



Response to Ofwat's PR19 Draft Determination for Thames Water

Appendix

TW-DD-A12

Outcomes

30 August 2019



Table of contents

Section 1	Outcomes	2
A	Introduction	2
B	Per capita consumption	4
C	Metering	6
D	Acceptability of water to consumers	6
E	Internal sewer flooding	7
F	Blockages	11
G	Pollution incidents	16
H	D-MeX	20
I	Renewable energy produced	20
J	Sludge treated before disposal	21
K	Reducing risk of lead	21
L	SEMD	22
M	Environmental measures delivered	25
N	Thames Tideway PCs/ODIs	26
O	Empty household properties	27
P	Number of customers on the priority services register	27
Q	Achieving British Standard BS18477 for Inclusive Service Provision	29
R	Percentage of satisfied vulnerable customers	30
S	Power resilience	32
T	Measures to be removed	32
U	Agreed measures	33
V	Revisions to the outcome performance commitment appendix	33
W	Conclusion – explaining the gap	35



Section 1

Outcomes

A Introduction

- 1.1. In this Appendix, we set out our plan for remaining PCs and ODI rates. We discuss:
- **Section B:** Per capita consumption;
 - **Section C:** Metering;
 - **Section D:** Acceptability of water to consumers;
 - **Section E:** Internal sewer flooding;
 - **Section F:** Blockages;
 - **Section G:** Pollution incidents;
 - **Section H:** D-MeX;
 - **Section I:** Renewable energy produced;
 - **Section J:** Sludge treated before disposal;
 - **Section K:** Reducing risk of lead;
 - **Section L:** SEMD;
 - **Section M:** Environmental measures delivered;
 - **Section N:** Thames Tideway PCs/ODIs;
 - **Section O:** Empty household properties;
 - **Section P:** Number of customers on the priority services register;
 - **Section Q:** Achieving British Standard BS18477 for Inclusive Service Provision;
 - **Section R:** Percentage of satisfied vulnerable customers;
 - **Section S:** Power Resilience;
 - **Section T:** Measures to be removed;
 - **Section U:** Agreed measures;
 - **Section V:** Revisions to the outcome performance commitment appendix
 - **Section W:** Conclusions.
- 1.2. A summary table of our responses is shown below.



Table 1: Our proposed approach

Measure	Ofwat DD 2024/25 target	Proposed Business Plan Scenario			
		2024/25 target	Glide path to 2024/25	ODI penalty rate	Other
Key areas of disagreement with the DDs					
Leakage <i>(based on MI/d AMP6 annual average methodology)</i>	477* (25% reduction)	509 MI/d (20% reduction)	Our April plan basis	✓	Reducing collar to 5%
Supply interruptions <i>(mins per property)</i>	3 mins	6 mins	DD glide path shifted upwards to reflect new end target	Our April plan basis	14mins, 42 sec collar (April plan basis)
Unplanned outages <i>(% peak week capacity)</i>	2.34%	5%	Straight line from 18/19 position similar to other companies	Non-financial ODI	True-down for specific related enhancements
Mains repairs <i>(No. per 1k km of mains)</i>	231.3	✓	Straight line from current position similar to other companies	Our April plan basis	
CRI <i>(Index)</i>	0.00	0.00	n/a	✓	Exclusion of metalddehyde
C-Mex	n/a	n/a	n/a	n/a	Proposing an alternative structure to the incentive, and other changes
Other measures**					
Per capita consumption <i>(Litres/head/day 3 year average)</i>	6.3% reduction	✓	✓	✓	
Metering	-	-	-	-	Rejected - duplication with other PCs
Acceptability of water to consumers <i>(No. contact/1000 population)</i>	0.6	✓	✓	Our April plan basis	
Internal sewer flooding <i>(No./10k properties)</i>	1.34	✓	New profile to reflect actions to meet Ofwat target	Our April plan basis	Exclusion for extreme weather; Collars as per our April plan basis
Blockages <i>(Number)</i>	62,500	✓	✓	Our April plan basis	Penalty collar to 120k
Pollution incidents <i>(No. /10k of mains)</i>	19.5	✓	✓	Our April plan basis	Reducing collar as per our April plan basis
D-MeX	n/a	n/a	n/a	n/a	We comment on the structure of the metric
Renewable energy generation <i>(GWhrs)</i>	517	✓	✓	✓	Remove cap/collar
Sludge treated before disposal <i>(%)</i>	n/a	n/a	n/a	n/a	Excluding untreated sewerage exported to 3 rd parties for treatment
SEMD	100%	✓	-	AMP6 legacy PC, ODI rate same as AMP6; AMP7 rate related to project delay	Remove AMP6 legacy PC;
Environmental measures definition <i>(No. sites)</i>	724	✓	✓	✓	Ability to update target based on EA agreed changes
Empty household properties (voids) <i>(% of household properties)</i>	✓	✓	✓	✓	-
Number of customers on the priority services register <i>(% reached/actual/attempted contact)</i>	7% / 50% / 90%	✓ / 30% / ✓	n/a	n/a	
Achieving British Standard BS18477 for Inclusive Service Provision	✓	✓	Accreditation by 2020/21	✓	Drafting change on first year target

Source: Thames Water. ✓ = accepting DD target/basis; * Rebased for comparability with the April plan basis; ** Thames Tideway Tunnel PCs discussed in Appendix TW-DD-A10-Thames Tideway Tunnel.



