inlet and outlet are not opposed ➢ Neither cistern has a tight fitting lid ➢ Neither cistern is appropriately insulated ➢ Each cistern should have a separate flow which may be used in order to link the cisterns • The cisterns require relining/replacement. • It is recommended to consider the requirement for the cisterns and their maintenance and consider draining/removal and connection of associated WC outlets to the mains cold water supply. <p><i>For further guidance see:</i></p> <ul style="list-style-type: none"> • <i>Legionnaires' disease: The control of legionella bacteria in hot and cold water systems. HSG274 Part 2 Published 2014.</i> • <i>HTM 04-01 Part A - Water systems Health Technical Memorandum 04-01: The control of Legionella, hygiene, "safe" hot water, cold water and drinking water systems Part A: Design, installation and testing.</i> |

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2.5 Systems Conditions General/Other Issues

| RAR / Survey Results Reference | Comments and Action Required |
|--------------------------------|---|
| Low | <p>Due to potential unpredictable usage and occupancy, the usage of some outlets may require monitoring. Regular discussions with on-site staff may confirm the usage of outlets and this should be used as a basis to implement an ongoing active flushing regime if outlets are not used on a weekly basis.</p> |
| Medium | <p>It is recommended that the following outlets are flushed on a weekly basis and the details recorded within the sites log book:</p> <ul style="list-style-type: none"> • Ground Floor Committee Room & Bar. WHB and Sink. • Ground Floor Arthur Meredith Gents WC. WHB • Ground Floor Arthur Meredith Kitchen. Sink • Ground Floor Arthur Meredith Ladies WC. WHB |
| Medium | <p>There is a redundant or dead end pipe work located above the Ground Floor Main Hall Stage (see photo 4). Dead end pipe work (DEP) and or units should Always be removed when identified.</p> |
| Low | <p>The site has a number of flexible hoses fitted to sinks and wash hand basins. Flexible hoses (also known as tails). If in place it is recommended that these are checked, ensuring they are manufactured from a recommended WRAS approved listed material. Going forward replace with copper or WRAS approved pipe work.</p> |
| Low | <p>It is recommended that all distribution pipe work and fittings are insulated.</p> <p><i>For further guidance see:</i></p> <ul style="list-style-type: none"> • <i>Legionnaires' disease: The control of legionella bacteria in hot and cold water systems. HSG274 Part 2 Published 2014.</i> • <i>BS 8580:2010 BRITISH STANDARD Water quality – Risk assessments for Legionella control– Code of practice.</i> |

2.6 Risk Assessment Review

Comments and Action Required

The record of the assessment is a living document that must be reviewed to ensure it remains up-to-date. The risk assessment should be reviewed regularly or whenever there is reason to believe that the original assessment may no longer be valid. The reasons for review may include changes to the following:

- The water system or its use.
- The use of the building in which the system is installed.
- The availability of information about risks or control measures.
- The management of control measures or water source/quality.
- The results of checks indicating that control measures are no longer effective.
- Changes to key personnel
- Where new construction work is expected to be carried out.
- A case of legionnaires' disease/legionellosis associated with the system

For further guidance see:

- *BS8580:2010 BSI Standards Publication Water quality – Risk assessments for Legionella control – Code of practice*
- *Legionnaires' disease: The control of legionella bacteria in hot and cold water systems. HSG274 Part 2 Published 2014.*
- *HTM 04-01 Part A - Water systems Health Technical Memorandum 04-01: The control of Legionella, hygiene, "safe" hot water, cold water and drinking water systems Part A: Design, installation and testing.*

3.0 ASSESSMENT OF RISK

Rationale

Legionnaires' disease is caused by the inhalation of aerosols/water droplets contaminated with the legionella bacteria. It is therefore important that systems susceptible to colonisation by legionella and which incorporate a potential means for creating and disseminating water droplets should be identified and the risk they present should be assessed. This identification and assessment is required under the ACoP (L8).

The assessment must be completed for routine system operation and use and also for circumstances such as breakdowns, abnormal operation, commissioning or other unusual circumstances.

Once the assessment has been completed a strategy can be prepared for preventing or controlling the risk. The strategy will be based on a sound knowledge of the varying levels of attention required by the differing risk sources within the building.

