Thames Water

AMP6 Outcomes Reporting Policy

Annex 1 – Wholesale

Performance Commitments

March 2015

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1 Overview

1.1 Introduction

Our PR14 Final Determination[1] confirmed the outcomes we will deliver for our customers in 2015-2020 to provide services that are safe and reliable, and bills that are affordable.

The AMP6 regulatory framework introduced at PR14 includes outcomes, performance commitments (PCs) and outcome delivery incentives (ODIs). The framework allows rewards for outperformance and penalties for underperformance. We have worked with our customers and stakeholders to develop our outcomes, PCs and ODIs for AMP6, and these are set out in our PR14 Final Determination.

The effective delivery of the outcomes, PCs and ODIs in AMP6 is a cornerstone of our plans for 2015-20. This will require effective governance, audit and assurance, independence and reporting of our performance to ensure our plans are delivered and performance is communicated to our customers and stakeholders. As part of our customer focused approach, we are publishing our policy for reporting performance against delivery of our AMP6 outcomes and the assurance we will undertake on the information we report.

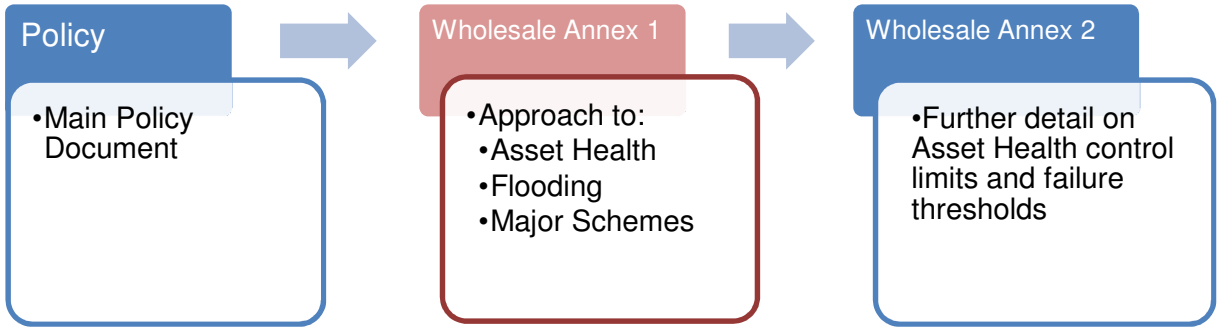
In order to give transparency and clarity to our customers and stakeholders, we have reviewed our outcomes and PCs to ensure that our planned approach to reporting, monitoring and assurance will provide customers and stakeholders with a high level of trust and confidence. This review has identified some areas where we believe that further technical information would be beneficial to provide greater clarity to our customers and stakeholders. Wholesale-related information is set out in this annex, and in Annex 2, 'Asset Health Control Limits & Failure Thresholds'. Annex 3 contains further technical information in relation to Thames Tideway Tunnel Performance Commitments.

[1] PR14 Final price control determination notice: company-specific appendix – Thames Water, Ofwat, December 2014

1.2 Purpose of this document

This document is Annex 1 and forms part of two wholesale technical annexes to the main AMP6 outcomes reporting policy document, as shown in Figure 1.

Figure 1: Structure of main AMP6 Outcomes Reporting Policy document and Wholesale annexes



Source: Thames Water

Annex 1 provides more detail on the underlying principles that have informed the way we will measure our performance against our PR14 Final Determination for PCs and ODIs relating to Asset Health, Flooding and Major Projects in the Wholesale Water and Wholesale Wastewater price controls.

Annex 2 provides further detail to support the assessments for the Asset Health PCs.

2 Asset Health Measures

2.1 Introduction

In our PR14 Final Determination, we have four separate PCs for Asset Health in our Wholesale Water and Wholesale Wastewater businesses. These are:

- WB1: Asset Health Water Infrastructure.
- WB2: Asset Health Water Non Infrastructure.
- SB1: Asset Health Wastewater Non Infrastructure.
- SB2: Asset Health Wastewater Infrastructure.

