

August 2018

Trust in water

Notice of Ofwat's imposition of a financial penalty on Thames Water Utilities Limited

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1. Introduction

- 1.1 On 7 June 2018, the Water Services Regulation Authority (“**Ofwat**”) gave notice of its proposal to impose a nominal penalty upon Thames Water Utilities Limited (“**Thames Water**”) under section 22A paragraphs (1) and (2) of the Water Industry Act 1991 (“**WIA91**”) for infringing the following provisions in relation to its leakage reduction performance within the current price control period (2015-20) and its management of its leakage reduction operations:
- Section 37 WIA91, in relation to the economic and efficient maintenance, operation and development of its network so as to ensure it continues to meet its obligations under Part III WIA91; and
 - Paragraphs 6A.1 and 6A.2B of Condition F of Thames Water’s instrument of appointment (“**Licence**”) in relation to the adequacy of Thames Water’s resources and systems of planning and monitoring.
- 1.2 In giving notice of a proposal to impose a penalty Ofwat is required to specify a period within which representations or objections with respect to the proposed penalty may be made. Ofwat received representations from three stakeholders in response to the notice, from Affinity for Business, the Consumer Council for Water (CCWater) and an individual consultant.
- 1.3 In light of these representations and for the reasons provided in sections 2 to 5 of this notice, Ofwat is satisfied that it would be appropriate to impose a nominal penalty on Thames Water of £1 in respect of the contraventions described in this notice. This document gives notice under section 22A(6) WIA91 of that decision.
- 1.4 Thames Water must pay this penalty to Ofwat (for onward payment to the Consolidated Fund) by 21 September 2018.
- 1.5 Thames Water has also given us [undertakings for the purposes of section 19\(1\)\(b\) WIA91](#), which formalises the measures it has put forward to secure compliance. We summarise them in paragraph 5.44 of this notice.

Rachel Fletcher

A handwritten signature in black ink, appearing to read 'Rachel Fletcher', is written over a light grey rectangular background.

Chief Executive

For and on behalf of the Water Services Regulation Authority

Dated this day, 8 August 2018

2. Thames Water's leakage reduction performance in AMP6

Importance of leakage management

- 2.1 It is widely recognised that pressures from population growth and climate change will reduce the per capita availability of water in England generally, and in critical areas, such as the South East of England, in particular. Population growth is forecast to increase disproportionately in the South East of England, where there are expected to be drought events of increasing frequency, duration and severity¹. Greater understanding of the environmental impact of excessive water abstraction has also emphasised the need for improved water efficiency.
- 2.2 Within this context, efficient leakage management is an important means by which water companies ensure continued security of supply efficiently and economically. Customers have repeatedly confirmed that they place a high value on leakage reduction.

Thames Water's performance commitments for AMP6

- 2.3 We asked all water companies in England and Wales to develop business plans for the current price control period ("**PR14**") to meet their statutory and licence obligations in an efficient and economic manner, based on the levels of service ("**outcomes**") that their customers expected of them during 2015-20. Companies developed these outcomes by speaking with and listening to their customers. We challenged aspects of those outcomes and determined companies' "**performance commitments**" along with their price limits and incentives in December 2014.
- 2.4 Under PR14's Outcome Delivery Incentive ("**ODI**") mechanism, if a company exceeds the delivery of its agreed performance commitments, it is rewarded; if it misses them, it is penalised. These ODIs have maximum rewards and penalties determined by the level of performance the company delivers (referred to as "**caps**" and "**collars**"). We made clear in our Final Determinations

¹ The long-term potential for deep reduction in household water demand – report by Artesia Consulting for Ofwat

for PR14 that where performance fell below the level of the penalty collar we would consider enforcement action (see [appendix 5 – PR14 Final Methodology Guidance on business plan tables](#)).

2.5 Each water company publishes an Annual Performance Report (“**APR**”) as part of its regulatory reporting requirements. This includes information about:

- how they have done in meeting their performance commitments for delivering their outcomes;
- whether they have earned any ODI rewards and penalties (for exceeding or missing the service levels they have committed to and customers expect); and
- (if companies are failing to deliver) how they will put things right.

2.6 While we required companies to include performance commitments for leakage management in their 2015-2020 business plans based on comparable metrics (“**Leakage**”), it was their responsibility to propose the levels of those commitments and any associated caps and collars for penalties and rewards, in accordance with their statutory and licence obligations and in consultation with their customers.

2.7 For its water service, we determined the following performance commitments and collars for Thames Water for management of leakage and security of supply risk, by reference to a Security of Supply Index (“**SoSI**”).

Table 1 – PR14 Performance Commitments

Performance Commitment	2015-16	2016-17	2017-18	2018-19	2019-20
Leakage (Megalitres per day (Ml/d))	649	630	620	612	606
Leakage collar	657	649	649	649	649
SoSI (unit) ²	100	100	100	100	100
SoSI collar	97	97	97	97	97

Thames Water's performance against its AMP6 performance commitments

- 2.8 Thames Water met its performance commitments for leakage in 2015-16. It achieved this principally through expediting pressure management activity and improving its understanding of unaccounted for water (“**UfW**”), by which water wrongly identified as leakage is counted as water delivered to customers.
- 2.9 On 19 April 2017 Thames Water told Ofwat in a meeting that it had not met its leakage performance commitment for 2016-17 and its performance had also gone significantly beyond its penalty collar. Thames Water confirmed this in writing on 3 May 2017.
- 2.10 Following this, on 14 June 2017 Thames Water published its Annual Report. This included its risk and compliance statement, which we expect all companies to produce yearly and which should set out how they have complied with their relevant statutory, licence and regulatory obligations. Thames Water reported it had missed its leakage performance commitment in its Annual Report.
- 2.11 On the same day, we announced that we had opened an investigation into Thames Water to consider whether as a result of the company not meeting its leakage performance commitment Thames Water had contravened or was contravening any of its statutory obligations, and therefore whether enforcement action was needed over and above the automatic penalty Thames

² SoSI indicates the extent to which a company is able to guarantee provision of its levels of service for restrictions of supply. The maximum is 100 and indicates the company could deliver its level of service in a design drought. If the score is less than 100 it would need to introduce restrictions, such as hosepipe bans, sooner in a drought than it should.

Water would incur under the ODI mechanism. Later, in June 2017 Thames Water issued its certificate of adequacy under its licence condition F for 2017-18.

2.12 On 9 June 2017 Thames Water sent us its leakage recovery plan in which it forecast that its leakage reduction performance would remain below the penalty collar for 2017-18 and 2018-19 and return to meet its performance commitment in 2019-20. In terms of SoSI Thames Water expected its performance to be below its performance commitment, and beyond its penalty collar for 2017-18.

Table 2 – Thames Water leakage recovery plan forecasts as of June 2017

	2015-16	2016-17	2017-18	2018-19	2019-20
Leakage performance commitment (Megalitres per day (Ml/d))	649	630	620	612	606
Leakage performance commitment collar	657	649	649	649	649
Leakage recovery plan forecasts	-	677	719	651	599
SoSI performance commitment	100	100	100	100	100
SoSI performance commitment collar	97	97	97	97	97
SoSI forecasts		99	96	99	100

2.13 Thames Water has continued to update its forecasts since June 2017 to reflect the delivery of its leakage recovery plan. In May 2018 it forecast that its leakage performance would be 695Ml/d for 2017-18, 672Ml/d for 2018-19 and 606Ml/d for 2019-20. It forecasts its SoSI performance will be 97 for 2017-18 and 100 for 2018-19 and 2019-20. When Thames Water published its 2017-18 APR on 28 June, it confirmed that for 2017-18 its leakage performance was 695Ml/d and its SoSI performance was 97.

Reasons for Thames Water's under performance on leakage

2.14 From the evidence we have obtained, Thames Water's underperformance on leakage reduction resulted from how it designed, implemented and managed its contracting arrangements for the delivery of its leakage activities through its Infrastructure Alliance ("**the Alliance**").