The assessment of risk from system conditions and water is based on the **CATEH** principles:

- a) **Contamination** - An evaluation of the risk at source, including assessment of the quality, temperature and integrity of the water supply.
- b) **Amplification** - Determination of the cultivation conditions: assessment of the likelihood that *Legionella* will proliferate, including an assessment of conditions such as the temperature, water change rate, areas of static or slow water movement and how conducive the conditions are to microbial growth.
- c) **Transmission** - An assessment of whether droplets or aerosols are likely to form and spread.
- d) **Exposure** – Determination of the risk that droplets or aerosols will be inhaled (or contaminated water aspirated).
- e) **Host susceptibility** - An evaluation of the nature of the exposed population, taking account of their vulnerability when exposed to *legionellae*.

Risks have been assessed using a five by five scoring system providing a risk score from 1 to 25, which is worked out by multiplying scores for consequence by likelihood (both are on a scale of 1 to 5). The higher the calculated score the higher the perceived risk.

The consequence of a legionellosis event will mostly depend on how the extent of exposure to legionella bacteria that has taken place, the number of people exposed and their vulnerability.

QUALITATIVE MEASURES OF CONSEQUENCE (Impact)

| LEVEL | DESCRIPTOR | DESCRIPTION |
|-------|------------|--|
| 1 | Negligible | No injury caused. |
| 2 | Moderate | Moderate injury: (i.e. semi-permanent injury but will recover) |
| 3 | Major | Major injury: (i.e. life-long disability) |
| 4 | Fatality | A single fatality. |
| 5 | Multiple | Multiple fatalities. |

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The likelihood of a legionellosis case or outbreak occurring depends on the design, condition, operation and performance of water systems. It is also dependent upon the effectiveness of management actions such as communications, training, record keeping

QUANTITATIVE MEASURES OF LIKELIHOOD (Probability)

| LEVEL | DESCRIPTOR | DESCRIPTION |
|-------|------------|---|
| 1 | Rare | Can't believe event will ever happen. |
| 2 | Unlikely | Don't expect event will happen but it's possibility. |
| 3 | Possible | The event may occur occasionally. |
| 4 | Likely | The event probably will occur but not an everyday occurrence. |
| 5 | Certain | The event is expected to occur on many occasions. |

Conditions supporting the growth of legionellae could occur frequently under normal operation or infrequently during exceptional but predictable circumstances. Applying the **CATEH** approach, the RAR / Survey Results References in the **2.0 Recommendations** and **3.1 Survey Results** sections of this report have been developed using the following risk matrix:

| | | Consequences | | | | |
|--|---|--------------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| L i k e l i h o o d | 1 | | | | | |
| | 2 | | | | | |
| | 3 | | | | | |
| | 4 | | | | | |
| | 5 | | | | | |

| |
|---------|
| 1 - 3 |
| 4 - 12 |
| 15 - 25 |
| High |

Risk Assessment Rating (RAR): Recommendations should be carried out in a timely and effective manner. These are suggested as:

| | |
|--------|-----------------|
| Low | Within one Year |
| Medium | Within 6 months |
| High | Within 3 months |