B Per capita consumption

Issue summary

- 1.3. The DD proposes a challenge to our proposed performance commitment, reducing PCC by 6.3% by 2025 compared to our proposed target of 4.2%. Following Ofwat's feedback, we have been through a rigorous process to re-interrogate our delivery plans, demanding more ambition from our business regarding performance commitments. We consider that Ofwat's proposed target may be achievable, and are therefore challenging ourselves to hit this tougher target.
- 1.4. This is an extremely challenging target. Ofwat has set a rate of improvement based on the upper quartile rate of improvement across the sector. This takes no account of differences in companies' circumstances (e.g. metering penetration).
- 1.5. For further details on our behavioural programme and approach to smart meter installations, please refer to TW-DD-A03.
- 1.6. In addition, Ofwat has invited stakeholders to consider the case for requiring companies to deliver a 10% reduction over the 2020-25 period or forward looking upper quartile performance. A 10% reduction over AMP7 is highly unlikely to be deliverable given the significant behavioural change this would require from our customers, many of whom are not metered.
- 1.7. Furthermore, it would represent a major, costly change from the plan we consulted our customers on. It would also represent a major change to our WRMP. Our Water Resource Management Plan has been through a rigorous consultation process. Moving to a 10% target would effectively be over-writing this process based on a top-down proposal being subject to a six week consultation.

Performance commitment

- 1.8. We agree that setting and delivering significant PCC reductions is an important part of securing the nation's long-term water security. Reducing PCC involves using water efficiency devices and changing daily behaviours in households and businesses. These are not easy, short-term objectives. Our April Submission PCC reduction performance commitment was to deliver a 4.2% reduction in PCC, from 141 to 136 l/p/day. This would require delivering single year (as opposed to a 3-year average) PCC of 135.05 l/p/day in 2024-25.
- 1.9. Our 4.2% target relied on our Progressive Metering Programme and Smarter Home Visit water efficiency work streams. Each involves customer-specific help to change behaviours and reduce water use. Individual properties reduce their Per Household Consumption (PHC) by about 20% following a meter installation and in-home water efficiency service (approx. 13% reduction with just a meter). Our ongoing communication awareness programmes use an omni-channel approach and incorporates our new +100 strong stakeholder partnership programme. We are working with journalists and social influencers to drive awareness and behaviour change on an ongoing basis, rather than in response to weather or drought risk. We also outline our specific engagement for our metering installations in TW-DD-A03.
- 1.10. Ofwat's DD performance commitment for PCC requires a 6.3% reduction in household customer water use, from 140 to 133 l/p/day. This would require delivering a single-year PCC of 128.4l/p/day in 2024-25, which is 6.66 l/p/day less than the end-AMP7 value as per Ofwat's IAP of our April Plan (see Table 2).



- 1.11. Across a 2024-25 population of 10,574,922, the further 2% PCC reduction to our 3-year rolling target will require an additional 70.45 Ml/d demand reduction.

Table 2: Extent of actual PCC reduction (litres/person/day) to meet targets

	Unit type	2020-21	2021-22	2022-23	2023-24	2024-25	% reduction
April BP	3-year average	141	140	139	138	136	-4.2%
April BP	In-year actual	140.0	138.8	137.5	136.2	135.0	-3.8%
Ofwat DD	3-year average	140	139	137	136	133	-6.3%
Ofwat DD	In-year actual	139.3	136.5	135.8	135.0	128.4	-8.6%

Source: Thames Water analysis.

- 1.12. Relying to this extent on demand reductions to provide resilience to drought protection, population growth and climate change is too great a risk, and a balance of supply options is still required. We therefore recommend the supply options remain in our Updated rdWRMP19 plan to balance the risk of not achieving the PCC reduction and the risk it is not sustained in AMP8.
- 1.13. The target takes no account of different operating circumstances of companies
- 1.14. Ofwat has set a reduction in consumption performance commitment level to 6.3% reduction, which is the upper quartile of proposed reductions by all companies. This rate of reduction has been driven by five companies, all with higher levels of metering than Thames Water.

Table 3: Metering penetration and PCC

	Affinity	SES	Southern	South East	Yorkshire	Thames
Metering penetration in 2020	61%	61%	88%	88%	59%	49%
PCC in 2020	151.6	145.8	130.4	149.7	131.2	142.0
Proposed PCC reduction by 2025	12.5%	6.6%	7.2%	6.3%	9.1%	6.3%

Source: Meter penetration data from 'Feeder model 1: Wholesale water – Master data', PCC from App1.

- 1.15. As can be seen from the above, all companies with an upper quartile level of reduction, have a higher metering profile than Thames Water – in particular, Southern Water and South East Water. Having a higher meter penetration means that water efficiency programmes are more effective, as customers can observe the benefits of saving water, and have a clear financial incentive for saving water.
- 1.16. The company with the highest level of reduction is Affinity Water, but it should be noted that it is starting from a much higher base position than Thames Water (152 l/p/d compared to 142 l/p/d), and has a proportionately larger meter roll out programme in AMP7.
- 1.17. All of the above points show how challenging the 6.3% target will be, and the issues with Ofwat's approach. While we consider that this target may be achievable in AMP7, we would not support Ofwat deriving PCC targets in the future using such a simplistic comparison-based approach. We also do not consider that a target beyond the one proposed is likely to be deliverable. It would also have significant costs associated, which we would need to consult with our customers whether they were willing to pay for such a change.