- 2.15 Thames Water chose to move to an innovative alliance model for the outsourcing of its leakage reduction and management activities for the AMP6 period (2015-20). The Alliance comprised a number of third party contractors (most of whom Thames Water had worked with under different contractual arrangements during the 2010-15 period). Alliance models have been successful elsewhere in delivering efficient and innovative approaches to leakage management.
- 2.16 Under the model it adopted, Thames Water devolved operational decisions to its Alliance partners. It based the performance incentives in its contract on its PR14 ODIs. Under PR14, ODIs are underpinned by Ofwat's ability to take enforcement action in the event of performance below the penalty collar. By contrast, under the model it adopted, Thames Water did not hold the Alliance partners to minimum standards of performance but instead relied primarily on the contract's financial incentives to drive performance. This was an innovative structure, but Thames Water only allowed a three-month transition period for testing the arrangement with its Alliance partners, before moving to full implementation in April 2015. At that point Thames Water stepped back from the detail of overseeing and managing the operational delivery of its leakage performance commitments. Thames Water told us that a key contractual protection was the two-year break clause in the Alliance's contract.
- 2.17 We have looked into other companies' supplier arrangements. Some companies refer to their suppliers as framework partners and some operate as alliances. We understand from other companies that it has taken several years to establish alignment of understanding and incentives between purchaser and contractor. This level of understanding is necessary to effectively operate partnerships and alliances similar to the one Thames Water sought to establish in three months. We also observe that these companies continue to maintain a high degree of Board oversight over the operation of their alliances and partnerships.
- 2.18 In practice, the break clause in itself did not provide Thames Water with sufficient control over the Alliance partners' performance. Thames Water states that the financial incentives drove perverse results and the Alliance underperformed badly, both operationally and financially, from the outset of AMP6. Thames Water told us:
- “the new model was based on actual costs as opposed to a schedule of rates per job, so contractors were paid according to the costs claimed per job rather than on number of jobs completed. We saw a drop in productivity during year 1 of AMP6 (number of jobs per day). Underperformance resulted in further

work orders but without a formal change control mechanism in place, which subsequently led to disputes about the legitimacy of costs incurred. The balance between the ROI fund and the leakage target and associated ODI set by Thames Water was, in the absence of effective enforcement of the contract and governance to facilitate change control, insufficient to drive the right decisions. There was a perception amongst the Alliance Partners that the penalty for failing the leakage target was relatively small compared with the additional investment needed to recover the plan.”³

2.19 Thames Water's poor performance was further affected by:

- Poor management of the transition from three main leakage contractors to two, which resulted in the loss of an important and experienced leakage detection team and its replacement with less experienced work gangs;
- Mis-targeted work (partly through deterioration in expertise, partly driven by the financial incentives referred to above) leading to work gangs digging a high proportion of 'dry holes';
- Poor design and implementation of Thames Water's "OneDesk" initiative. Onedesk intended to introduce a more efficient means of scheduling works and relied on key staff being prepared to move job locations from London to Reading, which did not materialise. It also assumed an increase in work gang efficiency from 1.8 jobs per day to 3 jobs per day – whereas in fact its workforce performance declined. Onedesk had to be reversed;
- Reducing work gangs available for leakage detection and repair at a time when Thames Water's leakage reduction performance was falling further behind target; and
- Slowing down of mains replacement activities.

2.20 From our review of the evidence, we identified deficiencies in Thames Water's oversight and upward reporting of the Alliance's operational performance. Board reporting on the Alliance during 2016 largely focussed on financial performance, rather than operational matters, and lacked detail and consistency on operational matters or appropriate read across to any implications for Thames Water's general duty under section 37 WIA91. As a

³ Source: Thames Water section 203 response to Ofwat (12 February 2018)

result, there was insufficient feedback between Thames Water Board and the Alliance to consider risks and issues and allow for a corrective course of action.

2.21 By the middle of 2015, Thames Water was sufficiently concerned about its deteriorating leakage reduction performance to call a “leakage summit”. This led to a number of one-off actions⁴ that enabled it to meet its leakage and SoSI performance commitments for 2015-16. However, Thames Water did not fully consider the underlying causes of its declining performance, or make material changes to the Alliance.

2.22 Leakage reduction performance continued to deteriorate throughout 2016-17 and Thames Water's Board received monthly updates on current and forecast leakage performance through the Group Management Report. A further leakage summit was held in May 2016. By September 2016 Thames Water's operational staff acknowledged that there was no realistic prospect of meeting Thames Water's leakage performance commitment for 2016-17 leakage but the Group Management Reports for September and October did not convey the operational staffs' assessment. It was only in November 2016 that the Group Management Report warned Thames Water's Board that meeting its target was “very challenging”, and not until January 2017 that it was told that the performance commitment would not be met.

2.23 Thames Water's poor leakage performance meant that its customers are exposed to a higher risk of water supply restrictions than the level of services that their bills pay for. On 11 July 2017 Thames Water reported to Ofwat that its SoSI would be 96 in 2017-18, a lower figure than Thames Water had considered likely in any circumstance when it submitted its business plan for PR14.

2.24 In missing its leakage and SoSI performance commitments, Thames Water still incurred expenses, particularly due to work that did not achieve leakage benefits, for example, digging dry holes, trial holes, non-leakage jobs and a number of re-visits and aborted jobs.

⁴ Thames Water brought forward capital spend originally planned for later years in AMP6, principally for Pressure Management. It also developed new work streams designed to help the company meet its leakage performance commitment i.e. Network and Production Optimisation, Water Balance and Unaccounted for Water.

2.25 Any removal of water (abstraction) from the natural environment will have an impact on that environment. Water abstraction during low flows can be particularly detrimental. It is important that water wastage through leakage is kept as low as reasonably possible so as not to contribute towards unnecessary environmental deterioration (recognising that on large systems, such as a water company's network some leakage is unavoidable). Additionally, high leakage can indicate possible network resilience issues. Bursts can be caused in a number of ways but a common feature is the worsening of leakage at a weak point in the network.

Thames Water's response

2.26 Between late 2016 and early 2017, Thames Water's main shareholder, Macquarie European Infrastructure Fund 2 (MEIF2), which is managed by Macquarie Infrastructure and Real Assets, was in the process of selling its stake in the company. The sale was announced in March 2017 and was completed in May 2017.

2.27 In April 2017, Thames Water initially approached us to inform us that it had missed its performance commitment on leakage and was seeking to address the root causes of its poor leakage performance. We subsequently learned that it had taken the following steps:

- From December 2016 it appointed a number of key roles, including a new Managing Director of Wholesale Water and a Head of Water Networks to investigate and address the structural issues in the Alliance, oversee leakage operations, and improve performance.
- It brought more than 700 outsourced employees back in-house and increased the number of work gangs dedicated to find and fix leakage activities.
- It negotiated new terms with its Alliance partners, which will apply for the remaining two years of AMP6. Under the new structure, Thames Water gave itself a much more active role as "Purchaser" than before to manage and monitor the Alliance and ensure its partners deliver to its specifications.
- It reinstated the most experienced of its leakage contractors from AMP5 as a main contractor for North London, and now has three main UK leak detection contractors working for it.

- It is now using acoustic loggers to detect leaks (which are more effective than the listening sticks it was using previously, although these are also still used). Thames Water has already deployed 18,000, and it expects to deploy a further 8,000.

2.28 Thames Water also continued to develop its leakage recovery plan during 2017. The leakage management plan it had in place from March 2017 assumed average winters (a P50 plan). Thames Water revised its plan in November 2017 to deliver on the assumption of one colder than average year in five (a P80 plan). Its Board committed to spend an additional £65 million in April 2017 and a further £74 million in November 2017 to increase Thames Water's likelihood of getting back on track with the performance commitments it has agreed with its customers for the 2015-20 period. Thames Water told us in December 2017 that it now had a reasonable degree of confidence in its ability to return to within ODI parameters by 2019-20 and to meet its Performance Commitment for that year. In July 2018 Thames Water confirmed that it continues to review and refine its recovery plan in light of its performance. The cold weather experienced in March 2018 and the heatwave in summer 2018⁵ has resulted in leakage being higher than anticipated for this point in Thames Water's recovery plan. Thames Water has revised its plan to address this.

2.29 Thames Water has also told us that its Board now receives better reports on the Alliance's performance and that "leakage performance is now regularly reviewed by the Board in a way that provides both meaningful challenge and effective support to the Executive management team". It has also told us that it has taken steps to improve its governance arrangements for providing us Condition F reports and certificates.

