

Report for: ACTION
Item Number:



Contains Confidential or Exempt Information	NO - PART I – MAIN REPORT
Title	Water AMR programme review
Responsible Officer(s)	David Scott, Head of Governance, Performance and Policy.
Contact officer, job title and phone number	Michael Potter, Energy Reduction Manager, 01628 682949
For Consideration By	Sustainability Panel
Date to be Considered	30 th November 2015
Implementation Date if Not Called In	Immediately
Affected Wards	n/a
Keywords/Index	Water AMR review

Report Summary

1. This report provides a review of the current water automatic meter reading (AMR) programme and is intended to give the Sustainability Panel an overview of the progress being made, review the merits and issues and discuss the options for the future.
2. This paper recommends that members note the progress of the water AMR project and that the Thames water AMR trial is continued.
3. The recommendations are being made because it is important that members provide comment and direction on the work being carried out to ensure value for money. It is also recommended that the Thames Water AMR trial is continued to allow further installations to progress. This will increase AMR coverage and therefore the benefits that they bring.

If recommendations are adopted, how will residents benefit?

Benefits to residents and reasons why they will benefit	Date
1. The water AMR programme has been implemented to enable detailed analysis of water consumption patterns to occur. This information will aid the Council's efforts in reducing revenue expenditure on water therefore ensuring better value for money to	March 2016

<p>the borough's residents.</p> <p>2. The water AMR programme has also been implemented to ensure quick identification of leaks. This will make sure that leaks are quickly dealt with therefore minimising exposure to large water bills. This will also help ensure better value for money for the borough's residents.</p>	
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1 Details of Recommendations

- i. **RECOMMENDED:** That members note the progress of the water AMR project.
- ii. **RECOMMENDED:** That the Thames Water AMR trial is continued to allow further AMR installations to progress.

2. Reason for Recommendation(s) and Options Considered

Option	Comments
(a) The Council does not continue to install water AMR.	(a) The absence of water AMR would mean that Council and would not be working towards an action on the Sustainability Strategy. It would also mean that the Council would not be putting in place measures that ensure that water is effectively monitored.
(b) The Council continues the water AMR programme. RECOMMENDED	(b) The Council will be able to work towards delivering an action set out in the Sustainability Strategy. It would provide value for money for residents by ensuring water is not wasted, that leaks are detected early and the Council only pays for what it uses.

3. Key Implications

Defined Outcomes	Unmet	Met	Exceeded	Significantly Exceeded	Date they should be delivered by
Overall reduction of water across the Council's corporate estate.	<3%	3-3.5%	3.6-4%	>4%	31 st March 2018

4. Financial Details

a) Financial impact on the budget (mandatory)

Current capital programme expenditure is due to be: £9007.82

No payment has been requested for the works currently completed and payment is expected once the full revised programme is complete.

5. Legal Implications

None

6. Value For Money

The work to reduce the Council's water usage will provide residents with value for money if the Council continues to reduce water usage.

7. Sustainability Impact Appraisal

Water is becoming a scarcer resource in the Thames Valley region and Thames Water are predicting a supply gap in the future. This work to reduce water usage will help to reduce the proposed supply gap and ensure that water is available for all in the future.

8. Risk Management

Risks	Uncontrolled Risk	Controls	Controlled Risk
Target for overall water reduction is not met.	High	By providing updates at each panel meeting, Members are able to keep track of overall progress to ensure the Council meets its annual commitments.	Low
Opportunities for water reduction are not highlighted.	High	Installing AMR will help to identify opportunities for water reduction. By providing opportunity updates to the Sustainability Panel, decisions on water saving measure implementation can be made.	Low
Water leaks are	High	AMR can highlight	Low

not highlighted early.		leaks at an early stage. Error messages will be sent out highlight where there are problems so that remedial works can commence swiftly.	
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9. Links to Strategic Objectives

The business case meets the following strategic priorities of the Council:

Residents First

- Improve the Environment, Economy and Transport

Value for Money

- Improve the use of technology
- Invest in the future

Equipping Ourselves for the Future

- Developing Our systems and Structures

10. Equalities, Human Rights and Community Cohesion

There are no direct equalities implications arising from this report.

11. Staffing/Workforce and Accommodation implications:

None

12. Property and Assets

The report deals with the monitoring of water usage at Council properties.

