

4 November 2016

Our ref – DVW/IP/Ofwat PR14

Final Reconciliation of 2010-15 period

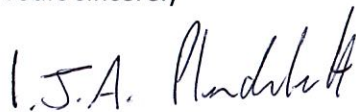
Dear Peter,

Thank you very much for your email of 4 October 2016 on the above subject and for giving Dee Valley Water the opportunity to respond.

Our responses to Section 3.4 – Serviceability Performance are contained in appendix 1 to this letter. We do not have any other comments on the rest of the company specific appendix for Dee Valley Water.

We very much hope you will review the positions contained in our responses and I look forward to a positive dialogue with you to discuss these topics in the weeks ahead.

Yours sincerely



Ian Plenderleith

Chief Executive

Appendix 1

Ofwat Blind Year Reconciliation

Discoloured water contacts

Ofwat comments

The company experienced discolouration contacts above the upper control limit for the whole of the 2010-15 period.

The cause of this discolouration was linked to raw water deterioration at the input to the treatment works (in the village of Legacy) resulted in increased manganese levels being output from the treatment works. The company entered into an undertaking with the Drinking Water Inspectorate (DWI) to respond to this issue within the 2010-15 period. The company undertook trunk main and distribution main cleaning in accordance with the DWI undertaking and completed this by December 2013. We recognised this activity through the change protocol and logged up this expenditure.

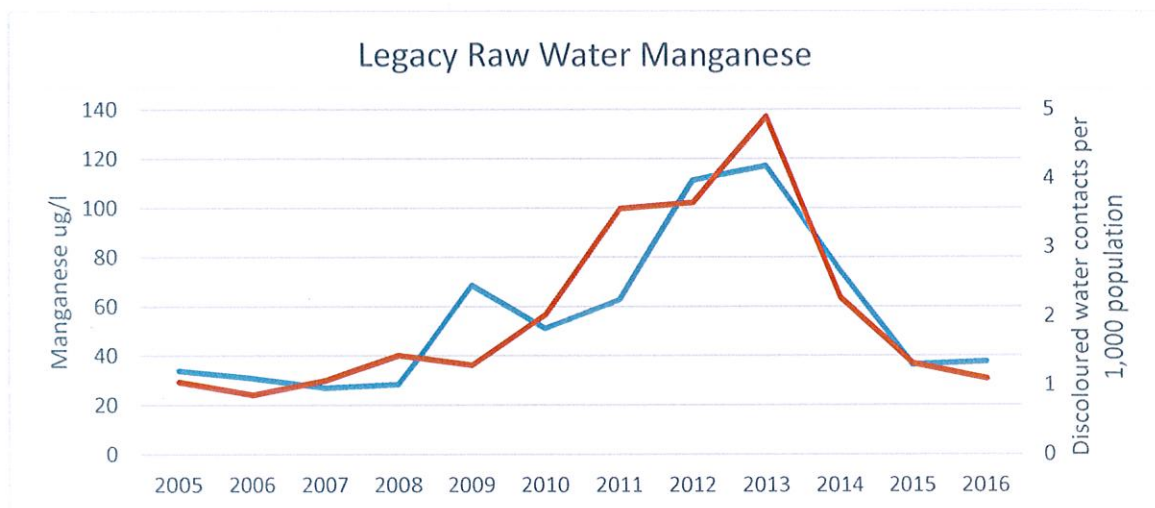
At the draft determination, we did not apply a serviceability shortfall for this indicator, as there was insufficient time series performance data available to determine whether the activity undertaken by the company was sufficient to return performance below the upper control limit. There was evidence that improvements had occurred but it was unclear whether these improvements would be sufficient to achieve a stable position. Our decision at draft determination was caveated upon the performance of discolouration being improved to stable within the 2014-15 period.