Request of Ofwat

- 1.18. We have significantly challenged ourselves to accept the 6.3% reduction target from our business plan's proposal of 4.2%. We do not consider that a 10% target would be deliverable in AMP7. It would represent a major change to our WRMP, and any such move should be subject to substantial consultation. Therefore, we do not support Ofwat's proposal to require companies to deliver a 10% reduction over the 2020-25 period or use a forward looking upper quartile performance.

C Metering

Issue summary

- 1.19. Ofwat has set two new performance commitments for smart meters in London:
- PR19TMS_M01 Installing new smart meters in London
 - PR19TMS_M02 Replacing existing meters with smart meters in London.
- 1.20. Ofwat has assumed the metering cost adjustment case is isolated from our other ODIs and therefore has adopted cost-recovery performance commitments to protect customers from non-delivery.
- 1.21. We do not accept these additional performance commitments because they duplicate penalties with our leakage and PCC performance commitments. We are relying on our metering program to achieve our targets for our leakage and PCC, and have used the costs of this program to develop the marginal costs for the related ODIs. Specifically, we have split the incremental metering cost and benefit between our leakage and PCC ODIs. Customers are already protected if we don't achieve our targets.
- 1.22. In addition, the targets selected by Ofwat do not match the performance commitment definitions outlined in its Thames Water outcomes performance commitment appendix. Ofwat has specified it seeks to measure the impact of our metering program on residential customers in London, but it has included counts of meters outside of the London water resource zone (WRZ) and meters for non-household customers. Please also refer to our data tables commentary (TW-DD-005-1).

Request of Ofwat

- 1.23. We request Ofwat removes the M01 and M02 performance commitments because these duplicate the costs associated with our cost adjustment case with the marginal costs for our leakage and per capita consumption performance commitments.

D Acceptability of water to consumers

Issue Summary

- 1.24. The DD set the level for this performance commitment at the level proposed by Thames Water in September 2018, but removed the outperformance rate, and adjusted the underperformance rate from -£0.27 million per unit to -£8.35 million per unit.



- 1.25. We are concerned that this material intervention exposes Thames Water to an unreasonable level of penalty, orders of magnitude worse than we had proposed.
- 1.26. Our performance for this measure over the last few years has averaged 0.6 contacts per 1,000 population served. This level of performance has placed us consistently as the best amongst the ten largest water and sewage companies (WaSCs) in England and Wales.
- 1.27. We believe that a score of 0.6 is a stretching target as it prevents any deterioration in service and enables us to retain our position in the industry. Had this target been in place in AMP6 we would not have achieved it in three of the years.
- 1.28. We proposed modest outperformance and underperformance rates, which reflect the fact that we are already high performers in this area and our plan for AMP7 is to maintain our performance at this stretching level. Our incentive rates are based on extensive customer research which shows that customers attach a low marginal benefit to further improvements in our already-high performance.

Request of Ofwat

- 1.29. We have challenged ourselves to maintain an ambitious target for AMP7 (and in the longer term) which keeps our performance at the upper quartile level and as the best performer of all the largest WaSCs.
- 1.30. We request that Ofwat accepts the underperformance rate we proposed in our April Submission, as being a reasonable level of penalty for underperformance against our upper quartile level of performance.

E Internal sewer flooding

Issue summary

- 1.31. The DD set the level for this performance commitment at (a forward-looking) upper quartile. We have concerns about:
 - operating in Thames region drives higher costs; and
 - increasing the collar level removes protection against factors outside our control, and;
 - our April plan collars responded to customer research.
- 1.32. Since receiving Ofwat's DD, we have listened carefully to Ofwat's feedback and have been through a rigorous process to re-interrogate our delivery plans, demanding more ambition from our business regarding our performance against this measure.
- 1.33. Our plans for AMP7 include the roll out of an untested, innovative approach, using low-cost sewer monitors in combination with machine learning from alarms to proactively deploy gangs to clear potential blockage build-ups before internal flooding occurs.
- 1.34. We have developed bottom-up plans to hit our April plan target of 1.57 incidents per 10,000 sewer connections. It may be possible (although unproven) that the machine learning from our new monitors could enable us to improve performance further. We are therefore not challenging Ofwat's DD's 2024-25 target of 1.34 incidents per 10,000 connections.

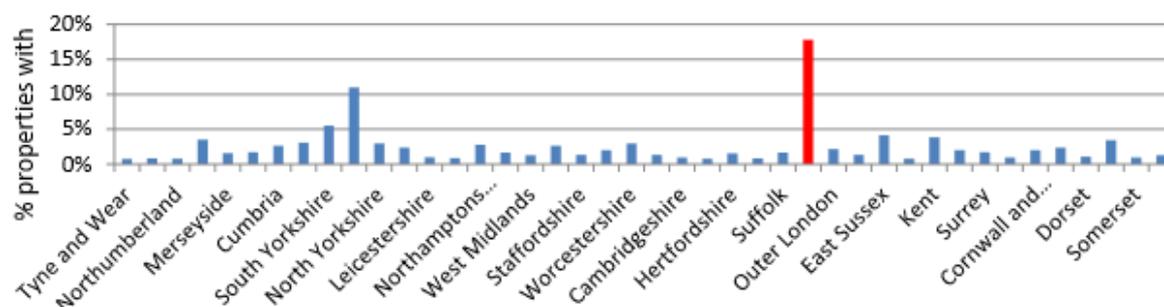


- 1.35. This is an extremely ambitious target for Thames Water, and relies on significant improvements being identified from our sewer monitor roll out. As such, we cannot accept the profile of improvements Ofwat has proposed, as the first two years of AMP7 are needed to gain the data necessary to drive towards the Ofwat target.
- 1.36. Furthermore, we do not accept the underperformance collars proposed in the DD. These have been set at a materially higher level, and give rise to a balance of risk that is not reasonable given the susceptibility of our performance on this measure to extreme weather events outside of our control.
- 1.37. We also consider that Ofwat has made an error in over-writing our ODI rate. We request that this is changed to align to our April plan.

