

Water Safety – Bronglais General Hospital

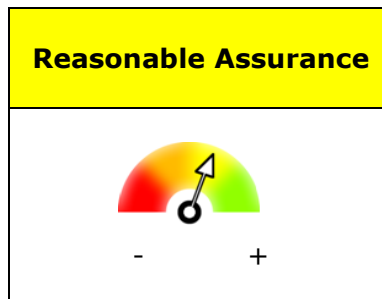
Final Audit Report

2019/20

Hywel Dda University Health Board

NHS Wales Shared Services Partnership

Audit and Assurance Services



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ACKNOWLEDGEMENT

NHS Wales Audit & Assurance Services would like to acknowledge the time and co-operation given by management and staff during the course of this review.

Please note:

This audit report has been prepared for internal use only. Audit & Assurance Services reports are prepared, in accordance with the Service Strategy and Terms of Reference, approved by the Audit Committee.

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1. Introduction and Background

An audit of water safety was undertaken at Glangwili & Prince Phillip Hospitals in April 2019 that provided **limited assurance**.

A follow-up of the agreed audit recommendations was therefore requested, at the May 2019 audit committee, together with a request for additional sampling at another site (Withybush DGH).

The results of these audits were published in October 2019.

While **substantial assurance** was provided in relation to the agreed Glangwili/ Prince Phillip actions, **limited assurance** was determined in relation to the Withybush DGH audit.

Accordingly, the October 2019 audit committee commissioned additional audits:

- Withybush Hospital – follow up; and
- Bronglais hospital (*including assessment of evidence in relation to Bronglais DGH against the Withybush agreed action plan*).

This report is in respect of the latter element i.e. evidence relating to Bronglais DGH and the audit opinion within this report is restricted to testing at this site.

2. Scope and Objectives

The review sought to provide the University Health Board with assurance that issues and risks identified at the Withybush Water Safety audit (issued October 2019) have been considered and addressed, if appropriate, at Bronglais DGH.

An objective of the audit was to evaluate appropriate systems and controls in place within the Health Board, with a view to delivering assurance to the Audit Committee that risks material to the objectives of the areas of coverage are appropriately managed.

Accordingly, the scope and remit of the audit was directed to the following areas:

- **Governance** – Assurance that the Health Board had adequate arrangements in place to support the implementation of the approved code of practice. Also, that an appropriate policy was in place to address water safety issues, there were defined allocation of responsibilities, clear lines of communication and reporting and approval processes.
- **Procedures** - To ensure that management were implementing applicable procedures – both internal and external requirements.

- **Monitoring and Reporting** - To ensure that the estate was appropriately monitored. To ensure that the Health Board had effective monitoring procedures in place e.g. the establishment of appropriate Water Safety Groups (WSGs). Assurance that there was appropriate record retention and dissemination of information through to the Executive team and Board.
- **Management** - Assurance that relevant staff received appropriate training, and appropriate resources were allocated. Assurance that an appropriate inspection / detection regime was operated.
- **Risk Management** - Assurance that the Health Board had performed a suitable and sufficient assessment of risks and that the same were appropriately managed.

The process included obtaining evidence in support of each recommendation of the Withybush 2019 audit, to demonstrate equivalent actions at Bronglais DGH.

3. Associated Risks

There is a potential risk that management did not have processes in place to appropriately implement agreed audit recommendations to mitigate the risk to/ of:

- Patient Safety;
- Prosecution / criminal negligence;
- Adverse publicity;
- Breach of regulations / Approved Code of Practice;
- Fines and defence costs;
- Ineffective / inappropriate governance arrangements;
- Ineffective / ill-informed management; and
- Ineffective risk control.

OPINION AND KEY FINDINGS

4. Overall Assurance Opinion

We are required to provide an opinion as to the adequacy and effectiveness of the system of internal control under review. The opinion is based on the work performed as set out in the scope and objectives within this report. An overall assurance rating is provided describing the effectiveness of the system of internal control in place to manage the identified risks associated with the objectives covered in this review.

Our opinion has therefore been derived from the risks and controls in place during the period of audit.

The Welsh Health Technical Memorandum 04 (WHTM 04) requires legionella testing be undertaken only when there are control issues within the hot or cold water supply (i.e. on a risk based approach).