2.30 Thames Water has been in discussion with Ofwat since May 2017 on the steps it is taking to address its poor performance in relation to its management of leakage.

2.31 After having provided a range of information to inform our investigation, on 19 March 2018 Thames Water approached Ofwat to begin discussions on a package of proposals to address its underperformance, including measures to

⁵ Which has resulted in higher levels of leakage because Thames Water has had to increase pressure levels to prioritise keeping customers in supply in light of higher water demands

ensure that customers would not bear the costs of its poor performance on leakage.

3. Findings

Section 37 WIA91

3.1 Section 37 WIA91 imposes a general duty on water undertakers “to develop and maintain an efficient and economical system of water supply within its area and to ensure that all such arrangements have been made

(a) for providing supplies of water to premises in that area and for making such supplies available to persons who demand them; and

(b) for maintaining, improving and extending the water undertaker's water mains and other pipes,

as are necessary for securing that the undertaker is and continues to be able to meet its obligations under [Part III WIA91].”

3.2 We find that Thames Water has failed to maintain an efficient and economical system of water supply within its area in relation to its management of leakage during AMP6. As described at paragraph 2.16 above, the Alliance's structure and contractual arrangements incentivised inefficient leakage management which Thames Water did not materially address until two years of poor performance had elapsed and it had fallen significantly below the ODI collar (see Table 2). In doing so, it has spent customers' (and its shareholders') money inefficiently and added additional, unnecessary stress to its ability to continue to secure water supply to its customers as described in section 2. Thames Water estimates that it has spent and will spend £92 million in AMP6 more on leakage management and water treatment than it would have done absent the leakage reduction performance and management issues described in section 2.

3.3 We also find that from 1 April 2015 to date, Thames Water has failed to ensure that it had in place all necessary arrangements for continuing to secure its obligations under Part III WIA91.

3.4 As described in paragraphs 2.15 to 2.19 Thames Water implemented a structure which was novel to it without an appropriate transition strategy, and without adequate arrangements for oversight of its operations, particularly at Board level. These factors contributed significantly to Thames Water only intervening in the Alliance after performance had fallen beyond the parameters envisaged by the ODI scheme. Even when it did intervene, it has taken a long

time to begin to reverse its performance. Thames Water does not anticipate returning to an operational level that meets its performance commitment until 2019-20.

- 3.5 In the summer of 2016 Thames Water reduced resources for leakage management which could have ameliorated its leakage position, without countervailing mitigations, when its leakage reduction performance continued to deteriorate. This approach placed unnecessary additional stress on the company's ability to meet SoSI performance commitment and its security of supply obligations under Part III WIA91 as discussed above in paragraph 3.3.

Condition F paragraph 6A.1

- 3.6 Condition 6A.1 of Condition F of Thames Water's licence requires it to "at all times act in the manner best calculated to ensure that it has adequate:

- a) financial resources and facilities;
- b) management resources; and
- c) systems of planning and internal control

to enable it to secure the carrying out of the Regulated Activities..."

- 3.7 We find that Thames Water failed to ensure it had adequate management resources and systems of planning and control to manage network leakage from 2015-16 consistent with its regulated duties and functions, including section 37 WIA91. While Thames Water has pointed out that no innovation is wholly without risk, in this case the reasons for its underperformance were within its control and as discussed above stemmed from issues in the design, implementation, management and oversight of its Alliance arrangement, alongside the problems associated with its abortive efficiency rationalisations. The consequences of this are discussed at 2.23 to 2.25 above.
- 3.8 Thames Water did not adequately plan for and manage implementation of the Alliance. It did not adequately assess and address the risks associated with its incentive structure for the Alliance and the loss of one of its most experienced leakage contractors as a result of the new contracting arrangements. It did not mitigate those and other transition risks with an adequately planned and executed transition strategy. This is despite the fact that Thames Water has acknowledged that the Alliance was an innovative step for the organisation. We summarise the consequences of these shortcomings at 2.23 to 2.25 above.

3.9 As it was originally conceived, the Alliance structure did not provide Thames Water with adequate systems of control over leakage management. Relying on incentives in the contractual framework to drive performance, it relinquished too much direct control of its operations. It handed responsibility for operational performance management of a key component of its operational resilience of critical importance to its customers to its contractors without adequate safeguards. It did not reserve for itself an adequate purchaser function and did not monitor and enforce minimum performance standards.

3.10 Thames Water acknowledges that there were flaws in the accountability systems it set up for the Alliance. In response to a section 203 request for information issued by Ofwat for its investigation, Thames Water stated:

“For the Alliance model to be effective, systems had to be in place to enable Alliance members (including Thames Water) to hold one another to account. This did not happen in all areas, for example:

- Alliance partners did not understand sufficiently their roles and the way the contract worked;
- There was limited and inconsistent reporting from the Alliance members to the Alliance Board, or from the Alliance Board to Thames Water Executive; and
- There was an insufficient level of governance and change control, which meant decisions to improve leakage were either not taken or not acted upon quickly enough when the new model did not deliver to plan.”

3.11 Thames Water's poor planning and management was also largely to blame for the difficulties Thames Water encountered when introducing OneDesk initiative. The decision to reduce the number of work gangs at a time when leakage detection and repair performance remained behind target seems largely driven by financial considerations. That it had to be reversed 12 weeks later because of the additional stress it placed on already struggling operations was predictable. These shortcomings are indicative of Thames Water's inadequate systems of planning and control for leakage management.

3.12 Finally, we are very concerned to have found evidence of Thames Water devoting insufficient management resources to, and imposing inadequate systems of control over, leakage reduction performance at a Board level.

3.13 Important issues highlighted in the Alliance's Leakage Exec Packs were not included in contemporaneous leakage performance reports to Thames Water's Board. The Alliance's Leakage Exec Pack reported as early as April 2016 that unless the Alliance's find and fix activity improved it would not be on track to meet its Performance Commitment. There is no record of this being reported to Thames Water's Board at the time.

3.14 By September 2016, the Alliance's Exec Pack states that:

"confidence in achieving the leakage target has fallen to Zero%. In order to raise to 50%, we would need to deliver the CaLM plan for the remainder of the year plus 102MI/d of additional effort. To date, 15MI/d of additional work has been added to the plan including 5ML/d of additional Water Balance, 5MI/d associated with Building Water and 5MI/d of additional Pressure Management".

3.15 The risk of failing leakage was reported as 'almost certain' and the impact to the business reported as 'major'.

3.16 This position was not reflected in those terms in the September report to Thames Water's Board. The September 2016 Group Management Report to Thames Water's Board gave a RAG rating of red for current leakage performance. It also showed how current leakage performance compared to tramlines (set at P20 and P80 level of performance). However, the report only downgraded the RAG rating for achievement of the overall leakage target from green to amber (rather than to red). The commentary in the report lists a series of actions that were being undertaken to improve leakage performance, but does not give any indication of what those schemes would have to deliver in order to enable Thames Water to meet its Performance Commitment or how likely that outcome would be.

3.17 In October 2016 the Alliance's board minutes report:

"Leakage forecast 0% confidence in leakage target. 6+6 only 25% confidence. To get back on target we need to complete 6,000 repairs with an additional 35 teams to come in over next 6-8 weeks. To be covered in Board Only discussion."

