

Committee: **Special Executive**

Date of Meeting: **8<sup>th</sup> July, 2020**

Report Subject: **Water Supply Quality in Schools**

Portfolio Holder: **Executive Member for Environment and Executive Member for Education**

Report Submitted by: **Corporate Director of Environment and Regeneration and Interim Corporate Director of Education**

Reporting Pathway								
Directorate Management Team	Corporate Leadership Team	Portfolio Holder / Chair	Audit Committee	Democratic Services Committee	Scrutiny Committee	Executive Committee	Council	Other (please state)
	7/7/2020					8/7/2020		

**1. Purpose of the Report**

- 1.1 The purpose of the report is to update the Executive on the current position of the water supply quality issues in schools following the announcement by the Welsh Government (WG) that schools would reopen on 29<sup>th</sup> June 2020.

**2. Scope and Background**

**2.1 Background**

- 2.1.1 Importantly, the safety of our children and staff is the priority and is of paramount importance in dealing with the school water supply issues across the school estate. It should be recognised that the majority of the school water quality test results have indicated low levels of localised contamination, which have been managed effectively to facilitate the large proportion of schools to reopen as planned.
- 2.1.2 In accordance with national guidance in respect of COVID-19 schools were closed from Monday 23<sup>rd</sup> March. Some schools within the Council remained open as childcare hubs for key workers and vulnerable learners. Following the WG announcement on the 3<sup>rd</sup> June 2020 that schools were to reopen on 29<sup>th</sup> June 2020, the risks to our water supplies from the unprecedented period of shutdown, coupled with low water usage within the school estate was identified and a water hygiene testing regime was immediately introduced, following the Ministers announcement on 3<sup>rd</sup> June, to check the water quality within the schools' supplies, prior to allowing the schools to reopen.
- 2.1.3 Normally schools are only closed for a period of five to six weeks through the summer holiday period, and therefore, a routine flushing of the system

on a weekly basis is carried out to maintain the safe quality of the water. The period of shutdown has been fourteen weeks since the schools reopened on Monday 29<sup>th</sup> June. This is an unprecedented period for schools to be either closed or not in normal use, and effect on water systems in the schools over that period is unknown and can only be assessed through a robust water testing programme prior to schools returning to their normal function.

- 2.1.4 Bearing in mind that WG announced on 3rd June that Councils had effectively three weeks to prepare for schools to reopen, should any schools water systems present significant levels of Total Viable Count (TVC) and/or Legionella contamination, it should be recognised that the timescale to safely reopen has been extremely challenging.
- 2.1.5 TVC analysis looks at the overall number of micro-organisms including mould, yeast and bacteria present in the water that is able to grow. Potable water whilst not sterile should not contain harmful bacteria. As well as picking up legionella, water sampling will also detect faecal indicator bacteria such as coliforms and e-coli, which would render water as unsafe to drink.

## 2.2 Sampling and Testing

- 2.2.1 The Council has taken a very pro-active and responsible approach to school reopening from a Health and Safety perspective, including water testing. Further to the Welsh Government Minister for Education's announcement on the Wednesday 3<sup>rd</sup> June that schools were to reopen on Monday 29<sup>th</sup> June, the Council's resources were mobilised immediately. A plan was established and contractors commenced sampling/testing on Tuesday 9<sup>th</sup> June. A programme of sampling/ testing was agreed with the Council's water hygiene contractor to visit all the school sites as soon as possible. The final school samples were collected on Thursday 18<sup>th</sup> June.
- 2.2.2 The testing process involves a five days' test for TVC bacteria e.g. e-coli and other coliforms bacteria, and a twelve days' test running in parallel for Legionella bacteria. If the test results record bacteria above safe limits, then remedial action must follow, either flushing, disinfecting, pasteurising or chlorinating outlets or the complete water system. The system then has to be retested, which can take a further five days for TVC bacteria and twelve days for Legionella bacteria. Therefore, it can be clearly seen that when bacteria contamination is above safe limits it could potentially take up to a period of twenty-six days to conclude the sampling/testing process in a school, in order to allow a contaminated school to safely re-open. During that period a school would also have to remain closed for potentially twelve days until the all clear test result had been received.
- 2.2.3 The period of three weeks to prepare for schools to reopen after a prolonged period of shutdown is clearly very challenging in managing the full water sampling and testing regime to be satisfactory concluded, in order to

facilitate the schools to open safely and minimise the risks to the staff and children.