Based upon the latest information provided by the company at the time of final determinations 2014 (up to the end of September 2014), while there was an improvement in discolouration performance from January 2014 onwards, performance in 2014 was forecast to out-turn above the upper control limit. Therefore, we did not consider that these improvements have been sufficient to achieve stable serviceability. A late representation noted that its performance over the year April 2014 to March 2015 would be better than the calendar year 2014 that we use for the indicator in 2014-15. In response to this, we noted that the definition of the indicator clearly refers to calendar years. The company was above the upper control limit for every calendar year in the price review process. We did not consider that the indicator could be judged stable on the latest information we had in any year in the 2010 to 2015 period. We therefore considered a serviceability shortfall was appropriate. For the final determination, we therefore applied a shortfall adjustment for this indicator.

Although the company has improved its performance for 2014-15 it is above the upper control limit. Overall performance is above the upper control limit for the whole of the 2010-15 period. We have therefore retained our assessment that the indicator cannot be judged stable in any year in the 2010 to 2015 period. We therefore consider a serviceability shortfall is appropriate. The shortfall of £0.642m is slightly less than that applied at PR14 final determinations because of the improvement in actual performance for 2014-15 compared to forecast.

DVW response

Our serviceability levels for the AMP5 period were set based on performance levels achieved prior to the determination in 2009. This period was before the raw water deterioration issue at Legacy treatment works which was a major contributor to our higher levels of contacts and the reason that we exceeded the serviceability level.