At the time of audit, temperatures were being regularly tested and controlled within required parameters within Bronglais General Hospital by a Building Management System.

Accordingly, recognising the temperature testing arrangements in place, additional legionella testing was last required in 2018, and found **no legionella** present within samples across eight tested outlets.

A programme to mitigate/ reduce the dead-legs at the site was evident (identified as a priority risk by management) – with 52% of the site identified as clear at the time of review.


There was also evidence of the UHB having applied recommendations at the Bronglais General Hospital site, arising from prior water safety audits of other UHB sites.

However, to fully comply with the requirements of the WHTM, the following is required:

- WHTM 04 requires temperature monitoring at the furthest points from source within the pipework (sentinels), but also requires monitoring of intermediate points (as temperatures can drop within sub-loops etc). A Building Management System (BMS) was successfully utilised at Bronglais to dynamically monitor outflow and return water temperatures – as well as testing of sentinels. To fully comply with the requirements of the WHTM, further monitoring of intermediate points was required. Management had recently obtained quotes for the upgrade of the system (**recommendation 4**).
- Whilst a full set of outline drawings was in place showing pipework configuration, WHTM requires “*as fitted*” drawings. This would include identification of key risk factors within the overall configuration. As fitted drawings were not available at the time of current review (**recommendation 5**).

- Recognising that the UHB had a risk-based approach, both WHTM and HSE require location specific risk assessments. Management advised that the site assessment had been deferred pending completion of MRI installation and refurbishment works to better focus the assessment on areas of remaining risk (risk assessments will require as-fitted drawings – see above (**recommendation 6**)).
- The UHB was in receipt of a number of external reports, each containing risk prioritised recommendations. At the time of review a significant number of these were noted as outstanding – including high priority recommendations. The WSG should receive assurance that these recommendations are being systematically addressed (**Recommendation 7**).

Recognising the risk-based and proactive approach to managing water safety, a **reasonable assurance** is presently provided. However, this is predicated on the timely implementation of the recommendations at this (and other) reports, which are not unimportant and are required for full compliance with WHTM.



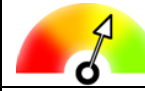
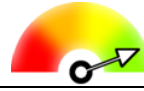
RATING	INDICATOR	DEFINITION
Reasonable Assurance		The Board can take reasonable assurance that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Some matters require management attention in control design or compliance with low to moderate impact on residual risk exposure until resolved.

The overall level of assurance that can be assigned to a review is dependent on the severity of the findings as applied against the specific review objectives and should therefore be considered in that context.

Note – Management agreement has been provided to all of the recommendations arising at this report. The target implementation dates will be reviewed on an ongoing basis recognising current operational pressures.

5. Assurance Summary

The summary of assurance given against the individual objectives is described in the table below:

Assurance Summary					
1	Governance			✓	
2	Procedures			✓	
3	Monitoring & Reporting			✓	
5	Management			✓	
6	Risk management		✓		

* The above ratings are not necessarily given equal weighting when generating the audit opinion.

Design of Systems/Controls

The findings from the review have highlighted one issue that was classified as weaknesses in the system control/design

Operation of System/Controls

The findings from the review have highlighted six issues that were classified as weaknesses in the operation of the designed system/control.

6. Summary of Audit Findings

Governance



- **To affirm that the Health Board had adequate arrangements in place to support the implementation of the approved code of practice.**
- **To affirm that an appropriate policy was in place to address water safety issues.**
- **To ensure that there were defined allocation of responsibilities, clear lines of communication and reporting and approval processes.**

Central governance arrangements in relation to Water Management within the UHB have previously been assessed at prior audits. Accordingly, only Bronglais specific governance is considered here.

The HSE Approved Code of Practice (ACoP) requires the identification of a site specific Responsible Person and Deputy Responsible Person. Both were observed as appointed and had allocated duties/ responsibilities assigned.

An updated Bronglais Water Safety Plan was also in process of ratification (see next section).

A local Water Safety Group met with appropriate frequency, and key attendance in accordance with the requirements of HTM04.