## 2.4 Position Statement - Sunday 5<sup>th</sup> July 2020

2.4.1 Of the twenty nine school sites sampled/tested, the large majority of sites identified varying elevated levels of TVC bacteria contamination, ranging from localised contamination to full system contamination. Localised contamination e.g. a tap outlet can be dealt with by flushing, disinfecting and pasteurising, and a full system contamination requires chlorination. The following six schools had been identified with full system TVC contamination.

- Six Bells Primary Campus; Chlorinated Monday 22<sup>nd</sup> June
- St Illtyd's Primary; Chlorinated Friday 26<sup>th</sup> June
- Bryn Bach Primary; Chlorinated Tuesday 23<sup>rd</sup> June
- St Mary's Church in Wales Primary; Chlorinated Friday 26<sup>th</sup> June
- Rhos-y-Fedwen Primary; Chlorinated Friday 26<sup>th</sup> June and,
- Ebbw Fawr Secondary. Chlorinated Thursday 25<sup>th</sup> June

2.4.2 All these schools required chlorination of their water systems and the schools water would, therefore, be unavailable for drinking and hand washing post chlorination, until the all clear retest results were available. In order to mitigate the situation, twenty six portable hand washing units were purchased and bottled water was made available for drinking purposes. This pro-active action has allowed the schools to reopen as planned on Monday 29<sup>th</sup> June.

2.4.3 On Thursday 25<sup>th</sup> June notification was provided that the test results for the following schools were positive for Legionella contamination.

- Blaen-y-Cwm Primary; Chlorinated Friday 26<sup>th</sup> June
- Ystruth Primary: Chlorinated Monday 29<sup>th</sup> June and
- Brynmawr Foundation. Chlorinated Friday 3<sup>rd</sup> July

2.4.4 The decision to close these schools was discussed and agreed with the headteachers on Friday 26<sup>th</sup> June. These schools required a full system chlorination, and following a retest would not be able to open for a further twelve days until an all clear legionella test result had been received.

2.4.5 In recent discussions with the headteacher of Brynmawr Foundation School, mitigation measures have been agreed to relocate portable hand washing units, provide bottled drinking water and provide temporary toilet facilities at the school, which will allow the school to reopen during week commencing Monday 6<sup>th</sup> July.

2.4.6 On Friday 26<sup>th</sup> June, the Tredegar Comprehensive school received an elevated TVC bacteria level above safe limits, and required full system chlorination. Discussions took place with the headteacher and it was agreed

that the school would not open on 29<sup>th</sup> June as planned. The chlorination of the full water system took place on Monday 29<sup>th</sup> June.