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3.1 Survey Results

| Customer Details | | | | | System Risk Assessment Details | | | | | |
|--|-----------------------------------|-------|-----------------|------------|--------------------------------------|---------|------|--------|--------------------------------------|---|
| Company Name: Tarporley Community Centre | | | | | Reference Number: 1 | | | | | |
| Address: High Street | | | | | Location: Tarporley Community Centre | | | | | |
| Tarporley | | | | | Assessors Name: S. Mount | | | | | |
| CW6 0AY | | | | | Date: 06/08/18 | | | | | |
| Location | Sink | Basin | Other (Specify) | Blended | Hot °C | Cold °C | RAR | | Recommendations Reference / Comments | |
| - | Ground Floor Committee Room & Bar | √ | - | TMV | 42.9 | 52.8 | 19.9 | Low | Low | Infrequently used |
| - | Committee Room & Bar | - | √ | TMV | 42.2 | -* | 19.5 | - | Low | *No access to TMV, Infrequently used |
| - | Gents WC | - | √ LHS | TMV* | 43.0 | 43.0 | 19.9 | Medium | Low | *X1 TMV located in Ladies WC |
| - | Gents WC | - | √ RHS | TMV* | 42.9 | 43.0 | 18.2 | Medium | Low | |
| - | Ladies WC | - | √ LHS | - | - | 60.1 | 19.8 | Low | Low | |
| - | Ladies WC | - | √ RHS | - | - | 56.8 | 19.8 | Low | Low | |
| - | Cleaners Cupboard/Store | - | - | Sluice | - | 52.4 | 20.4 | Low | Low* | |
| - | Disabled WC | - | √ | TMV in tap | 37.5 | 58.5 | 23.6 | Low | Low* | * WH 2 located here |
| - | Kitchen | √ | - | - | - | 50.6 | 20.4 | Low | Low* | |
| - | Arthur Meredith Gents WC | - | √ | TMV* | 41.3 | 52.2 | 20.3 | Low | Low* | *X1 TMV located in Boiler Room RHS, Infrequently used |
| - | Arthur Meredith Kitchen | √ | - | TMV* | 41.6 | 59.8 | 20.0 | Low | Low* | *X1 TMV located in Boiler Room RHS, Infrequently used |
| - | Arthur Meredith Ladies WC | - | √ | TMV* | 41.9 | 59.8 | 20.4 | Low | Low* | *X1 TMV located in Boiler Room RHS, Infrequently used |
| - | Lower Ground Floor Disabled WC | - | √ | TMV | 43.9 | 59.8 | 19.8 | Low | Low | * X1 TMV located in Boiler Room LHS |
| - | Kitchen | √ | - | TMV* | 41.3 | 52.2 | 20.3 | Low | Low* | *X1 TMV located in Boiler Room RHS |
| - | Ladies WC | - | √ | TMV* | 43.9 | 59.8 | 20.0 | Low | Low* | * X1 TMV located in Boiler Room LHS |
| - | Gents WC | - | √ | TMV* | 43.9 | 59.8 | 20.4 | Low | Low* | * X1 TMV located in Boiler Room LHS |

Notes: LHS- Left hand side, RHS- Right hand side, WH- Water heater, TMV-Thermosttic Mixing Valve.

- Any temperature found to be below 50°C within 1 minute of operation is regarded as a failure for the hot water and above 20°C within two minutes of operation for the cold water. *The assessor has delegated a Low risk due to the warm summer temperatures experienced at the time of the survey.

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- 2 The water supply to the Thermostatic Mixing Valve (TMV) temperature should be at least 50°C within a minute of running the water. One way of measuring this is to use a surface temperature probe on the hot water inlet to the valve. Outlet temperature should also be measured and should be 41°C for wash hand basins. TMV's that do not comply with these parameters are indicated accordingly (*).**

4.0 OBSERVATIONS

The survey and investigation was commissioned in order to identify and assess the risk of Legionellosis and other waterborne pathogens from the water sources on the premises. General and specific observations on the systems made during the course of the survey are also recorded and the more general requirements of ACoP L8, HSG274 and BS8580 are also commented on where applicable. Although references are made to compliance with the requirements the survey cannot be considered to have addressed all aspects of the guidance notes.

The specific observations made in this report should be read in conjunction with the practices and procedures detailed in the recommendations section and also with reference to ACoP L8, HSG274 and BS8580 documents.

Compliance with ACoP L8 may be classified into two distinct categories:

Management Procedures - The management procedures which have been implemented to ensure that all control measures, record keeping and monitoring are adequate and effective.

Systems Conditions and Description - The physical conditions and description of the water systems in the building must be considered when assessing the risk from Legionellosis.

This report therefore addresses the above categories. A general overview of existing Management Procedures is included and followed by comprehensive observations of the Systems Conditions and Systems Description as seen during the course of the survey.

4.1 General Management Compliance

The survey was commissioned in order to identify and assess sources of risk from the water storage and distribution systems.

The assessments are detailed in the relevant sections of this report.

The assessments of risk must be used as guidance for the preparation and implementation of an ongoing scheme for control of Legionella bacteria.