Each PC is a composite indicator, made up of a number of sub-measures. These sub-measures and their targets (which we call reference levels) are set out in our PR14 Final Determination.

For each composite PC, we are targeting *Stable* Asset Health. Underperformance is represented by *Marginal* and then *Deteriorating* Asset Health. This section sets out the process for determining our performance rating for each of the four composite Asset Health PCs, based on performance against the sub-measures.

2.2 Context

For the avoidance of doubt, nothing in these documents overrides or takes precedence over our responsibility to provide water in accordance with the Drinking Water Quality Regulations, or to meet our various Environmental Regulations.

This section covers the Asset Health performance commitments. The section defines how we will report on these measures and how penalties will be applied. The principle purpose of this document is to define how the performance commitments defined in our 2014 Final Determination will be reported. The resulting Asset Health measures are a backstop measure which will define when Thames Water may be penalised if the asset performance drops below these defined levels. In many cases these are “lagging indicators”, which mean they record performance failures that have already occurred.

In our Business plan we stated that we wanted to develop stronger, leading indicators, which can be used for performance management within our business. TW are committed to develop these indicators and sub measures that give a forward indication of future asset health, and therefore performance. In the process we will consult as appropriate with both the Drinking Water Inspectorate and the Environment Agency. These leading indicators will be developed through AMP 6 with the intention of becoming the basis of our AMP 7 performance commitments. Irrespective of the control and failure levels set out in this document, Thames Water recognises that we have a reputational incentive to perform to, or above the reference level.

We also note that the mitigation impact for the transferred assets (Section 105a Assets) is due to the short time period of time that Thames Water has operated these assets, particularly the pumping stations. We anticipate that this mitigation will only be relevant for the network assets during AMP 6, and its application will be reviewed at the end of the period. It may continue to be appropriate for the transferred pumping stations into AMP 7, but this will be reviewed during the next price review process.

2.3 Process for assessing Asset Health

2.2.1 Summary

In each year of AMP6 (2015-16 to 2019-20) for year-end reporting, we will assess Asset Health using the following process:

1. We will assess performance against each sub-measure using actual data and before any mitigating impacts ("pre-mitigation performance").
2. We will identify and quantify any mitigating impacts, to show performance against each sub-measure after mitigating impacts ("post-mitigation performance"). We note that post-mitigation performance will be equal to pre-mitigation performance where no mitigation events apply. We set out further detail in section 2.2.2.
3. The post-mitigation performance for each sub-measure is compared to the pre-defined reference level, control limit and failure threshold for that sub-measure. We set out further detail in section 2.2.3.
4. The composite Asset Health assessment is made based on the number of measures in that year that have post-mitigation performance above either the control limits or the failure thresholds. We set out further detail in section 2.2.4.
5. Our assessments of pre-mitigation and post-mitigation performance will be audited by an independent technical auditor and reviewed by the Customer Challenge Group (CCG). We expect to reach a consensus on any mitigating impacts, but in the event of differences in view, we will document the reasons for these clearly with our reported performance. We set out further detail in section 2.2.5.

This assessment will be an annual process. We will monitor our pre-mitigation performance and mitigating impacts on a monthly and quarterly basis, in line with the governance and assurance arrangements set out in our main policy, and will discuss these with our CCG prior to year-end performance reporting.

2.2.2 Mitigation impacts

In most circumstances we are well placed to manage our activities so that exceptional events do not and should not impact on the service we provide to customers. Customers judge our performance on how we respond to events outside our direct control and how successfully we manage those events.

For the purpose of assessing Asset Health, it is important that mitigating impacts are reflected in any overall assessment to ensure that performance for each sub-measure and the composite PCs reflect the underlying health of the assets and are not adversely impacted by external events outside reasonable company control. This is consistent with the objective of the measure which is to incentivise the retention of stable asset health for future customers. Short-term performance and the effective management of events are strongly incentivised through other PCs and ODIs.