- 2.4.7 Importantly, the mitigation measures including, relocating portable hand washing units and bottled drinking water allowed the school to be reopened on Tuesday 30<sup>th</sup> June.
- 2.4.8 Moreover, the test result was outstanding for Willowtown school and it was agreed with the headteacher on Friday 26<sup>th</sup> June that in order to safeguard staff and children the school would not open on Monday 29<sup>th</sup> June as planned.
- 2.4.9 We have now received confirmation of full system TVC contamination for Willowtown Primary School. This coupled with the fact that the legionella test results were anticipated towards the end of last week, has resulted in the requirement for the school to remain partly closed. The Legionella test result was received on Wednesday, 1<sup>st</sup> July confirming contamination of the system. However, in agreement with the headteacher the Council have been able to relocate the key worker childcare provision to Ebbw Vale Sports Centre from Tuesday 30<sup>th</sup> June, which has been agreed to be a suitable and safe facility by Health & Safety. Furthermore, it has been agreed that the school will continue to function using the Ebbw Fawr Primary school for two days a week, from week commencing Monday 6<sup>th</sup> July. Necessary provisions have been made to assist the relocation, such as cleaning and transportation. The chlorination of the full system took place on Tuesday 30<sup>th</sup> June.
- 2.4.10 The re-test TVC results for both Six Bells Primary Campus and Bryn Bach Primary School were received on Monday 29<sup>th</sup> June, resulting in the water supply in both schools being reinstated for use. As such, the mitigation methods i.e. six handwashing units were relocated to Tredegar Comprehensive School to enable them to reopen from Tuesday 30<sup>th</sup> June.
- 2.4.11 On Monday 29<sup>th</sup> June notification was provided that the initial test results for River Centre (Pontygof) were positive for legionella.
- 2.4.12 It was agreed with the headteacher that the school provision would be relocated to the River Centre's Thomas Richards Centre. The full system chlorination was undertaken on Wednesday 1<sup>st</sup> July.
- 2.4.13 On Saturday 4<sup>th</sup> July notification was provided that the initial test results for the following two schools were positive for legionella
- Tredegar Comprehensive
  - Sofrydd Primary
- 2.4.14 Discussions have taken place between Education, Property, Health and Safety and Environmental Health officers and jointly agreed with the headteacher that Tredegar Comprehensive school can remain open as the health and safety mitigation measures are already in place, and the

remedial system chlorination had already been carried out on Monday 29<sup>th</sup> June.

- 2.4.15 For Sofrydd Primary school, the level of Legionella contamination is very low, localised to one shower head and one blended outlet. These outlets will be isolated, and the system chlorinated at the earliest opportunity. The water is safe to use, however, as an added reassurance precaution we will relocate a hand wash unit to the school, and provide bottled drinking water.
- 2.4.16 One additional hand washing unit has been transferred from Bryn Bach Primary to Rhos-y-Fedwen Primary to supplement the three units the school already had in place. The school reopened on Monday 29<sup>th</sup> June as planned.
- 2.4.17 One hand washing unit has also been provided to Glyncoed Primary school to mitigate the effect of localised contamination in the toilet area.
- 2.4.18 The provision of the portable hand washing units has been a key factor in allowing schools to reopen as they can be reallocated to the other schools as they become available.
- 2.4.19 Importantly, WG has been informed of the current situation across the school estate within Blaenau Gwent. As a consequence, Welsh Government has requested confirmation of satisfactory health and safety checks including water supply testing, from Corporate Directors of Education throughout Wales.
- 2.4.20 The other school test results show localised contamination and these have been dealt with, allowing the schools to open as originally planned. Health and Safety officers and Environmental Health officers are satisfied with the temporary arrangements currently being implemented within the affected schools.
- 2.4.21 The initial legionella test results have now been received for all school sites. Of the twenty nine school sites, seven sites have tested positive for legionella.

### **3. Options for Recommendation**

#### **3.1 Options**

- 3.1.1 There are two options available to dealing with the water contamination situation faced within our schools.
- 3.1.2 Option 1 – Close all the affected schools.
- 3.1.3 Option 2 – Manage the contamination risks, implement mitigating measures, control the risks within health and safety regulations and guidelines.

- 3.1.4 Option 1 is not a viable option due to the impact on the education of the children, and the necessity to ensure that contact was made to as many children as possible prior to the summer holiday period.
- 3.1.5 Option 2 was the agreed option to follow, and the pro-active risk management plan was put in place to maintain as many schools open as possible. The plan was flexible, in that it allowed individual schools test results to be analysed from a risk basis, and mitigating measures introduced to allow the schools to open. As a consequence, only three schools have remained closed, which is a significant achievement.
- 3.1.6 The course of action followed in Option 2, to manage and control the bacteria contamination in our water systems is the only mitigation option which will allow all of the affected schools to reopen before the summer recess holiday. This outcome will be delivered across the school estate
- 3.1.7 Clearly, the Council has generated positive outcomes in delivering the level of school provision in such unprecedented circumstances. However, there are lessons to be learned at a corporate and school level, therefore, a lessons learnt review will be conducted and the outcome will be reported to the Executive and the appropriate Scrutiny Committees in due course.