The assessments must be reviewed regularly (normally every two years) or whenever there is a reason to believe that the original assessment may no longer be valid due to circumstances such as systems physical changes, failure of control measures etc.

A review of the assessment should be considered where there has been a change to any of the systems originally assessed to pose a risk and to other water systems, which may cause them to pose a higher risk.

A review should also be undertaken if there is change in the use of the premises or activities undertaken which may have a bearing on systems operations and occupant's susceptibility. A review should also be considered when new information becomes available and if monitoring checks indicate that control regimes may no longer be effective.

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Depending on the level of change the review of assessment may be more specific than general and whichever is the case, the findings should be recorded formally and any changes to existing practices and control measures should be undertaken if appropriate.

Responsibility for deciding whether it may be appropriate to review an assessment will normally be the decision of the person appointed managerially responsible for Legionella precautions. If the ongoing auditing and monitoring of the systems conditions and operation of control procedures is undertaken by an independent body, any situation requiring re assessment should be reported to the responsible person by them.

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4.2 Systems Conditions

Hot water system details

| Customer Details | System Risk Assessment Details |
|---|----------------------------------|
| Company Name: Tarporley Community Centre | Reference Number: Water Heater 1 |
| Address: High Street | Location: Lower Ground Floor |
| Tarporley | Assessors Name: S.Mount |
| CW6 0AY | Date: 06/08/18 |
| Heater Reference No. | |
| Heater Reference No. | WH 1 |
| Location: | |
| Location: | Boiler Room |
| Is there safe access to the heater | Yes |
| Is the heater supplied from mains or storage fed | Mains |
| Ref. Name/No. of any cold water storage cistern related to this system | - |
| Type of water heater e.g. calorifier, plate heat exchanger etc. | Calorifier |
| Is heater temperature raised to 60 °C for 1 hour before being used | Yes |
| Is there pumped secondary hot water flow and return system | Pumped return |
| If fitted with duty and standby pumps are they regularly changed | N/A |
| Over what time period do the heater(s) operate | 9-5 hrs |
| What material has been used to construct the heater(s) | Stainless Steel |
| Dimensions of water heater (height x width x depth (m)) | 1.1 h x 0.45 diam |
| Water capacity (litres) | 114 |
| Is the volume of the vessel suitable for use (i.e. is it too large) | Too big |
| Is the primary method of heating | Gas |
| Secondary method of heating | - |
| Is there an inspection hatch provided that would allow manual cleaning | No |
| Can the base of the vessel be flushed and completely drained | Yes-15mm |
| On what date was the heater vessel last inspected for scale/corrosion | - |
| Is the heater vessel insulated | Yes-pre insulated |
| Is the insulation adequate and in a good state of repair | Yes |
| What is the size of the cold feed pipe | 22mm |
| What size is the hot water flow pipe work | 22mm |
| What size is the secondary return pipe work | 22mm |
| Is the hot/cold water pipe work insulated | Incomplete |
| Is the cold water supply to the heater softened | No |
| Is there a shunt pump used for recirculating hot water around the vessel | No |
| Is a destratification shunt pump used for recirculating water around vessel | No |
| Is there any means of disinfection e.g. Chlorination UV (specify) | No |
| What is the set temperature of thermostat °C | - |
| Is there a temperature gauge on the hot flow | No |
| Is there a temperature gauge on the hot secondary return | Yes |
| Actual temperature of cold inlet °C | 19.1 |
| Actual temperature at top of vessel °C (should be at least 60°C) | No access |
| Actual temperature at middle of vessel °C | No access |
| Actual temperature at bottom of vessel °C | No access |
| Actual temperature at outlet of vessel °C | 58.9 |
| Return water temperature °C (should be >50 °C) | 50.4 |
| Are temperatures taken monthly and recorded | - |
| Are records maintained of cleaning and disinfection. | - |
| Is the biological quality of the water monitored | No |