Performance commitment

- 1.38. Operating in Thames region drives higher costs
- 1.39. Our ability to perform on this measure to the same expectations as other companies is impacted by the circumstances in which we run our sewerage networks being materially more challenging compared with other companies.
- 1.40. These circumstances mean that Thames Water is not on an equal playing field with other companies when it comes to performing to the same target on sewer flooding. Achieving the same target is considerably more difficult (and costly) for us.
- 1.41. Higher property density, greater ubiquity of basements, and the amount of fat in our sewerage networks are key differences between our region and other companies' operating circumstances that make it much more challenging for us to perform to the same target on sewer flooding as other companies. The origin of these differences lies in London, and the circumstances present there, accounting for a significant proportion of our sewer connections.
- 1.42. Thames Water has the most densely populated region out of all of water and sewerage companies. Using Ofwat's density measure, our operating area is more than 19% more densely populated compared to the industry average. Greater density means that when there is a blockage, on average, more properties are affected.
- 1.43. The 2001 census contains detailed regional information about the proportion of houses with basements. Almost 18% of properties in inner London have a basement – the figure below shows that this is around 6 times higher than the national average.

Figure 1: Percentage of properties with basements across England



Source: 2001 Census Data.



- 1.44. Historically, homes in London were constructed with basements for either storage or to act as a septic tank. In recent years, the value of land and property across the capital has risen markedly, and there is pressure for more habitable space. Many basements have now been converted to habitable areas with kitchens and bathrooms – most are below the sewer line and are prone to flooding internally when a sewer surcharges.
- 1.45. Properties with basements are more likely to experience sewer flooding as basements are located below street level. In turn, this means that operating in a region where a comparatively higher proportion of properties have basements materially increases the incidence of internal sewer flooding.
- 1.46. There is also a growing amount of evidence to suggest that the amount of fat in raw sewage in our London sewage treatment works catchments is much higher than in other parts of the country, which in part explains the higher blockage rate¹. This is in part due to the high concentration of food service establishments across the capital.
- 1.47. The combination of greater property density, ubiquity of basements, and greater amount of fat in raw sewage means that our operating circumstances are significantly more challenging compared to other companies. The implication is that an upper quartile target that applies across the industry is much more stretching for us. Therefore, when applying this target to Thames Water, it is appropriate to give us the opportunity to move towards this target more gradually (and reaching this target by the end of AMP7).

Delivery incentive

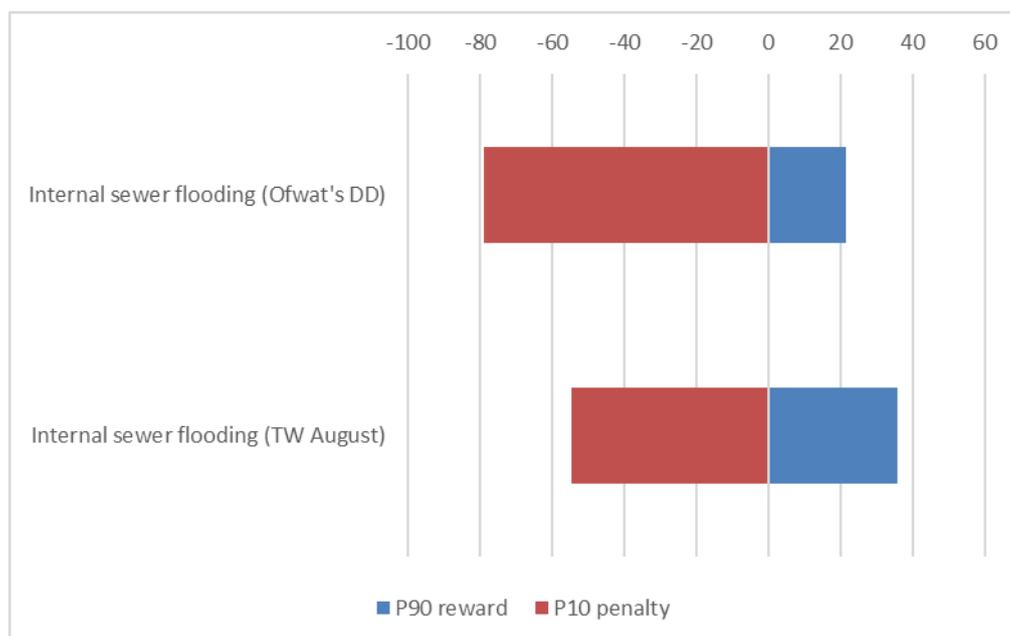
Increasing the collar level removes protection against factors outside our control

- 1.48. Setting materially higher levels of underperformance collars significantly increases our exposure to high underperformance payments, including payments originating for reasons outside our control. Extreme weather is the prime factor outside our control that affects and makes uncertain our performance on sewer flooding. Figure 6, under pollution incidents performance commitment, shows how the wet winters of 2012/13 and 2013/14 affected our performance on pollution incidents. In our experience, our performance on sewer floodings is similarly sensitive to weather.
- 1.49. The collar levels set out in our April plan appropriately balanced the need to incentivise us to improve our performance without penalising us for high underperformance payments for reasons outside our control. Ofwat's decision to increase collar levels gives rise to an unreasonable balance of risk.
- 1.50. Figure 2 below compares the P10/P90 range that follows from Ofwat's DD interventions with the range determined based on our ODI proposals. Ofwat's DD interventions increase the P10 penalty with an additional £25 million per annum. This shows that Ofwat's interventions significantly change our exposure to underperformance payments. We regard this disproportionate given the extent to which our performance can be affected by factors that are largely outside our control (extreme weather, most notably).