3.18 The Wholesale Water Risk Register for October 2016 also reported this level of confidence.

- 3.19 The Group Management Report for October 2016 to Thames Water's Board continued, however, to give a red RAG rating to the then current and year to date leakage levels, but a RAG rating of amber rather than red for the full year's performance against its commitment. As with the September report, it reported activities being taken to address the Leakage Event, but did not give an assessment of their likely adequacy to enable the Performance Commitment to be met. It also did not report the Alliance Board's assessment of what would be needed to achieve the performance commitment.
- 3.20 Leakage performance continued to deteriorate, rather than improve, throughout November. The Group Management Report to the Board for November reported that the likelihood of Thames Water meeting its Performance Commitment was "very challenging", but retained an overall amber RAG rating. It was not until the December 2016 Group Management Report that the Board was informed that Thames Water would be "very unlikely" to meet its performance commitment. Yet this had been the Alliance's consistent assessment since September.
- 3.21 We are particularly concerned, however, that Thames Water's Board did not challenge the reporting on operational matters or impose greater scrutiny or control over the Alliance, particularly given the activities it is contracted to deliver are so fundamental to Thames Water's statutory obligations.
- 3.22 We have reviewed both the relevant extracts of reports provided to Thames Water's Board regarding its leakage reduction performance, and the minutes from those meetings where leakage reduction performance was discussed. It is clear from the extracts we reviewed of reports provided to Thames Water's Board that the company's leakage reduction performance remained significantly behind its performance commitment throughout year 2 of AMP6 (2016-17), even though there is no evidence of the specific issues mentioned in 3.14 above being escalated to the Board. On review of the Board Minutes, however, we found no evidence of Thames Water's Board challenging the current position, requesting further information on leakage, providing strategic direction or setting expectations for leakage reduction performance, or setting actions to be discussed in further meetings. Instead, the Board minutes mainly consist of extracts where Thames Water's leakage reduction performance is noted without any actions being raised.
- 3.23 Given how important good leakage management is to ensuring an efficient and economic network and continued security of supply, Thames Water's Board should have taken a more proactive approach to its leakage reduction performance. We are surprised that it was slow to respond, given its

performance was materially below its penalty collar, and particularly given that we have previously investigated Thames Water⁶ and other water companies⁷ for poor leakage reduction performance and we made clear in PR14 that we would consider enforcement action if performance fell below the penalty collar. We expect Boards to be more diligent in ensuring that their companies meet core operational legal obligations such as section 37 WIA91.

Condition F paragraphs 6A.2A

3.24 Thames Water's Board's underestimation of its statutory obligations in relation to leakage is further evident in its approach to its reporting obligations under paragraphs 6A.2A and 6A.2B of Condition F of its licence.

3.25 Paragraph 6A.2A requires Thames Water to provide a certificate of adequacy at the same time that it submits its annual regulatory accounts to us. This is a separate regulatory document to the APR. Under this, it is required to certify

“(1) that in the opinion of the Directors, the Appointee will have available to it sufficient financial resources and facilities to enable it to carry out, for at least the next 12 months, the Regulated Activities (including the investment programme necessary to fulfil the Appointee's obligations under the Appointment(s));

(2) that in the opinion of the Directors the Appointee will, for at least the next 12 months, have available to it:

(a) management resources; and

(b) systems of planning and internal control

which are sufficient to enable it to carry out those functions as required by sub-paragraph 6A.1 above; and

(3) that in the opinion of the Directors, all contracts entered into with any Associated Company include all necessary provisions and requirements concerning the standard of service to be supplied to the Appointee, to ensure

⁶ In 2006, we investigated Thames Water for missing its leakage targets.

⁷ In 2008, we investigated Severn Trent Water for missing its leakage targets.

that it is able to meet all its obligations as a water and a sewerage undertaker."

3.26 Further, paragraph 6A.2B, sub-paragraph (2) states that:

"(2) Without prejudice to sub-paragraph 6A.3 below, the Directors shall inform the Water Services Regulation Authority in writing as soon as they become aware of any circumstance which causes them to believe that the most recent certificate under sub-paragraph 6A.2A could not be repeated in the light of that circumstance."

3.27 Thames Water's Board provided Ofwat with a certificate of adequacy in June 2016 despite the fact that it was already becoming apparent to the Alliance that there were major, unresolved leakage reduction performance issues that risked it missing its performance commitment. It acknowledged internally at Board level that it was impossible for it to meet its performance commitment in December 2016 and it was operating below the penalty collar. However we have seen no record of Thames Water's Board considering the circumstances in which it might be appropriate to notify Ofwat under paragraph 6A.2A(2) in relation to its leakage reduction performance. This is despite the fact that we understand that at this time Thames Water did not yet fully understand the root causes of its deteriorating leakage reduction performance.

3.28 Thames Water also provided a certificate of adequacy in June 2017 at a time when it was still undertaking its root cause analysis for its leakage underperformance and before it had implemented the changes that it has told us are necessary to bring its performance back in line with its minimum commitments. It noted in its certificate "additional consideration has been given to the impact of the missed leakage target and the trunk main bursts and the remedial action that has been taken or is planned and how this is monitored on an ongoing basis."

3.29 However, at this point Thames Water's recovery plan only envisaged it first meeting its leakage performance commitment in 2019-20, and only then if the temperatures in that year were no colder than average (P50). It was not until November 2017 that it committed sufficient additional investment that it could be confident of meeting its leakage commitment if the weather was colder than average.

3.30 Both the certificate and the notice only place obligations on companies to the extent of their awareness and opinion. However, we are concerned that Thames Water's Board did not think that the issues it was facing warranted a

different certificate or a notification under paragraph 6A.2A(2), at least on a precautionary basis.

4. Financial penalty

- 4.1 Under section 22A(1)(a) WIA91 Ofwat may impose on an undertaker a penalty of such amount (not exceeding 10% of the regulated company's turnover in a relevant year) as is reasonable in all the circumstances of the case where it is satisfied that the undertaker has contravened or is contravening any Condition of its Licence.
- 4.2 Section 22A(9) WIA91 provides that penalties imposed under section 22A WIA91 are paid into the Consolidated Fund.

Period for which a penalty may be imposed

- 4.3 Pursuant to section 22B(2) WIA91, Ofwat must have regard to its most recently published [statement of policy](#) with respect to penalties ("**Statement of Policy**") when deciding whether to impose a penalty, and its amount. The breaches to which this penalty notice relates occurred from 1 April 2015 onwards and were the subject of a notice under section 203(2) WIA91 issued on 29 January 2018. The proposed penalty will therefore fall within the permitted time period for imposing a penalty under section 22C(1) WIA91.

The maximum amount of a penalty

- 4.4 Ofwat may not impose a penalty under section 22A greater than 10% of the applicable turnover of the company. The applicable turnover of the company is its turnover for its regulated activities for the year preceding the year of the penalty notice.
- 4.5 Thames Water's last business year ran from 1 April 2017 to 31 March 2018. Thames Water's applicable turnover derived from its activities as a water undertaker (its wholesale water business) in the 2017-18 business year was [£842.0 million⁸]. Accordingly, the maximum penalty for Thames Water's contravention in this case is 10% of this number, i.e. £84.2 million⁹. Section 22A does not set any minimum penalty.

⁸ Based on 2017-18 wholesale revenue.

⁹ See above.

Competition Act 1998

- 4.6 Section 22A(13) WIA91 provides that “before making an enforcement order or confirming a provisional enforcement order, the Authority (Ofwat) shall consider whether it would be more appropriate to proceed under the Competition Act 1998”. The findings in this notice do not relate to breaches of EU or UK competition law and Ofwat is satisfied that, for the purposes of Section 22A(13) WIA91, the Competition Act 1998 is not the most appropriate way of proceeding.

5. Ofwat's reasons for considering it appropriate to impose penalties and the proposed broad levels

5.1 Under section 22A(4) WIA91, we must specify the "other facts" which we consider justify imposing a penalty for a relevant contravention, and of the amount proposed.

5.2 We are satisfied that Thames Water has contravened section 37 WIA91 and Paragraph 6A.1 of Condition F of its Licence in relation to its leakage reduction performance and its management of its leakage reduction operations during the 2015-20 price control period. In determining whether to impose penalties for these contraventions in the amounts proposed, we have had regard to Ofwat's statement of policy and in particular the following factors:

- The seriousness and duration of the contraventions or failure;
- If the contravention or failure has damaged the interests of customers, the degree of harm caused and also any increased costs incurred by customers;
- If the application of a penalty would be likely to create an incentive to comply and deter future contraventions or failures;
- Any gains made by the undertaker (financial or otherwise);
- Any damage to other market participants;
- Any damage caused to the environment;
- Whether the contraventions or failure was or is of a trivial nature;
- Whether the contravention or possibility of a contravention would have been apparent to a diligent undertaker; and
- Precedents set under equivalent provisions for other utilities.

5.3 **The seriousness and duration of the contraventions:** Competent leakage management is essential to the continued provision of efficient and economic security of supply. Thames Water's poor implementation, management and oversight of its Alliance caused it to miss its leakage performance commitments that were much lower than the rest of the sector by some margin and contributed to its low SoSI score of 97 for 2017-18. This means that Thames Water is less able to deliver against its planned service levels in a drought, leaving customers at greater risk of supply restrictions in such circumstances, with knock on implications for businesses and daily lives.