However, issues were noted relating to:

- The need to further enhance reporting (to appropriately inform the Water Safety Group – see **recommendation 3**); and
- The need to update site risk assessments (see **recommendation 6**).

These issues are more fully assessed at the Monitoring and Reporting & Risk Management sections below.

Noting the key controls of a local Water Safety Group, local procedures and appropriate personnel being in place, a **reasonable assurance** is therefore determined in respect of governance.

Procedures



To ensure that management were implementing applicable procedures – both internal and external requirements.

UHB Water Safety Management policies and procedures (e.g. UHB Water Safety Risk policy), have previously been assessed. Accordingly, only local arrangements at the Bronglais site were considered at the current review.

A revised Bronglais Water Safety Plan was submitted to the Water Safety group on the 13th December 2019. This contained:

- roles and responsibilities; and
- inclusions relating to:
 - definition of elevated levels of bacteria;
 - definition of infrequently used outlets;
 - response times for infrastructure works;
 - clarification of durations of flushing; and
 - the UHB's approach to pipework labelling.

A further enhancement has been recommended for the Bronglais Plan relating to the labelling of accessible pipework (to ensure consistency with other UHB sites). The formal approval of the Bronglais Water Safety Plan also remained to be evidenced within the time frame of the audit (**recommendation 1**).

Whilst noting the need for formal ratification, a **reasonable assurance** has been determined in respect of water safety procedures.



Monitoring & Reporting

Assurance that the estate was appropriately monitored. To ensure that the Health Board had effective monitoring procedures in place e.g. the establishment of appropriate Water Safety Groups (WSGs). Assurance that there was appropriate record retention and dissemination of information through to the Executive team and Board.

Monitoring

Generally, appropriate record retention (e.g. inspections) was observed. However, for the newly commissioned Theatres (1 & 2), while drawings, specification and test results were available, local records relating to a design risk assessment were not evidenced. These are required to support local site knowledge (**recommendation 2**).

Additionally, quarterly / six monthly management audits were not evidenced in accordance with the revised procedures (**recommendation 3**). It is acknowledged that this may be a timing issue (noting the recent introduction/agreement of UHB policies).

Reporting

Assurance was provided to the Executive via:

- senior committees;
 - via both the Infection Prevention & Control Committee, and Health & Safety Committee - IPCC;
 - full Water Safety Group papers provided to the IPCC
- an appropriately constituted Water Safety Group (WSG) supported by
 - expert advice, including a micro-biologist, and an authorised engineer (NWSSP: Specialist Estates Services -SES);
 - appropriately trained staff and contractor certifications; and
 - external testing and inspection agencies including Welsh Water.

This review focussed on the effectiveness of information supplied to the Water Safety Group (WSG) in respect of the Bronglais General Hospital site for scrutiny and escalation.

Accordingly, draft reports prepared for the forthcoming WSG, had initiated some enhancements to reflect those being implemented at other sites including:

- summary flushing reports, including nil declarations (i.e. for all areas);
- reporting of infrequently used outlets;
- remedial works; and
- legionella & pseudomonas test results (see finding **3**).

However, while recognising this progress, a recommendation has been made to further enhance the additional reporting, also noting that these remain to be seen in operation (**recommendation 3**).

Noting the implementation of enhanced reporting controls (as at other UHB sites), **reasonable assurance** is currently determined in relation to monitoring and reporting.

Management



Assurance that relevant staff received appropriate training, and appropriate resources were allocated. Assurance that an appropriate inspection / detection regime operated.

WHTM 04-01 requires that legionella testing is undertaken on a risk based approach e.g. where there are control issues within the hot or cold water supply (which may cause proliferation of bacteria).

The key control to the above is regular temperatures tests; which were found to be undertaken regularly at the Bronglais site, allowing timely corrective action to control temperatures within required parameters (a key requirement of Welsh Health Technical Memorandum 04(WHTM04)).

The last temperature reading that required legionella testing was in 2018, and found **no legionella** present within samples across eight tested outlets. Similarly, no cases of legionella related illness have been identified at the sampled site in recent years (as defined by the Health and Safety Executive (HSE, and recorded by Public Health Wales).