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Hot water system details (continued)

| Customer Details | | System Risk Assessment Details | |
|--|--|----------------------------------|--|
| Company Name: Tarporley Community Centre | | Reference Number: Water heater 2 | |
| Address: High Street | | Location: Ground Floor | |
| Tarporley | | Assessors Name: S.Mount | |
| CW6 0AY | | Date: 06/08/18 | |
| | | | |
| Heater Reference No. | | WH 2 | |
| Location. | | Disabled WC | |
| Type (unvented, multi point, combination cylinder or point of use) | | Combination | |
| Make and model | | Worcester | |
| Heater capacity | | - | |
| Cistern capacity | | - | |
| Method of heating | | Electric | |
| Size of inlet | | 15mm | |
| Size of outlet | | 15mm | |
| Cistern condition and conformity to Regulations | | Good | |
| Actual temperature of heater flow °C | | 58.5 | |
| Is cold water supply treated and type | | Mains - untreated | |
| | | | |

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Cold Water Cistern Details (continued)

| Customer Details | | System Risk Assessment Details | |
|---|---------------------------|-------------------------------------|---------------------------|
| Company Name: Tarporley Community Centre | | Reference Number: CWST 1 and CWST 2 | |
| Address: High Street | | Location: Ground Floor | |
| Tarporley | | Assessors Name: S.Mount | |
| CW6 0AY | | Date: 06/08/18 | |
| Cold Water Cistern Reference Number | | | |
| Cold water cistern reference number | | CWST 1 (Near) | CWST 2 (Far) |
| Location of cistern | | Roof Space Above Gents WC | Roof Space Above Gents WC |
| Is there safe access to cistern | | Limited Access | Limited Access |
| Length of ladder required to access cistern (m) | | 3.0 | 3.0 |
| What services does the cistern supply | | CWDS* | CWDS* |
| Is the cistern fully compliant with the Water Regulations | | No | No |
| Where there are multiple cisterns are they connected | | Yes | Yes |
| Are the cisterns linked in accordance with approved standards | | No | No |
| Reference name and or No. of any associated heater(s) | | - | - |
| Is the water pumped or gravity fed from cistern | | Gravity | Gravity |
| Where there are multiple pumps is the pump duty changed regularly | | N/A | N/A |
| Are the pumps approved for use with mains water | | N/A | N/A |
| What material is used to construct the cistern | | Galvanised Steel | Galvanised Steel |
| What material is used to construct the cistern lid | | No Lid | No Lid |
| What is the condition of lid e.g. gaps/holes/fixed/tight etc | | N/A | N/A |
| Size of inlet into cistern (mm) | | - | - |
| Size of outlet from cistern (mm) | | - | - |
| Are the inlet and outlet on opposite sides | | No | No |
| Size of overflow (mm) | | - | - |
| Size of warning pipe (mm) | | None | None |
| Are the warning pipes and overflows screened (0.65 mm) | | - | - |
| Is the warning/overflow pipe discharge conspicuous | | No | No |
| Size of drain (mm) | | No drain | No drain |
| Location of drain | | N/A | N/A |
| Dimensions of cistern (length x width x height (m)) | | 0.90 x 0.70 x 0.65 | 0.90 x 0.70 x 0.65 |
| Actual volume of cistern (litres) | | 409 | 409 |
| Size of access into cistern | | Open | Open |
| Clearance above cistern (mm) | | - | - |
| Is the cistern insulated | | Yes-Poorly | Yes-Poorly |
| What is the condition of cistern insulation: Good/Average/Poor | | Poor | Poor |
| Is pipe work insulated | | Incomplete | Incomplete |
| Is pipe work insulation in accordance with BS EN 806 | | No | No |
| Does the cistern turnover time require further investigation | | No | No |
| Are there any visible signs of surface contamination of the water | | Yes | Yes |
| Are there any visible signs of slime/algae | | No | No |
| Are there any visible signs of corrosion e.g. low/med/high | | High | High |
| Are there any visible signs of sediment e.g. low/med/high | | Medium | Medium |
| Does the cistern require upgrading to the Water Regulations | | Yes | Yes |
| Does the cistern require cleaning and disinfected | | Yes | Yes |
| How frequently is the cistern inspected | | - | - |
| How frequently is the cistern cleaned and disinfected | | - | - |
| How frequently are microbiological samples taken | | - | - |
| Temperatures (°C) | Mains Cold Water at Inlet | 19.4 | 19.4 |
| | Cistern Water | 22.9 | 21.2 |
| Ambient air temperature adjacent to cistern | | 18.9 | 18.9 |