#### 4. **Evidence of how does this topic supports the achievement of the Corporate Plan / Statutory Responsibilities / Blaenau Gwent Well-being Plan**

##### 4.1 Evidence

- 4.1.1 The actions to keep our schools open aligns with the Corporate Plan to maintain education objectives, and meet the authority's statutory responsibilities and wellbeing goals.

#### 5. **Implications**

##### 5.1 Impact on Budget (short and long term impact)

- 5.1.1 The impact on the budget is that additional costs will be incurred in respect of the temporary measures necessary to manage and control the risk, and allow our schools to reopen, in accordance with WG guidelines. The costs associated with the mitigation and management of the water testing programme are estimated to be within the region of £40,000. We will seek to reclaim these costs as additionality from WG or will be identified as a Covid cost pressure.

#### 6.0 **Risk including Mitigating Actions**

##### 6.1 Causes of Elevated Bacteria Contamination Levels

- 6.1.1 The recognised method of controlling risks and levels of bacteria in the water systems is by flushing the systems. The Council established an

Essential and Statutory Maintenance guidance and regime for the schools and all schools confirmed that arrangements would be put in place to deal with the shutdown period. Water turnover via flushing is undertaken by the schools' caretakers on a weekly basis, by working through the building and opening taps, shower heads, toilets, etc., to flush out the bacteria in the pipes. An enhanced flushing routine has been carried out through the school shutdown period. The probability is that the schools have now been shut down or in such low usage for an unprecedented fourteen weeks period, and that even the enhanced flushing routine carried out in some schools has not been sufficient to maintain the bacteria levels in the water supplies within safe limits. The level of bacteria in a water system, is significantly affected by the time period that it remained unused within the system, and although during the normal school summer holiday period of five weeks, no problems have generally been encountered, the unprecedented period of the current COVID shutdown of fourteen weeks has allowed the bacteria in the system to propagate and proliferate to unsafe levels. It needs to be recognised that the water samples from all sites have indicated that the water system contains no faecal contamination by coliforms or e-coli which would render the water system unsafe for use.

## 6.2 Management and Control of Bacteria Risks

6.2.1 Throughout the COVID-19 shutdown period, the Approved Code of Practice (ACOP) L8 and Health & Safety Executive (HSE) specific advice has been provided and followed with regard to hot and cold water systems, whereby it is advised that weekly flushing of the system is undertaken. This advice has been followed. It should also be recognised that contractors have been working within the restrictions of COVID-19 guidelines during this period, resulting in increased demand, timelines and decreased availability of resources. The decisions taken in managing the bacteria contamination risk to health can only be based on the test results as they are received.

- Where the test results have confirmed localised elevated TVC bacterial contamination the affected outlets have been flushed, disinfected, and pasteurised, and then retested. These outlets have been isolated from use until the retest results are known. The remaining water supply outlets can be used for hand-washing and drinking purposes.
- Where the test results have shown complete system TVC bacteria contamination, the schools have been prevented from using water supplies for hand washing and drinking purposes, and the system chlorinated and retested. The school water supply cannot be used until the retest results are known. All the children using those schools were relocated to other local schools/school hubs in the area.
- Where the test results have confirmed high legionella contamination the schools have been closed, or relocated to other school facilities and the systems chlorinated. The school water supply cannot be

used until the retest shows the water is clear of the legionella bacteria.