As set out in correspondence with Ofwat about our PR14 Business Plan,[2] we consider that the following mitigating factors should be taken into account in assessing post-mitigation performance against each sub-measure:

- Weather. A weather 'event' may be exceptional in its intensity or in its duration or combination of both. However long the event, the effects on our PCs can last for much longer. A weather event can include drought, heavy rainfall, freezing conditions, heat waves and strong winds. A weather event deemed to have a return period greater than 1 in 10 years will be a mitigating factor, provided that it is beyond our normal design standards, and we have demonstrated the materiality of the weather impact and reasonable attempts to mitigate the impact.

- Changes in methods of measurement. Where new measurement methods or changes to definitions are set by our regulators that result in different values for the same metric, our performance will continue to be assessed using the original methodologies set out in our PR14 Business Plan.

- Exceptional regional or national events. In exceptional events, for example during a Civil Emergency, we may be required to deal with effluent or provide water under special circumstances required by civil authorities. Under these circumstances our compliance targets may be waived and this will be treated as a mitigating factor.

- Disproportional impact. If against the longer term trend line a single asset failure or combination of events causes a failure of a sub-measure, which is rapidly rectified and does not repeat, then the case may be made that a penalty on the basis of a single failure is disproportionate and the penalty would not be applied. For example this would apply if an event causes inter-related sub-measures to fail, triggering the threshold for a penalty.

- Transferred S105a assets[3]. For the relevant wastewater sub-measures, in the event of a failure there may be a mitigation if it can be shown that:

[2] Asset Health query response, Thames Water, 15 July 2014

- the failure is due exclusively to the transferred assets – i.e. the number of incidents caused by Section 105a sewers is significantly more than that used to calculate the contribution of these assets to our target; and/or

- we have applied reasonable levels of activity to manage the situation, and it can be demonstrated that the increase in the PC failures is not due to unresolved repeat failures.

We would expect our assessment of the impacts of any mitigation events to be scrutinised in depth by our CCG and by an independent technical auditor.

[3] We also note that the mitigation impact for the transferred assets (Section 105a Assets) is due to the short time period of time that Thames Water have operated these assets, particularly the pumping stations. We anticipate that this mitigation will only be relevant for the network assets during AMP 6, and its application will be reviewed at the end of the period. It may continue to be appropriate for the transferred pumping stations into AMP 7, but this will be reviewed during the next price review process.

2.2.3 Comparison with control and failure thresholds

For each sub-measure, we have defined a:

- 'Reference level' – this is the target level for the sub-measure as defined in the PR14 Final Determination.
- 'Control limit' – this provides a deadband for performance for the sub-measure, similar to the use of upper control limits for serviceability in AMP5. Its primary purpose is to allow for a degree of natural variation in performance around the reference level, to allow us to identify material changes in performance.
- 'Failure threshold' – in line with our PR14 Business Plan proposals, where we stated that "a significant failure of one sub-measure would result in a movement from stable to marginal status", we have set this threshold to identify a significant failure for each sub-measure.

The reference levels for each sub-measure are included in our PR14 Final Determination. The control limit and failure threshold, and their justification, for each sub-measure are set out in Annex 2. We have set these limits and thresholds using the following principles:

- Where the sub-measures, both the metric and the reference level, are unchanged from serviceability indicators in AMP5, we have applied the upper control limits from AMP5 to be the 'control limits', unless there is a reason to depart from this approach (e.g. it appears to be conservative based on recent performance).
- Where the metric is unchanged and there is no other significant change from AMP5, but the reference level is changed, then the AMP5 control bands are applied to the new reference level to create the new control limit.
- Where sub-measures are new or the AMP5 upper control limits are inappropriate, but we have performance data over a sufficient time period (i.e. generally at least four years), the 'control limit' is generally based on two standard deviations away from the mean, or reference level, depending on which is appropriate.
- As a general rule the 'failure threshold' is based on one standard deviation away from the control limit.
- Where historic performance is not sufficient or the use of standard deviations appears to be inappropriate (e.g. because there are breaks in data due to changes in measurement), we have used expert judgement specific to each sub-measure.