¹ See UWKIR 15.SW.01.13 'Fats oils and grease, where are we and where could we be?', (2014), and Cranfield University PhD thesis on fats, oils and grease (ongoing) for evidence of the amount of fat in raw sewage being materially higher in London compared to elsewhere in England and Wales.



Figure 2: Comparison of P10/P90 range: Ofwat's DD interventions vs our proposals



Source: Thames Water

Our April plan's collars responded to customer research

- 1.51. The collar levels we proposed were informed by our customer engagement. Customer support for using caps and collars for this ODI was mixed². Those in favour argued that performance on this measure was to a certain extent outside of our control. There was some recognition that our performance on this measure could be higher (lower) as a result of weather conditions being (un)favourable.

ODI rate

- 1.52. In Ofwat's Delivering outcomes for customers actions and interventions appendix, Ofwat states: 'No intervention required. The company's proposed rates are within our reasonable range, as defined by the reasonable range set out in 'PR19 draft determinations: Delivering outcomes for customers policy appendix ', and we have not identified any concerns with the company's underlying valuation research and not with the derivation of its outcome delivery incentive rates.'
- 1.53. However, in the outcomes appendix, Ofwat has appeared to have intervened and over-written our incentive rates. Our incentive rates are based on extensive research with our customers. We therefore request that our April plan's rates are re-instated.

Request of Ofwat

- 1.54. We have challenged ourselves to accept Ofwat's ambitious target for 2024-25. However, hitting that target is dependent on the roll out of our sewer monitor programme and is comparatively more difficult for us given the more challenging circumstances in which we run our sewer networks. As such, we propose a different, more gradual glide-path to the 2024-25 target.

² See slide 76 of our August 2018 customer research. This concerns BritainThinks's research of our performance commitments and ODIs.



- 1.55. We request that Ofwat withdraws increasing underperformance collars and reverts to the levels we proposed in our April plan (see Table 5 below). This would strike a more appropriate balance between incentivising us to improve our performance and providing a proportionate insurance against the risk of high underperformance payments because of extreme weather incidents.
- 1.56. If Ofwat does not re-instate the underperformance collar, then we would request that extreme weather events are excluded from the calculation of any penalties.

Table 4: Internal sewer flooding proposed performance commitment, caps and collars

	2020/21	2021/22	2022/23	2023/24	2024/25
Performance commitment	1.89	1.81	1.65	1.50	1.34
Underperformance collar	2.44	2.35	2.17	1.98	1.79
Outperformance cap	1.43	1.35	1.22	1.09	0.96

Source: Thames Water proposed targets, collars and caps.

F Blockages

Issue summary

- 1.57. The DD proposes a challenge to our proposed performance commitment, reducing blockages from 65,000 in 2025 to 62,500³. Following Ofwat's feedback, we have been through a rigorous process to re-interrogate our delivery plans, demanding more ambition from our business in performing against Ofwat's target. We consider that Ofwat's proposed target may be achievable, and are therefore challenging ourselves to hit this tougher target.
- 1.58. The DD also proposes to significantly increase our penalty rate and to introduce caps and collars. This has been done on the basis that our proposed delivery incentive is at the lower bound of the reasonable range and our performance is comparatively poor and because the performance commitment is financially material.
- 1.59. We consider that Ofwat's proposed interventions are inappropriate because:
- 1) **Reflecting of our customers' valuation:** Our proposed rate is a reflection of our customers' valuation;
 - 2) **Comparative performance:** When performance is normalised for population, our performance is not an outlier;
 - 3) **Inappropriate incentives:** Ofwat have failed to take into account the interaction between the incentive rates for blockages, internal sewer flooding and pollutions and that as a result the intervention results in inappropriate incentives; and
 - 4) **The proposed collars are set at inappropriate levels.**
- 1.60. We are proposing that for the FD, Ofwat use the penalty rate set out in our April plan, and adjust the caps and collars as described below.

³ These concern the total number of blockages occurring across our sewerage network on a per year basis.