- 5.4 This is the worst annual failure of SoSI by a company since 2011-12. With one exception within a planned scheme¹⁰, no company has had a SOSI below 98 since 2008-09, the year in which the worst performance was by Thames Water with a SOSI of 56. The projected leakage under-performance is the largest both in absolute size or normalised by property or length of mains since Thames Water's failure in 2003-04. No company has missed its leakage target for three years in a row since Thames Water in the years running up to 2005-06. And we remain concerned that Thames Water's leakage reduction performance is only just stabilising, despite having devised a leakage recovery plan since July 2015.
- 5.5 **If the contravention or failure has damaged the interests of customers, the degree of harm caused and also any increased costs incurred by customers:** As well as damaging security of supply, Thames Water's poor performance is likely to have affected consumers in other ways. At a practical level, residents in Thames Water's area have experienced unnecessary nuisance and disruption to their daily lives through misdirected street works. More fundamentally, while Thames Water has not gained financially from its poor performance, its customers were at risk of higher bills because of the costs associated with the contraventions and the remedial action now required.
- 5.6 Thames Water has told us that it will spend much more on leakage in AMP6 than it would have done had it not had shortcomings in its leakage management. Thames Water paid the Alliance for inefficient work before it started to address the root cause of its performance issues. It now has to bear the additional cost of reducing a higher level of leakage faster than it would have done had it managed leakage efficiently. And it has also had to process more water than otherwise to replace the water lost through leakage beyond an acceptable level.
- 5.7 Thames Water acknowledges that it has spent money inefficiently on leakage during AMP6. It has estimated the efficient cost of a unit of leakage reduction from its revised plans for 2018-19 and from this estimated the efficient cost of leakage reduction over the period. Using this approach Thames Water estimates that, by the end of AMP6 it will have incurred c£88 million more on leakage management than if it had operated efficiently. This estimate is

¹⁰ The company that delivered this performance was acting in line with its 2009 water resource management plan that was to deliver a SOSI below 100 in 2010 to 2014. This was because the company had a reduction to the amount of water it could report could be taken from the environment in 2007-08 that had a significant impact on its SOSI

associated with inefficient delivery in the three years up to April 2018 as Thames Water expects to be managing leakage efficiently in the final two years of AMP6. In addition, Thames Water estimates that by the end of AMP6 it will have spent c£4 million more on processing water than it would have done had its leakage performance been within its ODI performance commitments.

- 5.8 Under its PR14 settlement Thames Water would be allowed to recover roughly 50% of this excess expenditure from its customers through higher prices in AMP7, with the remaining additional costs borne by Thames Water's shareholders. On Thames Water's estimates, customers would ultimately bear an additional £46 million of inefficient expenditure because of Thames Water's poor management of its leakage reduction, as well as bearing the additional risk to their water supply and inconvenience of Thames Water's inefficient working methods. We welcome the fact that Thames Water has proposed measures as part of its settlement package to ensure that its customers do not bear these costs.
- 5.9 **If the application of a penalty would be likely to create an incentive to comply and deter future contraventions or failures:** The incentives in the leakage ODI did not deter Thames Water from its poor planning and implementation of its leakage management alliance and having inadequate management and oversight of its leakage performance. We are concerned that Thames Water's Board did not take sufficient action to investigate and address delivery issues in the Alliance before leakage performance fell below the ODI collar for 2016-17. Some of the papers we have read suggest that the Alliance perceived that the maximum ODI penalty for missing the leakage performance commitment was relatively small compared with the additional investment needed to improve performance. Delay may have been influenced by the relative cost to Thames Water of improving performance against the maximum ODI penalty for its leakage performance commitment. We are concerned that Thames Water did not appear to attach sufficient weight in its assessment to the impact of its performance on customers or its underlying legal duties. In our view, only a penalty can rectify this.
- 5.10 **Any gains made by the undertaker (financial or otherwise) from the contraventions:** Thames Water did not make any gains from the contraventions.
- 5.11 **Any damage to other market participants:** Thames Water did not cause damage to other market participants.
- 5.12 **Any damage caused to the environment:** Excessive leakage leads to more water abstraction than necessary, putting greater pressure on water levels and

the environment more generally. Thames Water's area is particularly dry: all of the exceptionally low flows that the Environment Agency recorded in 2017¹¹ were at flow indicator sites in east and south-east England. We are concerned that Thames Water's poor leakage management may have added unnecessary stress to an already vulnerable environmental situation.

- 5.13 **Whether the contraventions or failure was or is of a trivial nature:** We have outlined at paragraphs 5.3 and 5.4 the serious nature of these contraventions and their duration.
- 5.14 **Whether the contravention or possibility of a contravention would have been apparent to a diligent undertaker:** As we find in section 3, Thames Water's poor performance results from the shortcomings in Thames Water's operational planning, management and operational oversight of its leakage performance. Innovation invariably carries risk. What is striking about Thames Water's case is that it did not build in basic mitigations such as a lengthy test phase before the Alliance's full implementation or set up an adequate purchaser role for itself. The failures arising from the introduction of OneDesk and the work gang reductions were predictable and should have been anticipated.
- 5.15 In PR14 Final Determinations we clearly signalled the possibility of Ofwat taking enforcement action where a water company's performance goes below its agreed ODI collar. We have also previously taken enforcement action against Thames Water and other water companies for not adequately managing leakage.
- 5.16 **Precedents set under equivalent provisions for other utilities:** We are not aware of any precedent decisions by other regulators in respect of provisions directly equivalent to sections 37 WIA91 and Condition F. The Office of Rail and Road (ORR) has imposed a number of penalties on Network Rail since 2006 in respect of its planning and performance failures.
- 5.17 Notwithstanding 5.10 and 5.11, we consider the reasons mentioned above justify the imposition of penalties.

¹¹https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/666527/Water_situation_report_November_2017.pdf

Broad level of the penalty

- 5.18 Section 22A(10) limits a financial penalty imposed by Ofwat to a maximum of 10% of the relevant turnover of the regulated company. For these purposes, Ofwat considers relevant turnover to be that related to the provision of wholesale water.
- 5.19 Having regard to each of the relevant facts and matters and to all of the factors set out in the [statement of policy](#), Ofwat judges that the level of the penalty should be calculated by reference to a starting point of 3% of the relevant turnover, based on 2017-18 wholesale water revenue and assuming customers are adequately recompensed. This represents the broad level of the penalty and would equate to c£25.3 million.
- 5.20 This starting point is consistent with a serious and prolonged failure to adequately deliver a core operational function for a water undertaker. It is slightly lower than the penalties imposed on Southern Water (3.5%) and Severn Trent (3.1%) for deliberate misreporting to take account of the fact that the breaches were not deliberate. It is however higher than the broad level for previous fine against Thames Water for misreporting (0.7%), in recognition of the additional harm to consumers and the environment and the failures at Board level.
- 5.21 We have found that Thames Water has contravened both section 37 WIA91 and Condition F of its licence in relation to its management of leakage. However, given the similarity of the findings for each, in this case we are minded only to issue a single penalty.
- 5.22 As set out in the statement of policy, once the broad level of the penalty has been considered, other factors such as aggravating and mitigating factors may be taken into consideration. These may include, but would not necessarily be limited to:
- repeated contraventions or failures;
 - the continuation of a contravention or failure;
 - any involvement of senior management;
 - the level of cooperation with any investigation carried out
 - any attempts to conceal the contravention or failure;

- the proactive reporting of the contravention or failure to the enforcement authority;
- taking appropriate action to acknowledge and rectify the contravention or failure; and
- activities to provide restitution and compensation.

Aggravating factors

Repeated contraventions or failures

5.23 Thames Water met its leakage targets for ten consecutive years up to and including 2015-16. However it has had problems with leakage reduction and security of supply in the past. At the price review in 1999, Thames Water was set the target to reduce the risk of water shortages in London in times of drought to a level in line with the rest of England and Wales by March 2004. It did not do this. It transpired that Thames Water had an insufficient understanding of just how the water it produced was being used or lost and leakage actually increased for a number of years. In 2003, Ofwat noted it had considered whether it should take enforcement action but concluded it would “involve a long phase of consultation and we do not think [it] would contribute to any quickening of the process of achieving the requirements.” At this point Ofwat did not have powers to make financial penalties. These powers were introduced from 1 April 2005.