The control limits and failure thresholds have been calibrated to provide reasonable levels of tolerance around the reference levels that provide strong incentives to avoid underperformance, and identify material and significant failures.

2.2.4 Determining the composite Asset Health assessment

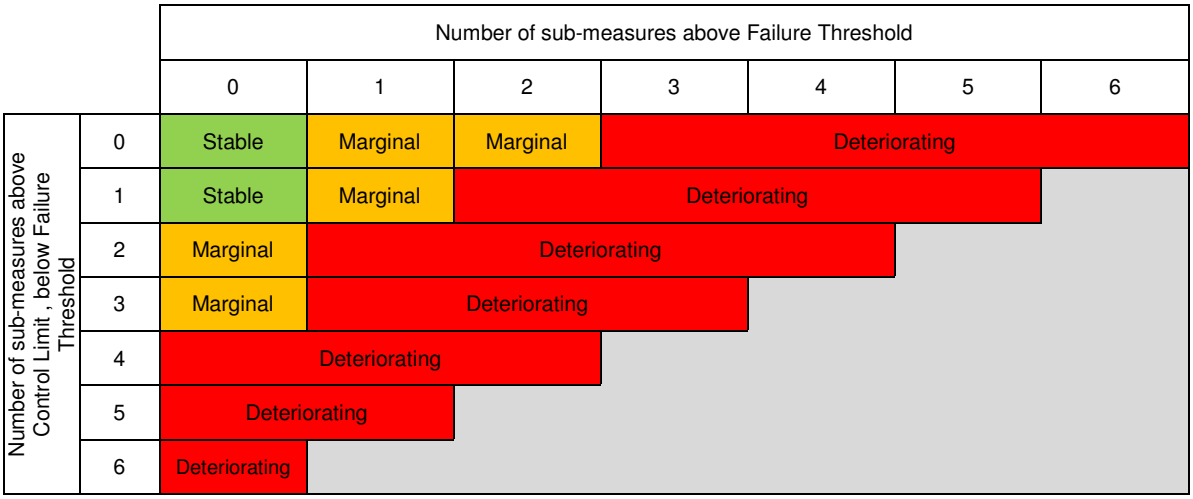
The composite Asset Health assessment is based on:

- The position of post-mitigation performance for each sub-measure compared to the reference level, control limit and failure threshold.
- The number of measures with post-mitigation performance in each position.

Figures 2 to 4 below set out how the Asset Health assessment will be made based on the position of the post-mitigation performance for that year. Under some limited circumstances judgement may also be needed to apply this approach.

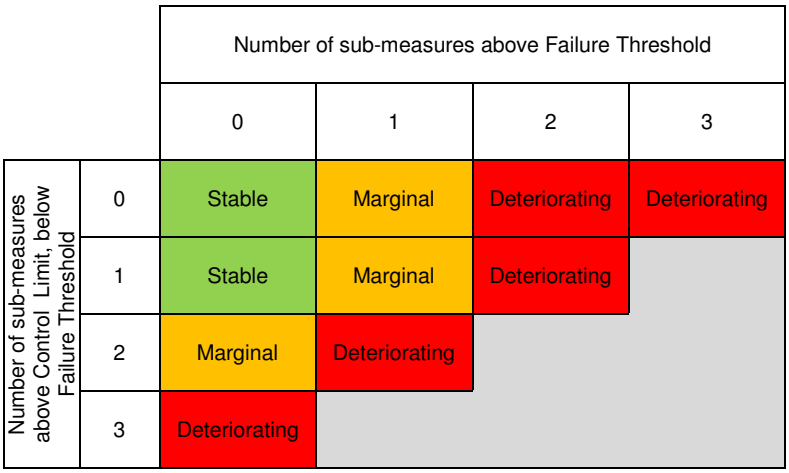
We note that two sub-measures will not be included in the annual assessment. Planned Network Rehabilitation (WB1) has a reference level to be achieved by the end of the AMP6 period; on an annual basis we will provide information on progress towards this target. Water Quality complaints (WB2) for hardness, which is a monitoring only sub-measure, is not included in the annual assessment of Asset Health.