WHTM 04 requires temperature monitoring at the furthest points from source within the pipework (sentinels), but also requires monitoring of intermediate points (as temperatures can drop within sub-loops etc.). A Building Management System (BMS) was utilised at Bronglais Hospital to dynamically monitor outflow and return water temperatures – as well as testing of sentinels. To fully comply with the requirements of the WHTM, further monitoring of intermediate points was required. Management were currently considering the same (**recommendation 4**).

The audit also observed a range of other key controls in operation, including:

- staff training e.g. a log of appropriate certifications, and primary records, including the Responsible Person and Deputy Responsible Person;
- active response to issues e.g. where temperature control parameters were exceeded, as part of a risk led approach; via scheduled and reactive works;

- appropriate application of risk mitigations e.g. flushing, temperature testing, shower maintenance, formal flushing duties;
- pseudomonas testing; and
- infrastructure inspections (e.g. heater, cold water tank inspections).

WHTM 04-01 requires 'accurate as-fitted drawings' that:

- "will assist in identifying any potential problems with poor hot water circulation and cold water dead-legs where flow to infrequently used outlets can be low", and
- "identify all key components in the installations, for example water meters, cisterns, filtration equipment (where fitted), calorifiers, and the location of isolating valves in the systems."

Such information is therefore required to inform appropriate and targeted management. While the complete set of outline drawings were observed showing the general pipework configuration, no as fitted drawings were provided during the audit for the site (**recommendation 5**).

As noted above, one of the risk factors identified within "as fitted" drawings would be dead-legs. The UHB have identified this as a key legionella risk. A programme was therefore being implemented to conclude removal of all dead-legs, together with comprehensive labelling of pipework. Management identified that 52% of the estate was already clear of dead legs – largely attributed to the new build and recently refurbished areas (**finding 5**).

We have recommended enhanced reporting in relation to the removal of other risk factors identified by the WHTM (see **recommendation 3**).

Noting key controls in place, including risk based temperature testing, a **reasonable assurance** is currently determined in relation to management.

Risk Management



Assurance that the Health Board had performed a suitable and sufficient assessment of risks. Risks were appropriately managed.

A risk-based approach to the control of legionella and pseudomonas was operated at the Bronglais General Hospital site in accordance with UHB policy (and WHTM requirements).

In particular, the audit observed a system in place to identify adverse temperature reads and to allow timely implementation of remedial actions. As temperatures were consistently within parameters, legionella testing had not been required for two years. Accordingly, risk exposure was reduced by controls in place.

However, both WHTM 04-01 and associated Health and Safety guidance require enhanced drawings and site based risk assessments.

To fully comply with WHTM there was need to:

- refresh the site risk assessment. Management elected to await completion of refurbishment within the MRI area, to better focus the assessment on areas of remaining risk. It should be noted that, to be fully effective, as fitted drawings are required to inform the risk assessment (**recommendation 6**); and
- confirm that outstanding actions relating to external reviews have been completed e.g. Welsh Water infringement notices (**Recommendation 7**).

In conclusion, while recognising these issues, the site benefitted from the following risk reduction/ mitigation arrangements:

- BMS ensuring temperatures managed within control parameters;
- a programme in place to remove dead-legs; and
- significant areas of new infrastructure (including key areas).

As the current arrangements exposes the UHB to potential moderate risk, **limited assurance** has presently been determined in this area.

7. Summary of Recommendations

The audit findings, recommendations are detailed in **Appendix A** together with the management action plan and implementation timetable.

A summary of these recommendations by priority is outlined below:

Priority	H	M	L	Total
Number of recommendations	-	6	1	7

Finding 1: Procedural guidance	Risk
<p><u>Pipework labelling</u></p> <p>The Bronglais Water Safety Plan previously specified “<i>clear labelling of pipework</i>” (reflecting requirements within HTM 04-01 Part C 3.1n, and to facilitate risk appraisal. It was observed that this had variously been interpreted to relate only to new or exposed pipework, or primarily pipes within plant rooms. The revised draft Bronglais Plan similarly states a requirement only for “<i>Clear labelling of pipework in new installations and major refurbishment.</i>”</p> <p>However, prior UHB Water Safety audits noted that labelling of pipework: “<i>should be maintained on an ongoing basis in refurbished / new build areas and in accessible areas such as plant rooms (as separately required by WHTM04)</i>”.</p> <p><u>Ratification</u></p> <p>Noting these matters, there is a need to ensure that appropriate guidance is ratified and published within the revised plan.</p>	<p>Procedures do not provide sufficient guidance.</p>
Recommendation 1	Priority level
<p>The Bronglais Draft Water Safety Plan should be appropriately ratified and published (and stating the need to label accessible pipework) (O)</p>	<p>Low</p>
Management Response 1	Responsible Officer/ Deadline

Agreed.