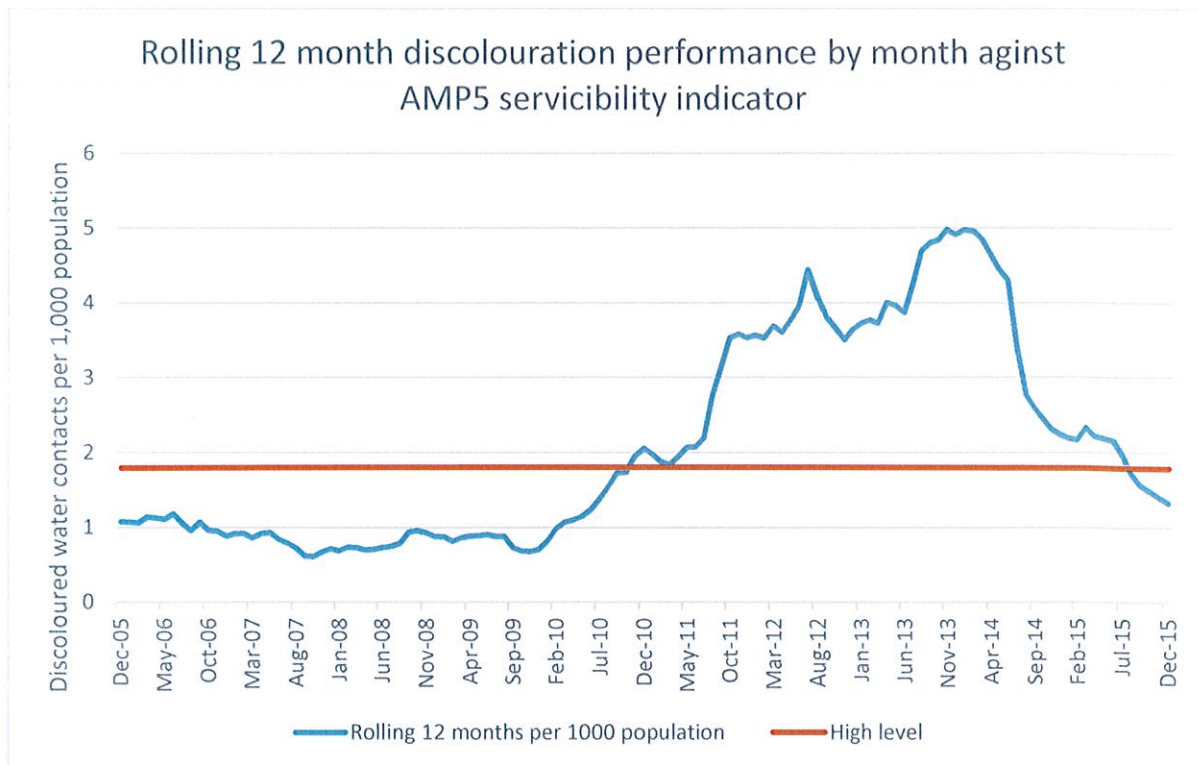


Following the increase in discoloured water contacts and particularly the 2 May 2010 burst on the Wrexham ring main, we entered into a series of legal programmes with the Drinking Water Inspectorate dated 29 October 2011 and 2 February 2012 respectively. These programmes were due to provide a long term permanent solution to the unacceptable risk to our customers from failures of the manganese standard which were manifested as discoloured water contacts. Legal instruments were required to be issued by DWI due to the instability in performance caused by the raw water deterioration resulting in greater risk. We agreed a Section 19 Undertaking for cleaning of the Wrexham ring main as well as Regulation 29 Notices for rebuilding Llwyn Onn and Legacy treatment works with manganese removal treatment.

The rebuild of Llwyn Onn was already part of our AMP5 capex programme, however the ring main cleaning and Legacy treatment works rebuild were not. Due to the risks involved in rebuilding two of our largest treatment works at the same time and to ensure that costs to our customers were kept consistent with the PR09 settlement, the Legacy rebuild was agreed to take place in AMP6 this was captured as an action to set a date in notice DVW3160, dated 29 November 2011, and was set in notice DVW3323 issued on 3 March 2014 for completion by 31 December 2017. It was therefore understood that due to the work required in controlling the newly increased risk that discolouration contacts numbers were not likely to significantly decrease immediately.

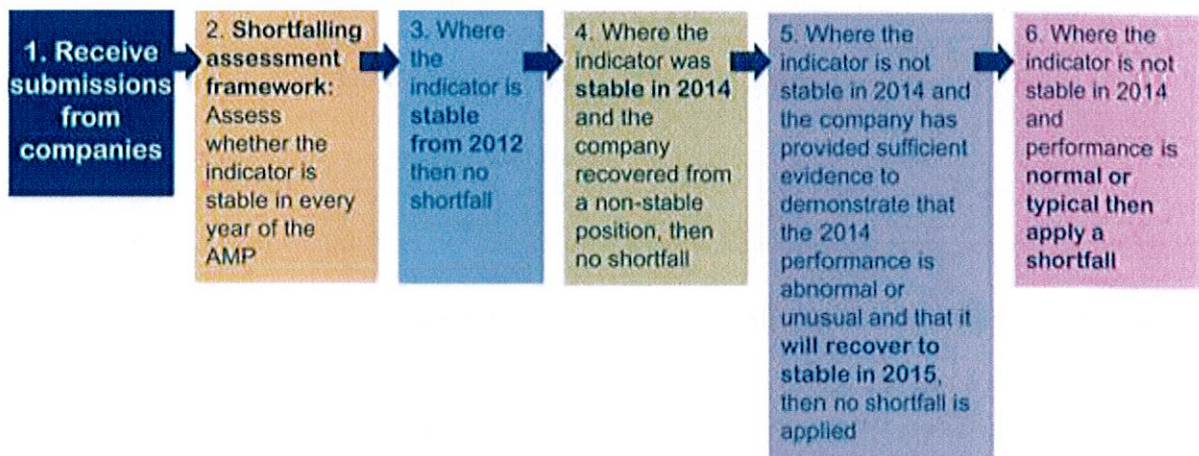
In your response you state that the company entered into an undertaking with the Drinking Water Inspectorate (DWI) to respond to this (discolouration) issue within the 2010-15 period, however this is only partially correct. In fact the company entered into an undertaking with the DWI to clean the trunk and distribution mains (for which logging up expenditure was given) during this period, however the other undertaking required to eliminate this discolouration problem was the Legacy re-build, which was not due for completion until December 2017, well outside of the 2010-15 period.