Figure 2: Asset Health assessment matrix - Water Infrastructure and Water Non-Infrastructure



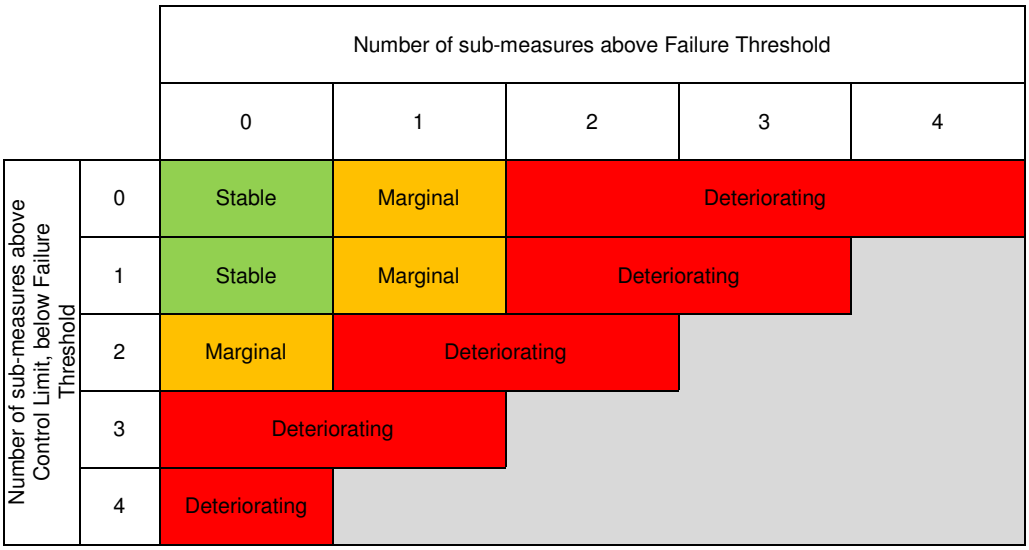
Source: Thames Water, matrix applies to WB1: Asset Health Water Infrastructure (six sub-measures) and WB2: Asset Health Water Non Infrastructure (six sub-measures)

Figure 3: Asset Health assessment matrix - Wastewater Non-Infrastructure



Source: Thames Water, matrix applies to SB1: Asset Health Wastewater Non Infrastructure (three sub-measures)

Figure 4: Asset Health assessment matrix - Wastewater Infrastructure



Source: Thames Water, matrix applies to SB2: Asset Health Wastewater Infrastructure (four sub-measures)

We note that Asset Health Wastewater Infrastructure sub-measures include transferred (Section 105a) assets, but that the performance of transferred assets may be a mitigating factor when using the above matrix to determine Asset Health.

2.2.5 Audit and external assurance

Our assessments of pre-mitigation and post-mitigation performance will be audited by an independent technical auditor. This will provide assurance that pre-mitigation performance is accurate and that the post-mitigation performance is robust and is supported by evidence on the mitigation impact. We will also present pre-mitigation and post-mitigation performance to our CCG for review and challenge.

We expect to reach a consensus with the technical auditor and our CCG on any mitigating impacts, but in the event of differences in view, we will document the reasons for these clearly with our reported performance.