*CWDS – Cold Water Down Services

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4.3 Systems Description

| |
|--|
| STORAGE CISTERNS |
| There are two Cold Water Storage Cisterns (CWST) located on site. CWST 1 and CWST 2 are linked and supply Cold Water Down Services to WC's located on site. |
| HOT WATER CALORIFIERS/HEATERS |
| WH 1 is located in the Lower Ground Floor Boiler Room and feeds hot water to all hot water outlets located in the Ground Floor Arthur Meredith and Lower Ground Floor Areas. WH 2 is located in the Ground Floor Disabled WC and feeds hot water to all outlets located on the LHS of the Main Hall area. (see 4.3 Hot and Cold Water Service Outlets and 6.0 Schematic Diagrams). |
| COLD WATER DOWN SERVICES |
| Mains cold water (MCW) enters the site in the Ground Floor Ladies WC with a temperature of 19.7°C and feeds cold water to CWST 1, CWST 2, WH 1, WH 2 and all cold water outlets located on site (see 4.3 Hot and Cold Water Service Outlets and 6.0 Schematic Diagrams). |

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4.4 Hot and Cold Water Service Outlets

| Room no or Description | | Usage | Fittings | Supply | Remedial actions (Sentinel Points) |
|------------------------|---|-----------|-----------------------|------------------------|------------------------------------|
| - | Ground Floor Committee Room & Bar | - | 1 SINK 1 WHB | MCW/LPHW MCW/LPHW | WH 2 Far Sentinel |
| - | Gents WC | Toilet | 2 WHB 3 UC 1 WC | MCW/LPHW MCW MCW | - |
| - | Ladies WC | Toilet | 2 WHB 2 WC | MCW/LPHW MCW | - |
| - | Cleaners Cupboard/Store | Utility | 1 SLUICE | MCW/LPHW | - |
| - | Disabled WC | Toilet | 1 WHB 1 WC 1 WH | MCW/LPHW MCW MCW | - |
| - | Kitchen | Food Prep | 1 SINK 1 WB | MCW/LPHW MCW | - |
| - | Arthur Meredith Gents WC | Toilet | 1 WHB 1 WC | MCW/LPHW MCW | - |
| - | Arthur Meredith Kitchen | Food Prep | 1 SINK | MCW/LPHW | - |
| - | Arthur Meredith Ladies WC | Toilet | 1 WHB 1 WC | MCW/LPHW MCW | - |
| - | Lower Ground Floor Disabled WC | Toilet | 1 WHB 1 WC | MCW/LPHW MCW | - |
| - | Kitchen | Food Prep | 1 SINK | MCW/LPHW | WH 1 Near Sentinel |
| - | Ladies WC | Toilet | 1 WHB 1 WC | MCW/LPHW MCW | - |
| - | Gents WC | Toilet | 1 WHB 1 WC | MCW/LPHW MCW | WH 1 Far Sentinel |

Notes: WHB=Wash Hand Basin, WC=Water Closet, UC=Urinal Closet, WH=Hot Water Heater, MCW- Mains cold water, LPHW- Low pressure hot water..

5.0 REPORT PHOTOS

Photo 1 – WH 1 Located in the Lower Ground Floor Boiler Room



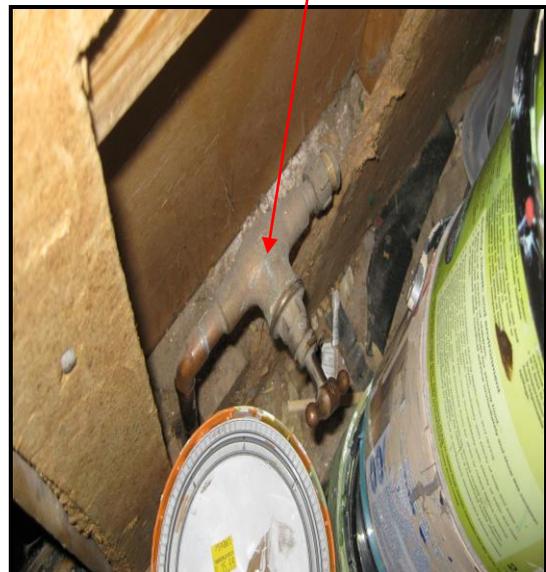
Photo 2 – WH 2 Located in the Ground Floor Disabled WC