5.24 In 2006 Ofwat took action as Thames Water had missed its leakage target for 2005-06 and was at risk of not delivering the new requirements to reduce the risk of water shortages in times of drought to those in the rest of England and Wales by 2010. Thames Water provided a legally binding undertaking to spend approximately £150 million at its own expense – with no financial consequences for customers – directly to address the problems of failing water mains by replacing at least an additional 368 km of leaking pipes by 2009-10 in the London area. This also included a profile of performance that was required to be delivered. Thames Water reported in its June Return for 2010 that,

“The...368km of additional mains replacement has been fully delivered at the company's own cost”¹².

5.25 Thames Water has also had other delivery issues that resulted from failures in its systems of planning and internal control.

5.26 In April 2008 Ofwat imposed financial penalties on Thames Water for not providing guaranteed service standard (GSS) payments to customers and misreporting information for the period up to March 2006. As part of this Ofwat noted “The evidence shows that the systems and processes which Thames Water had in place to identify GSS events and monitor performance against those standards were inadequate and as a result Thames Water did not meet its obligations under the GSS Regulations.” It also set out “Ofwat considers that Thames Water's internal systems and processes were inadequate to ensure that non-financial information in the June Return was robust and that appropriate confidence grades were assigned. Ofwat considers that these deficiencies in Thames Water's systems led directly to Thames Water misreporting its compliance with the GSS Regulations.”

Any involvement of senior management

5.27 Senior management at Thames Water had information to understand the serious risk of missing its leakage performance commitments and falling beyond the parameters envisaged by the ODI scheme. It chose to report to the Thames Board that the risk could be addressed, including a specific board paper on the matter in November 2016.

5.28 It is not clear how senior management concluded that the risk could be averted beyond September 2016 without a clear step change in performance. From September 2016 senior management took no action that could be realistically expected to deliver such a step change within the 2016-17 year.

5.29 It was evident to senior management from June 2015 that Thames Water was not finding and fixing sufficient leaks to meet its leakage performance commitment. Thames Water's actions were inadequate to address the underlying problem. By not acknowledging the seriousness of the situation or take adequate, timely action, Thames Water did not meet its leakage and

¹² Thames Water June Return 2010 Board Overview, page 12.

security of supply performance commitments to customers for at least two years.

Any attempts to conceal the contravention or failure

5.30 By September 2016 there was a very high risk that Thames Water would miss its 2016-17 leakage performance commitment. This risk steadily increased, but was not adequately reported to Board until January 2017. Thames Water did not clearly inform Ofwat until April 2017, three months after it had accepted internally it would miss its leakage performance commitment. We discuss at section 3 the fact that throughout this period, Thames Water's Board had certified the adequacy of its operations under Condition F paragraph 6A.2 and had not provided any notice to Ofwat of issues arising in relation to systems and governance adequacy under paragraph 6A.2B.

5.31 While there is no evidence of Thames Water deliberately making efforts to conceal the failure, it was, until recently, less open than we would expect a public utility to be.

Mitigating factors

The level of co-operation with any investigation carried out

5.32 Thames Water has complied in full with Ofwat's investigation providing a full response to Ofwat's requests for information within the times specified.

The proactive reporting of the contravention or failure to the enforcement authority

5.33 Thames Water proactively reported that it has significantly missed its leakage and security of supply performance commitments to Ofwat, but not until April 2017, three months after it had accepted internally it would miss them.

5.34 While there is no evidence of Thames Water deliberately making efforts to conceal the failure, the openness of the company was, until recently, less than we would expect a public utility to be.

Activities to provide restitution and compensation

- 5.35 We welcome the fact that Thames Water has proposed measures as part of its settlement package to ensure that its customers do not bear inefficient costs.
- 5.36 Thames Water has also highlighted that it has paid the automatic penalties that it will incur under the PR14 ODI regime for its 2016-17 performance as an attenuation of customers' bills in 2018-19, rather than wait for these to be reconciled at PR19.
- 5.37 However, this notice relates to performance well outside the parameters of the ODI scheme, and the calibration of any ODI penalties. At PR14 automatic penalties were subject to a penalty collar to avoid companies bearing uncontrollable risks. However Thames Water's performance has fallen considerably below the level for the penalty collar and we consider Thames Water's this underperformance as being entirely within management control.
- 5.38 A key assumption underlying the calibration of the automatic ODI penalties was that under-investment would be the main cause of under-performance. Under-investment would also mean lower bills for customers (under PR14, customers share in any savings a company makes) and so ODI penalties were reduced to take account of the benefit customers would have also received through lower bills.
- 5.39 However, Thames Water has not saved money, but instead incurred additional expense inefficiently. In the absence of the package of proposals put forward by Thames Water, customers will not receive the expected share of lower costs, but instead, stand to pay more because of inefficient spending caused by the contraventions. The settlement package Thames Water has agreed to, however, ensures that customers will not bear inefficient costs arising from its leakage performance issues in this price control period.

Taking appropriate action to acknowledge and rectify the contravention or failure

- 5.40 Thames Water told us that it has made improvements to its governance arrangements. In its response to our section 203 request for information, Thames Water stated that it had undertaken a substantial restructuring of the Alliance. It reported that "by 1 December 2017, as part of this restructuring exercise, around 700 staff have been in-sourced, enabling the performance of the field force to be much more closely controlled by Thames Water

management, rather than relying on contractual incentives applying to 'rainbow teams' of Thames Water and contractor operatives". It states that greater control of its repair and maintenance performance has provided improved visibility of performance, and that there is now "very strong engagement between the Board and the Executive management on all aspects of the business, including leakage performance".

- 5.41 On transparency, Thames Water reports it has taken positive steps to improve this around the performance of its water network, for example by providing in-depth regular updates of its leakage reduction performance to its Customer Challenge Group ("CCG") and publishing monthly website updates on its leakage performance for customers and stakeholders since March 2018 . It states that it is also engaged with its CCG on the development of its external reporting pack which it intends to share with all its customers. Further, Thames Water has told us that it is substantially investing in social media as a means to share with its customers the challenges it faces and the approach it is taking to addressing them.
- 5.42 On performance, Thames Water now has more resources available to provide it with data to find and fix leaks, allowing it to improve the efficiency and productivity of its leakage operations.
- 5.43 Thames Water also reports that it has reviewed and improved the commercial model for the Alliance, while maintaining the core principle of collaboration with its partners. In particular it has changed the risk and reward mechanism, which aligns the contract with only those activities that the alliance members can influence. Thames Water states it has sharpened its focus on managing risks and taking decisions around targets, with Alliance members clearly focused on improving operational effectiveness. It has included more Thames Water representation in the way the model operates, for example the new operating model vests powers and controls in the Thames Water Head of Networks. It has also created an Alliance Assurance Office within Thames Water's Commercial team which enhances the role of Thames Water as the Purchaser, looking to provide high level assurance and stronger governance within Thames Water that the contract is being carried out effectively.¹³

¹³ Source: Thames Water Section 203 response of 18 February 2018

5.44 Thames Water proposed providing us with formal [undertakings for the purposes of section 19\(1\)\(b\) WIA91](#) to rectify the contraventions and secure future compliance. We consulted on these proposals in the Draft Penalty Notice and the responses we received were supportive. Thames Water has now given these undertakings, subject to three minor changes. One respondent asked whether business retail customers would be able to benefit from the financial commitments. The undertakings now clarify that the benefits will apply to Thames Water's wholesale tariff to enable retailers to pass this through to their customers. For practical reasons, Thames Water commits to provide Ofwat and CCWater with monthly leakage updates on a timely basis, rather than simultaneously with their publication on the Thames Water website. Thames Water has also agreed to report to us periodically on its compliance with the undertakings. In summary, Thames Water has undertaken:

- To ensure that Thames Water's customers do not bear the costs of its failings, a reduction in its total revenue allowance for AMP7 of the greater of £46 million and its total excess expenditure on leakage management in AMP6 (as calculated in accordance with the methodology referred to in Thames Water's proposals discussed with Ofwat on 19 March 2018). This ensures that the generation of customers affected by the overspend is properly compensated for it ("overspend compensation").
- Not to reverse the attenuation of customers' bills in 2018-19 to reflect the £10.8 million¹⁴ of automatic ODI penalties Thames Water incurred as a result of its leakage and SoSI performance in 2016-17.
- To provide a rebate on customers' bills in 2019-20 to reflect the total amount of any expected automatic ODI penalties for leakage and SoSI performance for 2017-18. On the basis of forecasts in May 2018 these automatic ODI penalties are expected to total some £19.85m¹⁵. A rebate clearly visible to customers on their bills will emphasise the punitive nature of the settlement and serve as a reminder to Thames Water to

¹⁴ £10.8m is in 2012-13 prices – in 2018-19 prices this equates to £12.6m. We will check at PR19 that this was applied in line with Ofwat's Reconciliation Rulebook.