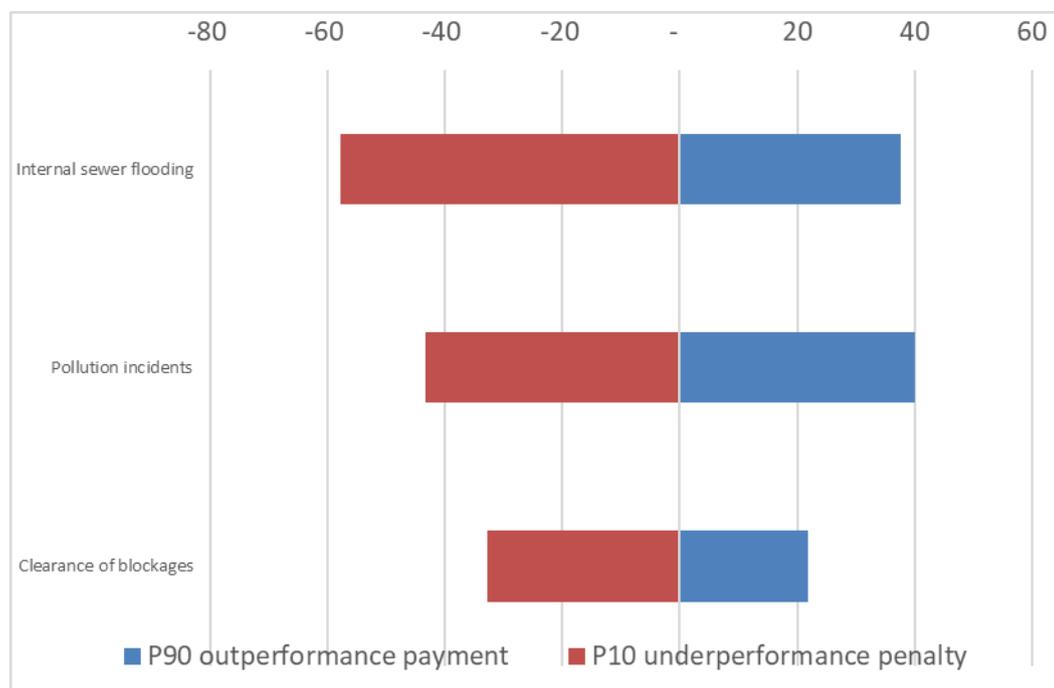


Delivery incentive

Reflecting of our customers' valuation

- 1.61. We have undertaken significant amounts of customer research to identify customer priorities between internal sewer flooding, pollutions and blockages and to identify appropriate customer willingness to pay. We found customers want us to prioritise reducing internal sewer flooding and pollutions and are less concerned by blockages⁴. Customers identify with the service impacts they experience, for example the resulting flooding, rather than a blockage itself. We have taken this into account through our scaling approach⁵. We illustrative how our incentive rates are rooted in our customers preferences in Figure 3.

Figure 3: Wastewater PCs scaled with blockages, P10/P90



Source: April plan data tables.

Comparative performance

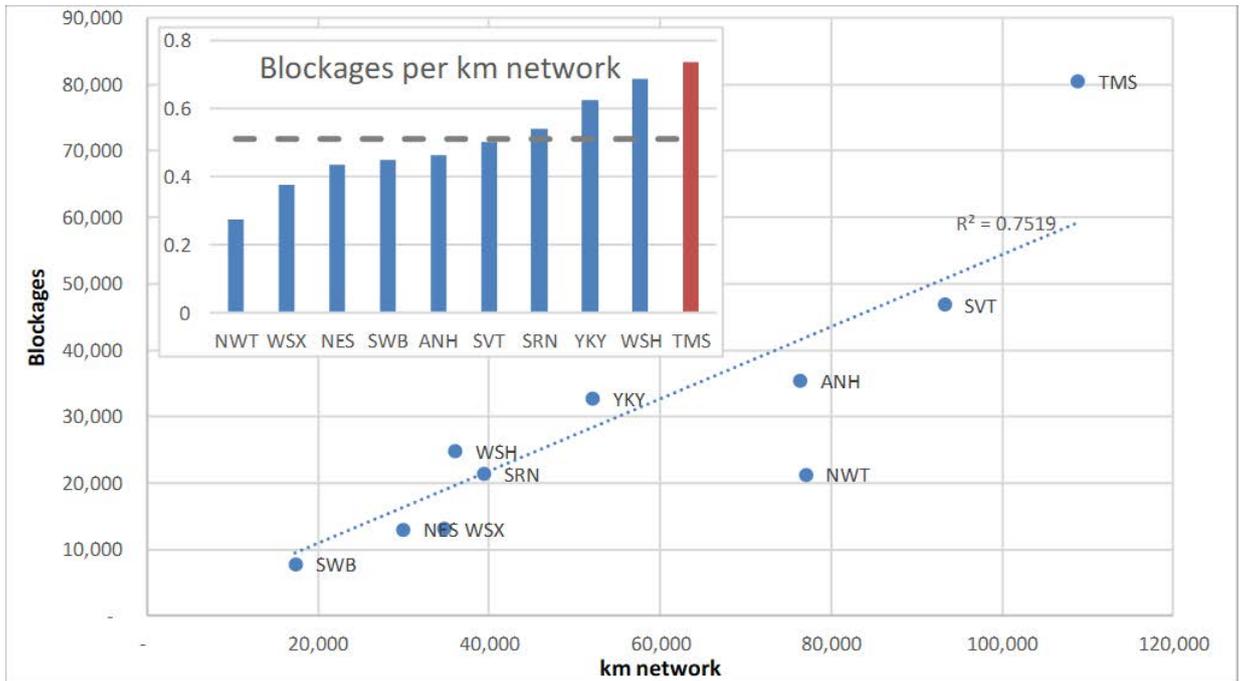
- 1.62. Ofwat have intervened on our incentive rate which is within the reasonable range for the stated reason that our performance is comparatively poor. It is not clear on what basis Ofwat have decided we are a poor performer. However, Ofwat's analysis appears to be based on performance normalised for sewer length as shown in Figure 4 below. Our performance is indeed high on this measure (see the blockages per km inset).

⁴ TSD019-CR27-PR19-PCs and ODs, slides 76, 78 and 86.