- 6.2.2 All schools with test results in health risk category (i) have undertaken remedial works, flushing, disinfecting and pasteurising in localised outlets, and retested. When the test results are known to be clear of TVC bacteria, then the outlets can be used by the school.
- 6.2.3 All schools with test results in health risk category (ii) have been chlorinated, and retested. Portable hand washing units have been installed and bottled water have been available, until the test results are known to be clear of TVC bacteria, following which the school water supply can be used.
- 6.2.4 All schools with test results in health risk category (iii) have been closed, risk managed or relocated to other suitable school facilities, the system chlorinated and retested. These schools water supplies will not be used until the test results are known to be clear of the Legionella bacteria.
- 6.2.5 The four schools identified below with elevated positive Legionella results had localised contamination on TVC results and initially identified in health risk category (i), and therefore, remained occupied until the Legionella test results became known and they were then elevated into health risk category (iii) and the water systems were then immediately shut down to all staff and children. The systems have been subsequently chlorinated.
- Blaen-y-Cwm Primary
  - Ystruth Primary
  - Brynmawr Foundation
  - River Centre (Pont-y-Gof)
- 6.2.6 The two other school identified below with positive Legionella test results have not been closed due to chlorination already having been carried out, or low levels of contamination in localised outlets that can be appropriately managed.
- Tredegar Comprehensive
  - Sofrydd Primary
- 6.2.7 The reasons why these two schools were able to remain open, is due to the chlorination at Tredegar Comprehensive school undertaken due to the high TVC results, and the mitigation measures already in place, when the Legionella positive results were received on Saturday 4<sup>th</sup> July. In the case of Sofrydd, there was very low Legionella contamination, which could be isolated, and the remaining water system was clear of contamination. There is clear differentiation between the schools that are remaining open and those that remain closed, due to the higher level of contamination identified in the latter.
- 6.2.8 Willowtown Primary school has tested positive for Legionella contamination, and the school has effectively been relocated to alternative school facilities.



- 6.2.9 As the test results evidence has become available, the health risks to the children and staff have been evaluated and decisions as to whether a school can remain open, or must close, is made on an individual school by school basis.
- 6.2.10 The health risk for users attending the school repurposing hub sites affected throughout the course of the last few months, are minimal. Staff have been briefed accordingly by Council officers as to the symptoms and procedure to follow should any issues arise. The extract below explains the level of risk involved with the disease and the demographics in our schools reduces an already low risk to even lower. Also, the fact that our vulnerable staff and children are shielding as a result of COVID-19, and will not be attending the schools, lowers the risk even further.
- 6.2.11 *Legionella Facts and FAQ 6 – The illness occurs more frequently in men than women at a ratio of around 3:1. It is thought that this may be a result of typical occupations, lifestyles and possibly lungs size. However, it usually affects middle-aged or elderly people and individuals with suppressed immune systems. Legionnaires' disease is very uncommon under the age of 20 and whilst children can catch the disease it is very rare.*

### 6.3 Mitigation Plans to Facilitate School Re-opening

- 6.3.1 Meetings have been attended by H&S officers, EH officers, Technical officers, Education officers, and the headteachers from the aforementioned affected schools, to discuss the matter and to explain the reasons why it has been necessary to advise their schools should close, relocate or provide temporary hand washing facilities at some of their schools. This is in order to meet the COVID-19 guidance requirements regarding handwashing and comply with the risk assessments prepared by the schools and Council officers for managing the risks to allow the schools to re-open.
- 6.3.2 Discussions had also taken place between Education, H&S and Technical officers to develop alternative temporary arrangements to allow the majority of the schools to be open on Monday 29<sup>th</sup> June, as planned. These temporary arrangements involve the purchase of portable handwashing units, to be sited in agreed locations within the schools. The alternative would be to close the affected schools, until the water systems had been chlorinated and retested.
- 6.3.3 H&S officers are satisfied with the temporary alternative arrangements, and the EH officer has also confirmed that he also has no concerns with the temporary arrangements.
- 6.3.4 The school Risk Assessments (RAs) have been amended to include the temporary arrangements; however, these were relatively minor changes, as the RAs were already based on regular hand washing routines.

## 6.4 Legal

- 6.4.1 The legal health and safety responsibilities arising from our obligations to meet the statutory requirements associated with water hygiene are far reaching. The testing and mitigation measures that are in place are in compliance with the Health and Safety Executive Approved Code of Practice (L8) and HSE Guide 274.