Due to the raw water deterioration after the start of the AMP period, short to medium term measures were enacted to drive down discolouration as much as practicable given the constraints listed above. These measures included greater monitoring of source water quality and a protocol for selecting low risk sources where possible as well as our largest ever mains cleaning programme. These measures were delivered without any additional cost to our customers and reduced our discolouration contact numbers from greater than c.1300 in 2013 to c.600 by 2014 and c.350 in 2015. As can be seen from the graph below these measures successfully reduced discolouration contacts to below the AMP5 serviceability high level of 1.8 by August 2015.



At the time of the final determination we accepted the shortfall penalty as we did not have a full 2015 dataset to demonstrate compliance with step 5 of figure 3.20 in the [Draft price control determination notice August 2014 technical appendix A3 – wholesale water and wastewater](#) where the indicator is not stable in 2014 and the company has provided sufficient evidence to demonstrate that the 2014 performance is abnormal or unusual and that it will recover to stable in 2015 then no shortfall will be applied” (see below).

However the evidence we have provided demonstrates that we have satisfied this requirement as our 2010 to 2014 performance was atypical due to the raw water deterioration issue that started during AMP5. We had managed to achieve stable performance in 2015 (1.32 discoloured water contacts per 1,000 population) and in has remained stable at well below the upper reference limit in 2016 where we forecast 1.10 contacts per 1,000 customers.



Given all of the above facts we feel that the £640,000 shortfall penalty is entirely inappropriate for the following reasons:

1. Raw water conditions deteriorated after the initial performance levels were set – in 2009 our discolouration performance was 1.29 per 1,000 customers, i.e. became unstable and outside of the upper reference level after the start of AMP5.
2. The quality programmes agreed with the DWI had a duration of 2 AMP periods as the sustainable solution to the manganese issue was not possible to implement within AMP5 due to supply risks and cost to customers.
3. We managed to achieve a substantial improvement in discolouration performance through short term actions at no additional cost to customer bills that achieved the AMP5 serviceability target 8 months after the end of 2014 and four months after the end of AMP5 and returned the indicator to stable in 2015. We were on track to achieve the performance standard and did achieve the performance standard in 2015 – we fully complied with step 5 of Ofwat's guidance described above which states no shortfall will be applied.
4. We have continued to drive improved performance to date and forecast an 2016 outturn performance of 1.1 contacts per 1,000 customers, further evidence that the indicator has returned to and continues to be stable and demonstrates compliance with step 5 of figure 3.20 of the [Draft price control determination notice August 2014 technical appendix A3 – wholesale water and wastewater](#)

In summary we had a sustainable permanent solution being implemented for addressing manganese risk through rebuilding one treatment works per AMP. Following the start of AMP5 the levels of manganese found in the raw water at Legacy treatment works deteriorated. Our existing permanent solution was captured in DWI legal instruments covering a two AMP period, an undertaking was also issued for additional work to clean the Wrexham ring main. Short term measures were carried out to address the risk as much as possible but there ultimate success relied on the new treatment works at Llwyn Onn, which is reflected in the significant performance increase in 2014 after the new Llwyn Onn was in service.

The penalty seems hugely disproportionate for what is essentially a timing issue on the results of a very successful improvement scheme which was delivered with no impact on customers' bills and achieves the requirements of the short falling assessment framework. We were 126 contacts above the high level in 2014 which equates the £640,000 penalty to £5,079 per customer contact, as a small company it seems inappropriate as it is equivalent to circa 1% of our RCV.

We feel our improvement scheme was successful in addressing the increased manganese risk posed by the raw water deterioration but we welcome the changes to the regulatory model introduced by Ofwat for PR14 to allow Totex and outcome based solutions, we have embraced this change to drive further performance improvements and believe that this flexibility would allow more targeted response to any potential similar future occurrences.

Therefore, given all the facts highlighted in this response we reject Ofwat's position in this determination and respectfully request that Ofwat re-reviews this decision to take account of these facts. Should Ofwat have any questions or queries we would be pleased to discuss this with Ofwat to ensure that a proportionate and appropriate decision can be reached.