13. Any other implications:

None

14. Consultation

N/A

15. Timetable for Implementation

N/A

16. Appendices

None

17. Background

The Sustainability Panel at its meeting held on 28 July 2014 agreed that water automatic meter reading (AMR) should be trialled using Thames Water.

This was because water AMR has three key benefits:

- 1) It allows monitoring of water usage patterns to help identify water wastage
- 2) It allows identification of leaks
- 3) It ensures accurate billing

17.1. Current Programme - progress and achievements

The current water AMR programme commenced in October 2014. Of the initial group of 18 meters selected 12 meters were identified as being suitable for AMR following a desk based exercise. The other 6 meters needed a survey to determine whether they were suitable. All meters in the trial were then surveyed and it was found that only 6 of the meters were actually suitable for AMR. All the other meters in the trial would require replacing before AMR could be installed.

The 6 suitable meters had AMR installed and it was found that 3 of the 12 remaining meters could be replaced free of charge. The Council would need to fund the replacement of all the other meters.

Following the decision by the Sustainability Panel on the 3rd February to focus on pulsed water meters before reviewing the possibility of paying for meter upgrades, a review of all the Council's Thames Water meter estate has been carried out. It was found that a further 9 meters should have a pulse and AMR could be installed on these. The meters that can be replaced free of charge will also be replaced. With these additional meters the programme will be back up to eighteen meters with AMR once complete.

The Council has been waiting for the free of charge meter upgrades to happen before the next round of AMR devices were installed. The meter exchange process has been taking a very long time to happen, so this has now meant that Thames water have agreed to progress the remaining AMR installations where meter exchanges are not required. Two of the three free of charge meter exchanges have now been carried out and the final one should be carried out in the next month.

17.2. Programme merits

Where the water AMR has been installed it has highlighted some useful information through the online water AMR portal. This was highlighted in the papers for the 2nd July Sustainability Panel. The water AMR has enabled the Council to view in detail how water is being used at the 6 meters. For example, it has helped identify that water is being used at Riverstreet Car Park toilets overnight when it is not necessary. This equates to over £600 worth of water wastage per year. This knowledge has led to further investigations of the urinal control system in order to resolve the problem. Other issues such as leaky valves and taps have also been highlighted at York House and Maidenhead Road Allotments.

So far there has not been any suspected leaks identified, however, the online system would make this issue easy to identify. It has also highlighted that perhaps one of our meters is oversized and perhaps the Council is paying too much for this specific meter.

17.3. Programme issues

A lot has been learnt about water AMR installations during this water AMR trial as many issues have been identified, such as:

- Not all meters are suitable for AMR because they are not pulsed. This is because the meters are too old.
- Sometimes the meters that look suitable for AMR based on a desktop survey are not actually suitable in reality.
- Of the meters that require exchange some replacements are offered free of charge and others are chargeable. Whether the replacement is offered free of charge is dependant on the age of the meter and the size of the meter. Only old and small meters provide the opportunity for free of charge replacement.
- Thames Water's metering contractors do not prioritise free of charge meter exchanges and so it takes a long time to get the meter replaced.
- The internal unit that collects the flow data from the AMR unit is connected to a plug at the nearest power point. Unfortunately this means the plug can be removed and the data flow stops.

These issues have meant that the installation progress has been slow and there have been times where data is not being provided to the online portal where the data is stored.

Of the above issues, all of them would be relevant if any other water AMR provider was trying to carry out the works apart from the loss of data due to the unplugging of the data collection unit. This is because Thames Water operates and owns the local water network and so all works would need to go through them. Other AMR systems do not use a data collection unit that requires plugging in because the AMR units send the data directly to a central data collection server via a GSM network. The Thames Water system instead provides the potential to link up a number of AMR units to one central data collection unit which requires plugging in to operate. This helps to reduce ongoing data costs.

17.4. Next steps

Whilst the Thames Water AMR installation process has been slow, the AMR once installed provides invaluable information. It is therefore recommended that the Thames Water trial is continued. The next 12 installations should be complete by the end of the year and then there will be 18 AMR units installed.

18. Consultation (Mandatory)

Name of consultee	Post held and Department	Date sent	Date received	See comments in paragraph:
Internal				
Andrew Scott	Civic Team Manager	17/11/15	18/11/15	Throughout
Cllr Sharp	Sustainability Panel Chairman			

Report History

Decision type:	Urgency item?
Non-Key	No

Full name of report author	Job title	Full contact no:
Michael Potter	Energy Reduction Manager	01628 682949