Photo 3 – CWST 2 Located in the Roof Space Above the Ground Floor Gents WC



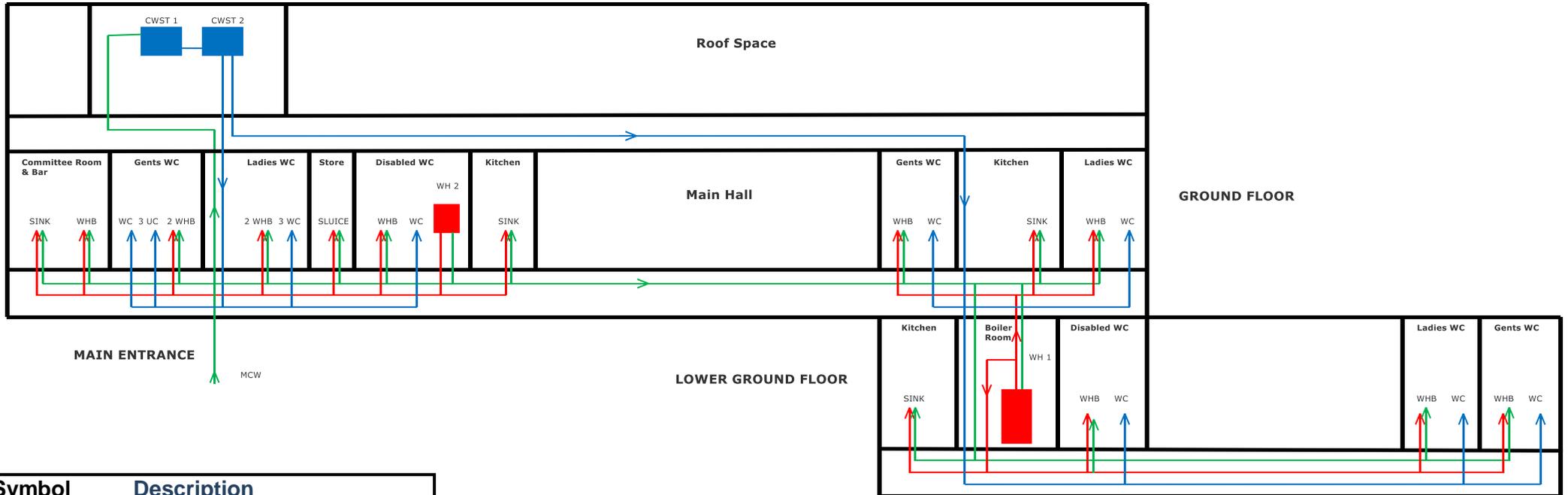
Photo 4 – Dead End Pipe Work Located Above the Ground Floor Main Hall Stage



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6.0 SCHEMATIC DIAGRAMS



| Symbol | Description |
|--------------------------------------|--------------------------|
| WC | = WATER CLOSET |
| WHB | = WASH HAND BASIN |
| UC | = URINAL CLOSET |
| WH | = WATER HEATER |
| — | = HOT WATER |
| — | = MAINS COLD WATER (MCW) |
| — | = COLD WATER DOWN |
| — | = SERVICES(CWDS) |

| | | | |
|---|---|--|--|
| <p style="text-align: center;">Steve Mount Associates Ltd.</p> <p>22 Moel Famau View, Liverpool, L17 7ET</p> | <p>Site address:</p> <p>Tarporley Community Centre High Street, Tarporley, CW6 0AY.</p> | <p>PLEASE SEE SEPARATE KEY TO IDENTIFY SYMBOLS USED</p> | |
| | <p>Drawn by:</p> <p>STEVE MOUNT</p> | <p>Drawing:</p> <p>1 of 1</p> <p>Date:</p> <p>07/08/18</p> | |