¹⁵ £19.85m is in 2012-13 prices – in 2018-19 prices this equates to £23.04m. This will be applied in line with Ofwat's Reconciliation Rulebook.

keep customers at the heart of what it does. Thames Water will agree with Ofwat the wording to be included on the face of customers' bills.

- To provide a rebate on customers' bills in Years 1 and 2 of AMP7 (2020-21 and 2021-22) to reflect the total amount of any automatic ODI penalties for leakage and SoSI performance for 2018-19 and 2019-20 respectively. On the basis of forecasts in May 2018 these automatic ODI penalties are expected to total some £16.65m¹⁶. This ensures that the penalty is returned to the generation of customers whose minimum expectations for leakage management were not met.
- To provide a further rebate on customers' bills in 2019-20 to reflect an ex-gratia payment of £7 million in recognition of its governance failings ("ex gratia bill reduction").
- To further incentivise a return to acceptable performance, removing the penalty collar in the calculation of any ODI penalty for leakage reduction performance for the years 2018-19 and 2019-20, applying this as a rebate on customers' bills in 2020-21 and 2021-22 if they occur. On the basis of forecasts in May 2018, this would total some £10.4 million¹⁷ ("additional ODI penalty") from 2018-19 performance.
- To apply the resulting rebates on a proportional basis via its wholesale tariffs, so that the amount each customer receives will depend on their consumption levels. This will ensure the benefits of the rebates flow through to both Thames Water's direct household customers and the retailers that serve business customers in Thames Water's area. Thames Water will work with retailers to so that this is clearly communicated to customers.
- To prepare its PR19 business plan on the basis of a commitment to reduce leakage by a further 15% (or better) from its 2019-20 performance commitment level and an ambition to reduce it by 50% (or better) from the 2016-17 level in subsequent price control periods.

¹⁶ £16.65m is in 2012-13 prices – in 2018-19 prices this equates to £19.33m. This will be applied in line with Ofwat's Reconciliation Rulebook.

¹⁷ £10.4m is in 2012-13 prices – in 2018-19 prices this equates to £12.0m. This will be applied in line with Ofwat's Reconciliation Rulebook.

- To meet its Performance Commitment for leakage for 2019-20.
- To publish monthly reports on leakage reduction performance against its leakage recovery plan prominently on its website and provide these to Ofwat and Thames Water's CCG on a timely basis. These reports will compare monthly MI/d of leaks found and fixed compared to what it had planned to achieve, and explain the reasons for any differences. The reports should be easily accessible to customers (in terms of availability, style and content) and facilitate meaningful customer feedback. The reports should also identify if there are any material risks to ongoing delivery of the plan and explain how these are being addressed.
- To take additional steps to ensure meaningful engagement with customers on leakage performance and any potential risks linked to this. This will include commitments to develop a dedicated leakage micro-website to provide and seek customer feedback on leakage activities, Board member participation in and oversight of its customer engagement programme and its Board receiving and discussing customer feedback on leakage on a regular basis.
- For the remaining two years of AMP6, to ensure that no Executive or senior management incentives will be paid for leakage performance below its performance commitment.
- To appoint an independent monitor to certify that information in its monthly leakage reports is prepared in a way that is consistent with its AMP6 performance commitments.
- That in providing certificates under Condition F, to ensure that Thames Water's Directors will do so on the basis of their reasonable belief, formed on the basis of reasonably diligent enquiry. The Directors will provide us evidence of that enquiry, a statement of the main factors they have taken into account in providing the certificate and procure a report to be shared with Ofwat from (an) external auditor(s) on the appropriateness and effectiveness of their enquiry process. The report will include the auditor's findings on:
 - whether Thames Water has appropriate and effective compliance and assurance policies in place, which are regularly reviewed by appropriate and qualified individuals within Thames Water, and updated where necessary;

- whether these policies are implemented and adhered to;
- how any compliance issues identified through any of these processes have been addressed;
- whether Thames Water's Board is regularly informed of the operation of these policies and any material potential compliance issues;
- Whether Thames Water should adopt any improvements to these processes.

The Directors will also provide us with an explanation of how they have addressed any adverse findings from the external auditor(s).

- To carry out a governance review of Thames Water Utilities Limited's and Kemble Water Holdings Limited's Boards and the committees that report into them, to ensure that Thames Water is able to operate efficiently and effectively, and sufficiently independently of its parent companies, to the benefit of its customers.
- To maintain sufficient management control over the delivery of core operational functions (whether or not delivered by Thames Water staff), that it is able to address any issues which risk the delivery of its performance commitments in a timely manner.
- To provide Ofwat with quarterly updates, externally assured and assured by Thames Water's Board, on its compliance with the undertakings.

The proposed penalty

5.45 In considering the amount of the penalty to be imposed, Ofwat has taken account of the seriousness, duration and impact of the contraventions. We are particularly concerned about the insufficiency of Thames Water's Board's oversight of leakage performance, particularly its apparent lack of challenge on operational aspects of its leakage management within the Alliance before performance fell irretrievably beyond the ODI collar for 2016-17.

5.46 On the evidence, however, Thames Water's actions are more negligent rather than deliberate. We also take account of the mitigating factors in this case, including:

- the seriousness with which Thames Water is now addressing its leakage reduction performance issues and the steps it has already taken,
- the undertakings Thames Water has given to provide confidence that it will fully remedy its performance and provide adequate compensation to customers, and
- its level of cooperation with the investigation.

5.47 In the absence of these measures Ofwat would have been minded to impose a penalty of 3% of Thames Water's applicable turnover (for 2017-18). This amounts to c£25.3 million.

5.48 We think the package of measures set out in 5.44 will offer greater benefits to customers than imposing this level of financial penalty. The ex gratia bill adjustment and the uncollared ODI penalties (on current forecast levels) would together amount to about £17 million or around 2.0% of Thames Water's relevant turnover for 2017-18. However, we acknowledge that Thames Water has sought and engaged in settlement in a constructive fashion, and that it has also committed to provide timely compensation to customers for its inefficient expenditure. Having regard to the overall balance of mitigation and aggravation and all other relevant factors, including the package of measures put forward by Thames Water, Ofwat now considers it appropriate to impose a nominal penalty of £1.

5.49 We note that some of the consequences of Thames Water's poor leakage reduction performance issues are not addressed by this package, particularly impacts on customers if they experience water restrictions or interruptions from reduced water levels during the remainder of this price review period. We expect Thames Water to take efficient and effective measures to avoid such restrictions and adequately to compensate customers should they occur.

6. Summary of representations or objections received in response to Ofwat's Section 22A(4) Notice

- 6.1 In giving notice under section 22A(4) WIA91 of a proposal to impose a penalty Ofwat is required to specify a period within which representations or objections with respect to the proposed penalty may be made. Having published a notice of Ofwat's intention to impose a penalty on 7 June 2018, interested parties were able to submit representations or objections until 29 June 2018. Ofwat received three representations; from CCWater, Affinity for Business and an individual consultant. The points raised in these and our response are set out below. We have published copies of the above representations [on our website](#).
- 6.2 CCWater was fully supportive of our proposals.
- 6.3 Affinity for Business pointed out that the notice did not specify whether rebates would apply to business customers as well as household customers, given that Thames Water has exited the business retail market. It proposed that the rebate should be applied to Thames Water's wholesale charges so that both household and business customers would benefit.
- 6.4 Thames Water has clarified in the undertakings it has given that the rebates will be applied to wholesale charges. It has also committed to working with retailers to enable this to be clearly communicated to business customers.
- 6.5 The individual consultant raised three points:
- a) He suggested that paragraph 2.26 wrongly identified Macquarie Infrastructure and Real Assets (MIRA) as Thames Water's former main shareholder rather than Macquarie European Infrastructure Fund (MEIF). We have amended paragraph 2.26 to reflect Macquarie European Infrastructure Fund 2 (MEIF2) was Thames Water's former main shareholder, and that it was managed by MIRA.
 - b) He noted that many of the issues Thames Water is now having to resolve originated under its previous shareholders and asked if Ofwat or Thames Water is seeking redress from the shareholders who sold out in 2016-17 to recover some of the additional costs Thames Water will incur in order to address its leakage underperformance. Ofwat does not have the power to seek redress from Thames Water's previous main shareholders.