The Bronglais General Hospital Water Safety Plan (WSP) has been changed to incorporate the need to label accessible pipework.

This revised WSP will be ratified at the next Water Safety Group Meeting.

A complete site review will now commence to establish what areas of the site are accessible, in order to complete the labelling of pipework within 2020/21 financial year.

Head of Operational Facilities
Management
in co-ordination with

Senior Nurse Infection Prevention

July 2020

Finding 2: Commissioning	Risk
<p>The Bronglais Water Safety Plan requires:</p> <ul style="list-style-type: none"> • “Design assessment – <i>All water system designs are subjected to a design risk assessment before construction commences where a schematic drawing of the water system and performance criteria (volume, flow, temperatures and other relevant controls) are reviewed and assessed by appointed Capital and Operational RP (Water) and/or the Authorising Engineer (Water), and a representative of IPC”</i> <ul style="list-style-type: none"> ○ i.e. Risk assessment – completion pro-forma within the Water Safety Plan. • “Commissioning testing – <i>WSP Extract “Performance of the water system in line with design criteria must be proved and witnessed by or on behalf of the RP (Water) and/or Authorising Engineer (Water) during the commissioning process and before the project is handed over. Records of commissioning are issued as part of the Health & Safety Manual or Operation & Maintenance Manual”.</i> <ul style="list-style-type: none"> ○ i.e. evidence of witness & records of commissioning <p>The audit sought to sample local availability of records relating to the above in relation to the recent Theatres 1 & 2 refurbishment at Bronglais.</p> <p>The following were evidenced:</p> <ul style="list-style-type: none"> ○ contractor assessment; ○ agreement of the design; 	<p>Unrecognised risks and issues are introduced by new infrastructure.</p>

<ul style="list-style-type: none"> ○ agreed drawings; and ○ biological test results, including legionella testing and chlorination. <p>However, a design risk assessment was not evidenced. There is the potential therefore for unassessed risks to be inherent within the pipework configuration such as crossing of hot and cold pipework in proximity to each other, or temperatures at maximum usage (or with additional outlets).</p>	
<p>Recommendation 2</p>	<p>Priority level</p>
<p>Local commissioning records should include design risk assessment (including Theatres 1 & 2). (O)</p>	<p>Medium</p>
<p>Management Response 2</p>	<p>Responsible Officer/ Deadline</p>
<p>Agreed. All future works will now incorporate a design risk assessment to identify any inherent risks as part of the scheme. This process will commence immediately.</p>	<p>Head of Operational Facilities Management At future schemes</p>

Finding 3: Reporting	Risk
<p>The Bronglais Water Safety Plan describes the role of the Water Safety Group (WSG) as having:</p> <p><i>“collective and individual responsibilities for the safe provision and use of water”.</i></p> <p>The Bronglais Water Safety Policy states that the Responsible Person for Water Safety (RPW) shall:</p> <p><i>“Submit a status report six monthly to the Water Safety Group, which can be circulated to the Infection Prevention Sub Committee, which shall include:</i></p> <ul style="list-style-type: none"> • <i>compliance audit on ward flushing regimes; and</i> • <i>review of PPM.”</i> <p>A comprehensive (draft) overview report to be presented the Water Safety Group was evidenced (including assurances that certain elements were being enhanced)¹ e.g.</p> <ul style="list-style-type: none"> • a Planned Preventative Maintenance report, to summarise response times (demonstrating compliance with targets - as per Section 6 of the Bronglais Water Safety Plan); • the showerhead replacement programme is reported, but not against target coverage; • quarterly / six monthly management audits in accordance with procedures; 	<p>Responsible parties are not appropriately informed.</p>