3 Assurance of flood protection schemes

3.1 Summary of approach

In our PR14 Business Plan and our AMP6 outcomes reporting policy, our approach is to use peer review with relevant technical experts for PCs where detailed technical expertise and judgement is required to effectively measure performance. The Independent Advisory Group (IAG) will comprise of at least two industry leading experts and will provide assurance to our CCG, stakeholders and customers for the delivery of the following PCs:

- SB3 – Properties protected from flooding due to rainfall
- SB5 – Contributing area disconnected from combined sewers by retrofitting sustainable drainage
- SB7 – Population equivalent of sites made resilient to future extreme rainfall events
- WB8 – Ml/d of sites made resilient to future extreme rainfall events

The ODIs for the PCs listed above are based on cost benefit analysis and, with the exception of SB7, we may be rewarded for outperformance. As with our other outcomes and PCs, the assurance on the quality of the data underlying our modelling is of key importance. The information we report will be used by our customers and other stakeholders to challenge our performance and hold us to account.

The role of the IAG is to ensure that any schemes delivered under these outcomes, PCs and ODIs have appropriately calculated benefits and are based on data that are audited and assured. Where the cost benefit analysis case is dependent on modelling that we undertake, the IAG is expected to comment on our approach, including: the appropriateness of the input data, the techniques used, the modelling approach, analysis and conclusions.

The IAG will follow the methodology set out in our proposals submitted to Ofwat in our PR14 Business Plan for each of the PCs listed above. Additional information on SB3 is set out below.

3.2 SB3 Properties protected from flooding due to rainfall

3.2.1 Assurance

For the SB3 performance commitment, we expect to review our investment programme on an annual basis. At each review the IAG will review the planned programme of flooding schemes. This review will cover:

- Approach to data gathering.
- Methodology for modelling rainfall.
- Appropriate use of hydraulic models.
- Assessment of the quality of auditing around the investment needs and solutions.
- Use of innovative approaches.
- Overall cost benefit case for proposed schemes, and quality of underlying data.

The review will summarise any issues or concerns relating to the historic or future programme, and also provide direction for continuous improvement. The review will also confirm any actions to mitigate concerns and further tests to ensure appropriate compliance.

The review will cover principles and processes, and look at specific schemes, as appropriate, to test compliance. As required and at appropriate timing in the programme, the IAG will assess the quality of the data collection and modelling by:

- Reviewing the scope of any technical audits for technical work, including, but not limited to data collection, network model build, network solution modelling, rainfall modelling, or run off modelling.
- Reviewing audit outputs, challenging where appropriate to ensure audits provide confidence for work to progress.
- Defining scope for additional reviews as required.

As required, we will arrange targeted audits of data to provide the necessary level of assurance to the IAG.

3.2.2 Measurement of benefit and confidence in the solutions proposed

The method for calculating benefits is set out in our PR14 Business Plan proposals, with annualised benefit values set out in our PR14 Final Determination.

3.2.3 Mitigation

In the event that customers have reported flooding, and the only economic solution is a FLIP, but the customers refuse in writing to accept a FLIP, we will consider the appropriate adjustment to the targeted benefits, ensuring no detriment to customer protection. For example, we may reduce the benefit by the value associated with the relevant properties. This assumes no change in the customers' view during AMP6, e.g. due to a change in ownership.

4 Major Projects

For the major projects PCs SB8 (Lee Tunnel), SB9 (Deephams) and the Counters Creek scheme, we will capture the evidence that we have achieved our PCs in our confirmation of benefits fulfilled documentation. This documentation will be reviewed by a suitably qualified independent technical auditor.

In the event that the full benefits are dependent on the completion of activity from a third party, the benefits are taken as delivered when we substantially complete our works and the project is handed over from the Contractor to the Operator.

If a scheme is partially complete at a milestone date for a PC, the level of benefit achieved and any associated penalty will be assessed by TW and reviewed by the technical auditor.