Interruptions to supply

Ofwat comments

Actual performance for 2014-15 is worse than forecast (135 vs. 16 properties) and it is above the upper control limit. The forecast of 16 properties was below the upper control limit at PR14 final determinations. In response to a query, the company has provided evidence it considers shows that one event was outside management control. This relates to an incident at a canal bridge at Mollington, which affected 109 properties. After the loss of supply was reported, the company was unable to find the leak for over 5 hours, after which it was unable to obtain speedy permission from the local authority to excavate the bridge and effect a repair.

At the 2014 final determination, the company forecast 2014-15 performance to lie within the control limits. Therefore we did not apply a shortfall. The actual performance for 2014-15 is now reported as above the upper control limit, and we did not find compelling the company's evidence that the loss of supply at Mollington was outside the company's management control. From the query response we are not satisfied that this particular section of the main had been sufficiently well assessed for its criticality in terms of being a single supply main. Given the location of the main in the bridge, the company should have understood the criticality of the asset and should have identified, and put in place, appropriate measures in advance to maintain continuous service to customers. It took the company more than 5 hours to locate the leak. We consider that the company ought to have put in place measures which could have located the leak more quickly and maintained service despite the leak occurring. For example, the company could have identified and installed monitoring points for leakage identification or could have installed hydrants on the downstream side of the bridge in order to maintain supplies. Alternatively, the company could have taken measures to ensure it could quickly provide overland supply pipes. We didn't find any evidence that the company had taken such measures in the company's response. We also consider that the company ought to have put in measures to increase the speed and effectiveness of its operational response. For example, the company could have put in place 'in principle' permission from the local authority to excavate and/or an effective communication strategy with third parties to ensure swift action during such an incident.

There are two breaches of the upper control limits in the last four years of AMP5. As explained in the main consultation document, it is appropriate in this situation that we apply a shortfall adjustment. We are applying a shortfall adjustment of £0.250 million.

DVW Response

In our response to Ofwat's comments we have addressed the key points from Ofwat's main comments one by one supplemented with a summary at the end of the text.

Ofwat comment 1

We are not satisfied that this particular section of the main had been sufficiently well assessed for its criticality in terms of being a single supply main. Given the location of the main in the bridge, the company should have understood the criticality of the asset and should have identified, and put in place, appropriate measures in advance to maintain continuous service to customers.

Prior to 2005 the Mollington area was not part of a DMA and any leak would potentially have been significantly more difficult to locate than it is today. The Company invested in several DMAs to improve the management of the network with Mollington DMA being sized at a moderate circa 1,500 properties to reduce the risk to supply in this area.

We have circa 600 bridge crossings across its region and, although we are aiming towards a fully resilient network, this will progress over a long time frame and requires considerable investment and must therefore be risk based to ensure that customers get best value for money.

The properties in the Mollington DMA are primarily located in the south of the DMA towards Chester whereas the burst in question is towards the north at the outer reaches of the Company's network. Few customers are therefore effected by a burst in this location. Further, the leak is on a main that has not suffered any burst in the last decade and is not identified as high risk. For these reasons the canal crossing in question is considered low risk to customers when compared to the many others across our Network.

In summary, we have many mains that have the same level of criticality and sensitivity, therefore we have focussed on others where the likelihood of a burst/leak and the customer impact is far greater. It is not possible to address and implement plans within one AMP for all the assets that are the same/similar in location to this main.

Ofwat comment 2

It took the company more than 5 hours to locate the leak. We consider that the company ought to have put in place measures which could have located the leak more quickly and maintained service despite the leak occurring. For example, the company could have identified and installed monitoring points for leakage identification or could have installed hydrants on the downstream side of the bridge. Alternatively, the company could have taken measures to ensure it could quickly provide overland supply pipes

The leak was unusual in that it was not readily visible, with the flow entering directly into the canal. This delayed our ability to locate precisely where it was, generally we locate leaks immediately if water loss is visible and most leaks are repaired within the 3 hours interruptions window. We had to excavate and use correlators to find the burst this difference highlights the atypical nature of this event. Furthermore, Unfortunately due to the lack of valves on the main by the bridge we had to excavate and install valves for the overland to be successful.