<ul style="list-style-type: none"> • Legionella & Pseudomonas test results, including original and re-reads, and, indication of significance i.e. <ul style="list-style-type: none"> ○ High / significant; ○ Medium; ○ Low / negligible / nil; and ○ duration of elevated reads; • more effective reporting of external reviews (finding 7); • summary temperature test findings; and • remedial works¹, including work on: <ul style="list-style-type: none"> ○ purification; ○ lagging; ○ inadequate return flows; ○ TMV's passing; ○ removing flow restrictors; and ○ fitting of filters. <p>¹ While draft commentary was evidenced in relation to these, this awaited submission to the WSG at the time of audit, and supporting summary data / reports were not evidenced within this time frame.</p>	
<p>Recommendation 3</p>	<p>Priority level</p>
<p>In accordance with the Bronglais Water Safety Policy, reporting to the Water Safety Group should include outcomes from periodic management audits, categorised levels of legionella findings, temperature test results, progress against external review recommendations, and delivery against targets. (O)</p>	<p>Medium</p>
<p>Management Response 3</p>	<p>Responsible Officer/ Deadline</p>

Agreed.

The revised key actions report now incorporates all of the additional reporting elements identified above and will be tabled at the next WSG meeting for approval.

Head of Operational Facilities
Management

July 2020

Finding 4: Building Management System	Risk
<p>The BMS at Bronglais currently provides dynamic (and historic) outflow and return temperatures for the prime feed pipes. It can be utilised to identify sudden or significant temperature variations, and enable timely corrective action e.g. if a pump fails. It can also record the maximum and minimum temperatures of storage tanks (a task which otherwise requires discrete testing under HTM 04-01).</p> <p>However, WHTM 04 requires temperature tests at intermediate points in the pipework, as sub-loops can have temperatures at variance to the major loops. The existing BMS should be enhanced to comply with the full requirements of the WHTM.</p> <p>A death at the Bath RUH was linked to issues with a sub-loop, which had not been identified or effectively monitored. The HSE inspector stated:</p> <p><i>“The investigation revealed that the annex to the William Budd Ward is on a separate loop of the hospital’s water system to that which supplies the main ward. This important fact had not been recognised by the Trust from the opening of the annex in 2009 until Mr Brooks’ death in July 2015. This failure meant the required temperature checks and tests for the presence of legionella bacteria in the water had not been carried out in the annex over this period.”</i></p> <p>The BMS was in process of upgrade to a cloud based system for which quotations were being obtained at the time of audit. Noting the potential for enhanced</p>	<p>Compensating controls not effectively / fully utilised.</p>

<p>controls via this mechanism (e.g. to include dynamic email alerts), there is need to fully consider the cost / benefit of enhancement options. Management advised that that costs were awaited to further inform this review.</p> <p><i>We recognise that management are already undertaking this action, and have rated accordingly, and include for completeness.</i></p>	
<p>Recommendation 4</p>	<p>Priority level</p>
<p>Management/ WSG should formally consider the cost / benefit of BMS upgrade options to ensure compliance with the WHTM. (D)</p>	<p>Medium</p>
<p>Management Response 4</p>	<p>Responsible Officer/ Deadline</p>
<p>Agreed.</p> <p>Management have since reviewed the cost benefits of this enhancement, specifically in relation to the reduction of staff time to perform manual temperature testing. It also provides additional levels of assurance that enhanced monitoring is in place at the site.</p> <p>Additional wireless monitoring will now be installed at the site to cover intermediate points of pipework. Specialist companies have already been engaged. Tenders for this will be issued by July 2020, commencement of work in August 2020 with a full completion by September 2020.</p>	<p>Head of Operational Facilities Management</p> <p>September 2020</p>