⁵ PR19 - CSD020 - Performance commitment values, pages 48-51.

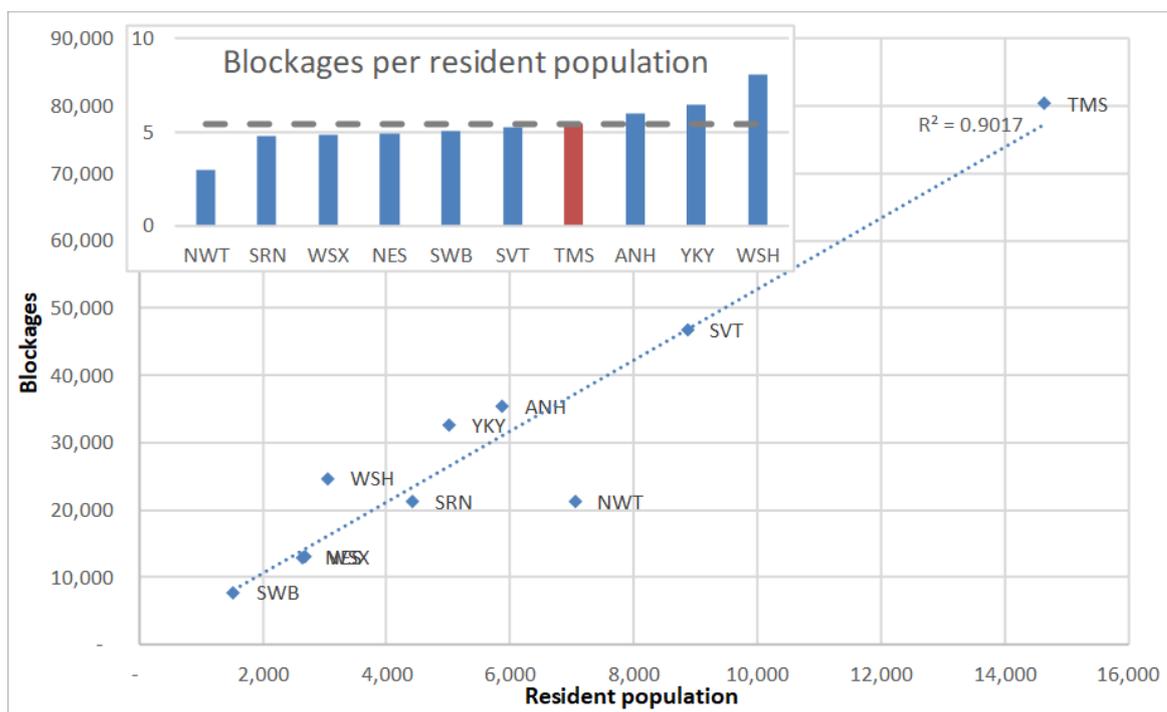


Figure 4: Blockage per km of sewer



Source: Thames Water analysis.

- 1.63. However, this analysis has an R^2 of only 0.75. Analysis across our six regions and across the industry shows that normalising for resident population has a much stronger correlation and makes sense from an engineering perspective, as blockages are caused by what people put into the sewer network. When this adjustment is made, as shown in Figure 4 below, our performance is closer to the industry average and the correlation (R^2) is better at 0.90.

**Figure 5: Blockages per resident population**

Source: Thames Water analysis.

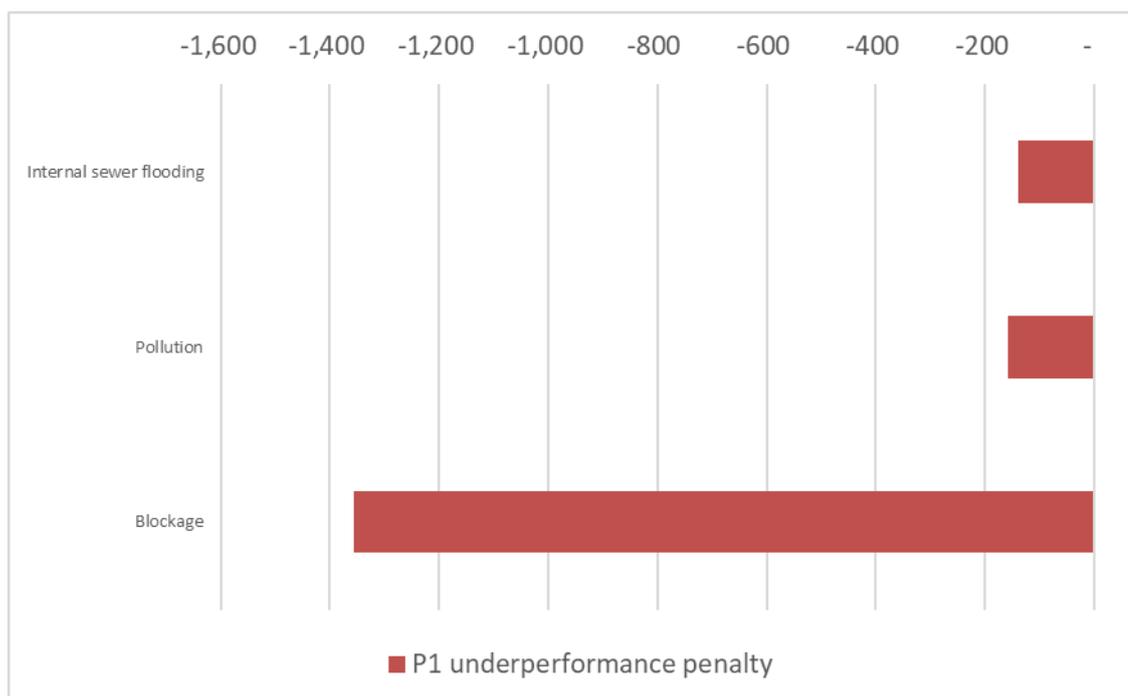
- 1.64. This analysis does not take into account another driver of blockages – the density of food outlets – which is much higher in London than elsewhere in the country.
- 1.65. We have also analysed blockages, taking into account the propensity of different sewers (foul, combined, surface water) to block, which gives a similar result.
- 1.66. It is notable that the two worst performing companies - Yorkshire and Welsh Water – did not include this as a bespoke metric. It therefore appears that Thames Water is being punished for including a metric.
- 1.67. There is no robust evidence that shows Thames Water is a poor performer and therefore Ofwat does not have any reason to intervene to adjust our incentive rate.