- c) He asked for a clearer explanation of the expected values and timetable for how components of the penalties on Thames Water will affect customers. As detailed in paragraph 5.44, Thames Water will apply the rebates on a proportional basis via its wholesale tariffs for all customers. For 2019-20 this will amount to a 3% reduction in the average water bill, although the specific amount each customer will receive will depend on their consumption level. Thames Water proposes to highlight both of these values on the household bill. Thames Water estimates the rebate will amount to £6.96 off an average household bill in 2019-20.

6.6 The individual consultant also raised other points which are relevant to the wider work which we are currently undertaking such as on Ofwat's change of control consultation, and which we do not address as part of this notice. We have shared these with the respective workstreams so they can be considered in resulting decisions.

6.7 In light of the above representations, this notice includes updates to address the relevant points raised.

- a) at paragraph 5.44 we have set out how business customers will also benefit from the rebate and how Thames Water proposes to coordinate with Retailers on how this will be implemented.
- b) We have amended paragraph 2.26 to reflect Thames Water's main previous shareholder.

A1 Glossary of Terms

Aborted job	A leak repair job that has not been completed, typically because no leak is found where it has been marked up on the ground.
Acoustic loggers	Leaks make a noise and are often located by pinpointing the source of the sound. This can be undertaken manually with a listening stick or electronically with an acoustic logger. Acoustic loggers are electronic remote listening devices which send an alarm to a central server when they detect the noise associated with a leak.
Appointee	Water company with an Instrument of Appointment under the Water Industry Act 1991
Back to Back	Contract term when a sub-contract contains the same terms and conditions as parent contract. Creates the same incentives across the supply chain but can also be used to pass risk through to sub-contractors.
CaLM	Climate and Leakage Model – Thames Water's model of water demand and supply which includes a predictive tool to assess performance against weather.
Certificate of Compliance/ certificate of adequacy	As part of the licence condition companies are required to confirm and certify annually that their systems and process' are compliant with their licence conditions
Consolidated Fund	The Consolidated Fund is the Government's general bank account at the Bank of England. Payments from this account must be authorised in advance by the House of Commons. The Government presents its 'requests' to use this money in the form of Consolidated Fund Bills.
CCG	Customer Challenge Groups (CCGs) are independent local groups of customer representatives and other stakeholders. They were established at PR14 to provide challenge to water companies' business plans. CCGs ensure that local and regional issues are properly considered and that the views of the company's entire customer base are taken into account. More information about CCG can be found at https://www.ofwat.gov.uk/regulated-companies/price-review/2019-price-review-final-methodology/customer-challenge-groups/
Distribution main	Water supply main smaller than 300mm (12inch) and typically larger than 80mm diameter.

DMA	District Meter Area - a discrete area of the network bounded by meters and closed valves. Property types and hence average demands should be understood in the area.
Dry Hole	An attempt to repair a leak where no leak is found at the point highlighted for excavation.
EA	Environment Agency
Eight2O	Unincorporated Joint venture of seven companies who, together with Thames to make the eight, deliver the major capital works including, trunk main and distribution main replacement and pressure management
Event	Thames terminology for a business process outside of Business as Usual
Find and fix	The process for leakage detection and repair of all active and visible leaks.
FTE	Full Time Equivalent - typically when referring to head count
June Return	Up until 2011, water companies sent Ofwat information about their performance each year. This annual data submission (or "June Return") was published to allow customers and stakeholders to understand each company's performance. The June Return was superseded by the Annual Performance Report.
Work gangs	Site based teams (could be 1 or more person) undertaking leakage detection or repair activity
L3 leakage event	Level three event - one of Thames four levels of response to circumstances outside business as usual.
Leakage	Water that cannot be accounted for in the Water balance. It is a mixture of Real and Apparent Losses. Apparent losses are also known as Unaccounted for Water.
Leakage Detection	Activity to locate leaks - targeted effort where leaks are suspected from inspection of data (DMA nightlines) or customer reports of leakage.
Leakage Exec(utive)	The senior team reporting to the Head of Wholesale Water.
Leakage Recovery Plan	Specific Programme set up by Thames Water with the aim of achieving their end of AMP leakage targets
Leakage Repair	Site operation to repair a leaking water mains
Mains Replacement	Programme of replacement of water mains at the end of their asset life. Mains replacement is targeted in areas on a number of drivers including water quality, pressure, burst frequency and leakage.
MI/d	Mega litre (1,000,000 litres) per day

Obligations	Statutory and licence commitments that the Appointee must meet
One Desk	Thames Water's programme to improve efficiency of scheduling site operations
Opex	Operating Expenditure – expenditure that cannot be capitalised in the company accounts
ODI	Outcome Delivery Incentives. Mechanism established by Ofwat at PR14 to allow companies to agree outcomes with their customers and to incentivise out performance against those outcomes (and to penalise under performance).
Outcomes	Benefits delivered to customer, environment or wider society
Penalty Collar	Limit of the pain mechanism associated with failure to perform against agreed Outcome Delivery Incentives
Performance Commitment	Undertaking by the company to deliver a level of service - e.g. a leakage level.
PR14/PR19	Price review in 2014 or 2019 respectively
Pressure Management	The process by which water companies moderate flow (i.e. smooths water pressure) through their network. Pressure management helps to prevent bursts and limits the amount of water lost through leaks.
Price Control	Limit set by Ofwat on the level of revenue that companies can recover from customers
Purchaser	The term referred to in the infrastructure alliance contract for Thames Water as the client
Regulated Activities	The activities that companies are licensed to undertake under the water industry act 1991 and their conditions of licence. Companies are at liberty to undertake un-regulated activities.
Relevant Undertaker	The company licensed to undertake regulated activities under WIA91
R&M	Repair and Maintenance. Typically the non-capital works to maintain their network undertaken by an undertaker. As distinct from new capital works such as water mains replacement.
ROI	Risk Opportunity and Innovation Fund. The difference between Thames Water's 'contracted amount' being the target cost and the actual costs submitted by the IA parties. The profit/loss to be shared by the IA parties.
Schedule of Rates	Prices submitted by contractor to undertake individual discrete jobs. A schedule of rates (as opposed to the IA

	'cost-plus' contracts) would pass the risk for variability in cost to the contractor. A schedule of rates also incentivises the contractor to increase work rate - working harder not smarter.
SoSI	Security of Supply Index - an index of the ability of the company to supply water to planned service levels during a drought. 100% is the target and maximum score. Any hypothetical value > 100% would therefore be reported as 100%.
Totex	Total Expenditure (capital and operational expenditure) a financial tool introduced by Ofwat in PR14 (AMP6)
Trial Hole	An excavation to investigate ahead of planned works. Trial holes can be used to investigate ground conditions, presence of other utilities or to survey the main to be worked on (for size, material condition etc.).
Trunk Mains	Larger mains feeding from the Water Treatment Works and Service Reservoirs. Typically customers are not supplied directly from trunk mains. Trunk mains often operate at higher pressures than the downstream (distribution) mains.
UFW	Unaccounted for Water - The industry uses this term to mean real and apparent losses of water. Thames uses the term for apparent losses (water delivered to customers but not accounted for). Apparent losses are water that has to be reported as leakage but is actually consumption. These may be properties with higher than average occupancy.
Water Balance	Equation to account for the water leaving the treatment works to enter the distribution system - sometimes called Water Into Supply (WIS) or Distribution Input (DI) – and either downstream meters or consumption.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales. Our vision is to be a trusted and respected regulator, working at the leading edge, challenging ourselves and others to build trust and confidence in water.

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