However as with the first point we would like to highlight that we operate a risk/customer based programme, i.e. we invest based on risk and customer impact. However with many hundreds of sensitive mains this main and was not considered one of the highest risk and as such a priority due to the performance of the main (no leaks) and the small number of customers impacted. Therefore our investment programme for network monitoring and resilience had focussed elsewhere in places where we the likelihood and potential impact were much greater.

Ofwat comment 3

We also consider that the company ought to have put in measures to increase the speed and effectiveness of its operational response. For example, the company could have put in place 'in principle' permission from the local authority to excavate and/or an effective communication strategy with third parties to ensure swift action during such an incident.

We have investigated and discussed potential permission issues with the local authority however it is not possible for us to obtain "in principle" permission to excavate on a bridge. Local authorities will never provide such permission on bridge structures due to the potential damage it may cause to structural integrity. Health and safety concerns are a paramount concern for our staff and the authorities, they will not allow anyone to start excavation or other intrusive work without one of their Bridge Engineers having inspected the asset prior to the work commencing. The potential risk to life from unauthorised intrusive work going ahead is understandably not a risk they are willing to accept. To confirm this, we have since spoken to the Local Authority and they have stated *"it is imperative that a member of the Council's Bridges Team is informed, attends and advises is critical to ensure the integrity of the Bridge and can assist in the process of repair by having detailed drawings*

of the structure and their bridge engineering expertise to determine the impact of any damage and proposals for repairs."

It was not possible to get a Local Authority Bridge Engineer to site immediately and therefore excavation work had to be postponed to the following morning. Once the Engineer had visited site, inspected and given permission to excavate, it all had to be done by hand as mechanical diggers were not allowed for fear of damaging the structure. This is all in accordance with safe working practices and cannot be avoided but did cause further delays to the repair.

We carried out short term actions to support supply to customers as much as possible while the complex repair was carried out. Cross company collaboration was initiated in an attempt to assist the businesses effected and we contacted a neighbouring water company to for the provision of a tanker to supply water, keeping an effected business on supply. We actioned alternative supplies through bottled water and bowsers and also put an overland connection into restore supply while the repair was carried out.

In summary, we are committed to improving the resilience of our supply network and installed 1.6km of dual supplies for resilience during AMP5. We have a long term commitment to improve our network which we carry out in a risk targeted manner to ensure that it delivers value for money. Unfortunately the burst that occurred on 9 December 2014 was in an area which does not yet have a fully resilient supply due to its lower risk nature.

Our long term resilience improvement programme is targeted using the likelihood of failure and the impact on customers. We have many hundreds of sensitive mains in our area and at the time this particular main was not a high risk due to the performance of the main and the small number of potentially affected customers. We remain committed to improving the resilience of our supply to customers but that it should be carried out in a risk based proportionate manner.

The risk ranking and status of this main demonstrates why there were not full alternative supplies available and the correspondence with the local authority shows the issues that delayed the repair work and full restoration of supply. Alternative supply options were carried out as far as reasonably practicable but this was a difficult situation to address and we feel the evidence shows that there were many factors outside of management control that significantly contributed to the delay in restoring supplies. We welcome Ofwat's comments on potential means of addressing resilience in these types of situations and will incorporate them into our long term plans.

With this particular event we firmly believe that all reasonable measures were undertaken by the company to restore supplies to customers as quickly as possible, however there were many factors that were either outside of management control or outside of the company's risk based approach to asset management and, for those reasons and the information provided throughout this response, we do not think that a shortfall penalty is appropriate.

Finally if we could take this opportunity to thank Ofwat for giving us the opportunity to respond fully to this incident. In our first response earlier this year we had not taken the trouble to completely understand what Ofwat required from Dee Valley Water and as such did not submit a thorough enough analysis of the reasons why this interruption lasted over 12 hours. We very much hope you will review the above information anew and ensure it is fully taken into account in your final determination.