Finding 5: Schematic drawings	Risk
<p>WHTM 04-01 states the requirement for:</p> <p><i>"accurate as-fitted drawings"...that "will assist in identifying any potential problems with poor hot water circulation and cold water <u>dead-legs</u> where flow to infrequently used outlets can be low" and that "identify all key components in the installations, for example water meters, cisterns, filtration equipment (where fitted), calorifiers, and the location of isolating valves in the systems."</i> (Part B 6.80/ 81)</p> <p>and that:</p> <p><i>"The risk assessor(s) should be given access to competent assistance from the client. This may be in the form of as-fitted drawings and schematic diagrams" to enable "engineering assessment of water systems".</i></p> <p>Whilst, a full set of outline drawings was in place at Bronglais showing pipework configuration, as fitted drawings were not in evidenced.</p> <p>As fitted drawings would include identification of all risk factors within the system such as dead legs (a key cause of build-up of bacteria). They should also identify other issues such as proximity of hot and cold water pipes, length of runs, for potential heat transfer issues, and location of thermostatic mixing valves (TMV's), etc.</p>	<p>Non-compliance with WHTM 04-01.</p> <p>Risk appraisals are not appropriately informed.</p> <p>Corrective actions are not appropriately informed.</p>

<p>While the complete set of outline drawings are a key control, showing the general pipework configuration (and inform a risk assessor), there is a need to further develop them to become “as fitted” drawings including risk factors. This is required to fully comply with the WHTM, direct testing, remedial works, and inform a risk assessor.</p> <p>It is recognised that despite the above, the UHB has initiated a programme to remove dead-legs, with 52% of the site reported as ‘clear’ at the time of the audit.</p>	
<p>Recommendation 5</p>	<p>Priority level</p>
<p>Management should ensure that “as fitted” drawings are sufficiently detailed (inclusive of risk factors) to inform risk assessment and remedial works in accordance with HTM 04. (O)</p>	<p>Medium</p>
<p>Management Response 5</p>	<p>Responsible Officer/ Deadline</p>
<p>Agreed.</p> <p>Management have already engaged with external consultants to address the outstanding as fitted drawings at the site. This will be issued for tender in July with a commencement on site in August and completion by the end of September.</p> <p>This information will be used to support the new 2020 legionella risk assessment in identifying any areas of non-compliance with pipework dead-legs of other inherent risks that can be addressed.</p>	<p>Head of Operational Facilities Management</p> <p>September 2020</p>

Finding 6: Site configuration risk assessment	Risk
<p>HSE guidance (HSG274 part 2) states:</p> <p><i>"The risk assessment should consider and evaluate: a description of the water system, including an up-to-date schematic diagram" and that: "The practical risk assessment should include a site survey of all the water systems."</i></p> <p>The Bronglais Water Safety Policy also requires <i>"regular Risk Assessment Reviews on all water systems"</i>.</p> <p>The UHB adopts a risk-based approach to the control of legionella and pseudomonas, in accordance with WHTM 04-01. In particular:</p> <ul style="list-style-type: none"> • linkage was established between temperatures outside control parameters and Legionella testing; • infrastructure / control issues, have resulted in remedial works and mitigations. <p>However, while there were extensive reports relating to water issues and actions to the WSG, these reports did not link to re-assessment of infrastructure risk.</p> <p>The "Hywel Dda UHB Water Safety Risk Assessment Form" (as refreshed in April 2019) defines a risk policy approach for the UHB. It states that <i>"If any control measures fail. Undertake a further Risk Assessment of the individual circumstances"</i> i.e. at specific locations.</p>	<p>Non-compliance with WHTM 04-01.</p> <p>Risk appraisals are not appropriately informed.</p> <p>Corrective actions are not appropriately informed.</p>

<p>Management advised that a site risk assessment was reported in 2016, this was not evidenced. The outcome of the 2016 report did not appear in the action tracker for recommendations of external reviews (which did include Welsh Water notices, and those of Specialist Estates Services).</p> <p>We understand that the current (2020) updated risk assessment, has been delayed to await completion of MRI installation and refurbishment works (to better focus the assessment on areas of remaining risk – i.e. legacy build).</p> <p>Such risk appraisal will utilise “<i>as fitted</i>” drawings, matched to (in-situ) pipework labelling to inform their assessment. However, as noted at finding 4, there was need to upgrade the outline drawings to “as built” representation to appropriately inform the risk assessor.</p>	
<p>Recommendation 6</p>	<p>Priority level</p>
<p>A site risk assessment should be commissioned and appropriately informed in relation to the “<i>as fitted</i>” infrastructure / configuration in accordance with the WHTM / HSE requirements (i.e. sufficiently detailed to show risk factors within the configuration). (O)</p>	<p>Medium</p>
<p>Management Response 6</p>	<p>Responsible Officer/ Deadline</p>
<p>Agreed. Management have now programmed a commencement date for the 2020 legionella risk assessment at the site with consultants. This will be programmed in two phases.</p>	<p>Head of Operational Facilities Management October 2020</p>