## 6.5 Human Resources

- 6.5.1 The Council's corporate response team have worked extensively to deliver a positive outcome in challenging circumstances. Corporate and Education's school based staff have been engaged regarding the water quality and have been informed of the necessary changes to the RAs to mitigate the low risks and to ensure that the both the health and safety requirements in the use of uncontaminated water and the COVID guidelines are met for the period that schools are open prior to the summer holiday. For example, cleaners require clean safe water to undertake their cleaning duties and their hands need to be constantly washed to meet the COVID guidelines.

## 7.0 **Supporting Evidence**

### 7.1 Test results

- 7.1.1 A pro-active and robust sampling and testing regime has been undertaken on all our school buildings over the past month. Varied levels of TVC and Legionella contamination have been found in our water systems. The contamination present has been managed and controlled in accordance with the regulations to ensure that the health and safety risks to staff and children using the buildings is maintained within safe limits.

### 7.2 Expected outcome for the public

- 7.2.1 Managing public messages and concerns children are safe when attending school has been a priority. Corporate Communications have worked with the response team to deliver key messages through the schools and via corporate mechanisms e.g. web-site etc.
- 7.2.2 Reassurance have been provided directly to staff in the affected schools via headteachers and managers that the risk from the water bacteria contamination is low. Although there have been no reported cases of any symptoms, as a precaution staff have been informed of the symptoms and to either visit their doctor, or the can discuss with the Environmental Health officer.

### 7.3 Communication (consultation, engagement, participation)

- 7.3.1 The Council's officers have maintained close communication links with headteachers in the affected schools, in order to ensure that they are briefed

of the risks involved, and can agree the way forward to mitigate the impact of the risks on the schools re-opening. Essential and Statutory Maintenance Guidance regarding flushing requirements was circulated in early May to all schools and also discussed at the Repurposing Planning Group meetings throughout April and May. Confirmation was sought from headteachers regarding compliance with these arrangements, including flushing regimes, for which all schools confirmed compliancy.

7.3.2 As soon as the test results for individual schools have become available the headteachers have been informed, and the actions described in previous sections put into operation. There have also been twice weekly meetings were held with the School Repurposing Planning Groups to discuss the health and safety requirements for their schools. Schools have been fully engaged with regards to the implications and planning for their respective settings throughout this process, and have agreed all temporary arrangements necessary to reopen their school. Meetings have also taken place with between officers and headteachers of the affected schools. There has also been a dedicated Education JCC meeting convened with all Trade Unions on the reopening plans associated with the water testing process.

7.3.3 Regular communications messages have been sent out via various media channels to the affected schools, to inform parents of the position regarding their schools and the alternative provisions that are in place.

#### 7.4 Preventative focus

7.4.1 Water quality assurance systems and procedures will need to be reviewed as a result of the extent of contamination that has propagated and proliferated through our building water systems over the period of the fourteen weeks shutdown.

7.4.2 However, it also needs to be recognised that this period has been unprecedented and a pragmatic response is required.

7.4.3 The important fact is that no known cases or any person has been directly affected by the level of contamination in our water systems. Although some schools have been used for the period of shutdown as childcare hubs, it is reassuring that the level of risk to staff and children in the affected schools was extremely low.

7.4.4 Officers are making substantial efforts to open and keep open our schools, complying with the COVID-19 guidelines, whilst managing the low risks and water test results in a sensible and pragmatic way, using the extensive knowledge and experience of Technical officers, H&S officers, Environmental Health officers, and Education officers, in the field of water quality hygiene, particularly Legionella management.

7.5 Integration (across service areas)

- 7.5.1 The team involved with the management of this water contamination situation includes officers from Education, Property Services, Health and Safety and Environmental Health Departments in the Council and this is an outstanding example of cross departmental working, utilising the skills, knowledge and experience of the officers to ensure that the level of risk was effectively managed and that the large majority of schools were allowed to open.

7.6 Monitoring Arrangements

- 7.6.1 Statutory procedures are already in place to monitor and control the quality of our water systems, however, they will be reviewed on the basis of risk and the effects that long periods of shutdown of buildings can have on the quality of the water.
- 7.6.2 However, it does need to be recognised that the normal longest period of our schools is for five/six weeks in the summer, and no issues of contamination have been experienced over the very many years that schools are closed during the summer.