- Phase 1 commencing in July 2020, focusing on areas of the site where there are detailed as fitted drawings to support the risk assessor.
- Phase 2 of the works will commence following receipt of the outstanding drawings in September 2020.
- On receipt of the reports, the findings will be reviewed carefully to prioritise any actions that require addressing. Actions will also be tracked and presented at the WSG for reporting.

Finding 7: External reviews & Infringement notices	Risk
<p><u>Infringement notices</u> Welsh Water advised in November 2019 that 19 infringement notices remained outstanding. In reporting progress against this, the January 2020 WSG reported:</p> <p style="padding-left: 40px;"><i>"Infringement notices near completion awaiting confirmation from Welsh Water to return to site".</i></p> <p>Further detail was not provided within a supporting tracker. The original number was determined by audit to be 59 raised in January 2018.</p> <p><u>Authorised Engineer Report</u> A report by the Authorised Engineer (NWSSP: SES), undertaken in December 2018, raised 30 recommendations. Of these, 5 were designated as outstanding (as of January 2020), including one "High".</p> <p><u>External risk assessment</u> A "Risk Assessment and Water Hygiene Survey Report" was undertaken to assess water safety infrastructure risks in March 2015, by an externally commissioned company. The associated recommendations were not included in the tracker advised to the WSG.</p>	<p>The UHB is exposed to penalties / prosecution / prohibition notices.</p> <p>Adverse publicity.</p> <p>Contaminated supplies.</p>
Recommendation 7	Priority level

<p>Management should routinely report to the Water Safety Group the implementation status of recommendations arising from external reviews, including those of;</p> <ul style="list-style-type: none"> • the Authorised Engineer; • Welsh Water (infringement notices); and • site survey risk assessment. (O) 	<p>Medium</p>
<p>Management Response 7</p>	<p>Responsible Officer/ Deadline</p>
<p>Agreed.</p> <p>Management can confirm that:</p> <ul style="list-style-type: none"> • Infringement notices - There are currently 2 high risk actions outstanding at the site. This work is now being programmed for completion in September, via the 2020/21 capital allocation. • Authorising Engineer Audit Actions – All outstanding actions will be addressed by October 2020. Actions were subject to addressing staff shortages (HTM Gap Analysis), which has now been concluded. • All of the actions contained in the (new) 2020 external water risk assessment will be tracked accordingly and communicated to the WSG by the designated RP. 	<p style="text-align: center;">Head of Operational Facilities Management</p> <p style="text-align: center;">October 2020</p>

Audit Assurance Ratings



Substantial assurance - The Board can take **substantial assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Few matters require attention and are compliance or advisory in nature with **low impact on residual risk** exposure.



Reasonable assurance - The Board can take **reasonable assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Some matters require management attention in control design or compliance with **low to moderate impact on residual risk** exposure until resolved.



Limited assurance - The Board can take **limited assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. More significant matters require management attention with **moderate impact on residual risk** exposure until resolved.



No Assurance - The Board has **no assurance** that arrangements to secure governance, risk management and internal control, within those areas under review, are suitably designed and applied effectively. Action is required to address the whole control framework in this area with **high impact on residual risk** exposure until resolved.

Prioritisation of Recommendations

In order to assist management in using our reports, we categorise our recommendations according to their level of priority as follows.

Priority Level	Explanation	Management action
High	Poor key control design OR widespread non-compliance with key controls. PLUS Significant risk to achievement of a system objective OR evidence present of material loss, error or misstatement.	Immediate*
Medium	Minor weakness in control design OR limited non-compliance with established controls. PLUS Some risk to achievement of a system objective.	Within One Month*
Low	Potential to enhance system design to improve efficiency or effectiveness of controls. These are generally issues of good practice for management consideration.	Within Three Months*

* Unless a more appropriate timescale is identified/agreed at the assignment.