Inappropriate incentives

- 1.68. Ofwat have failed to consider the interaction between the incentive rates of internal sewer flooding, pollutions and blockages. Where the incentive rate for one is increased one or both of the others will need to be decreased to remain consistent with customers' willingness to pay. Ofwat have failed to make this adjustment. However, if they had it would have made the incentive effects of the intervention even worse. Through their interventions Ofwat have ensured that our incentives are to reduce blockages in preference to reducing internal sewer flooding even though this is counter to customers' clear preference as shown in the figure below:



Figure 6: Wholesale Wastewater ODI Impact of collars or P1 (£m)



Source: Thames Water based - based on Draft Determination outcome performance commitment appendix. The proposed collars are set at inappropriate levels.

- 1.69. If we look at the difference between the level of performance commitment and the proposed penalty collar (145,000) Ofwat has effectively set maximum penalty of £1,356 million or -4% RoRE across AMP7. This is clearly a material and disproportionate underperformance payment even when compared to our next largest PCs at a p10 position in our ODI package (unplanned outage and mains repairs based) and demonstrates that the collar is set at an inappropriate level. As we set out in Chapter 8 of TW-DD-001 for leakage, Ofwat has reduced collars for other companies to reduce the underperformance financial exposure 0.8-0.9% RoRE positions Ofwat adopted for Affinity Water and Portsmouth Water.
- 1.70. In setting caps and collars for a number of performance commitments including blockages, supply interruptions and internal sewer flooding, Ofwat has used a multiplier approach based on the worst levels of recent historic performance across the industry to set caps and collars. The multiplier used varies by performance commitment, which has not been explained or justified. We consider this approach to be inappropriate for a number of reasons. It lacks consistency providing greater risk for some measures, which may result in incentives that conflict with customer priorities. In addition, it can result in disproportionate penalties as in the example of blockages as highlighted above.
- 1.71. If Ofwat were to retain its proposed incentive rate the penalty collar would have to reduce to 85,000 to keep the potential RORE impact below 1%. However, we propose that Ofwat reinstates our underperformance rate of -£0.001008m/unit, which is consistent with our customer research. At this penalty incentive rate, and a collar of 120,000 blockages, the resulting maximum penalty would be £265 million or 0.8% RoRE, which aligns with the levels used for Affinity Water and Portsmouth Water. However, we continue to consider that caps and collars are most appropriately set at the level of P10/P90 expected performance, which is the approach Ofwat have taken for other measures when they have intervened to establish caps and collars.



Request of Ofwat

- 1.72. We propose that for the FDs Ofwat reinstates our underperformance rate as per our April plan and replaces the DD proposed penalty collar of 145,000 with our P10 levels set out in Table 5 to ensure that we have the right incentives to deliver for customers. We recognise that Ofwat has taken a different approach to setting financial collars based on financial materiality and on that basis the collar should be no more than 120,000 to ensure that the ODI's financial impact is not disproportionate.

Table 5: Clearance of blockages (number) proposed caps and collars

	2020/21	2021/22	2022/23	2023/24	2024/25
Outperformance cap	66495	63788	61510	59232	56527
Underperformance collar	78801	76518	73785	71052	68767

Source: Thames Water proposed caps and collars.

G Pollution incidents

Issue summary

- 1.73. Our concern is that the combination of Ofwat's interventions on ODI features strikes an inappropriate balance between incentivising us to improve our performance on this measure and protecting us against the incidence of very high penalties for reasons outside our control (extreme weather events, most notably).
- 1.74. The removal of outperformance payments takes away any scope for rewards, thus reducing our incentives to stretch our performance on an area that we have historically performed strongly on. This does not align with the value that customers place on this measure, and with their support for using enhanced rates to further incentivise our performance in this area.
- 1.75. The incidence of pollution incidents, and thus companies' performance on this measure, depends in large part on the occurrence of extreme weather events over the next review period. We illustrate that the likelihood and impacts of extreme weather on our performance on this measure are real and significant. In such circumstances, it is not appropriate to increase our exposure to underperformance payments to the extent that Ofwat have by removing collars and increasing underperformance rates.

Delivery incentive

Underperformance rate

- 1.76. Ofwat did not accept our proposed underperformance rate. It decided to set this rate at the average of the company's proposed rate from its original plan and its equivalent 2015-2020 outcome delivery incentive rate. The resulting rate is materially greater than we proposed: -£1.270 million vs -£0.865 million.

*Outperformance rate*

- 1.77. Ofwat removed the outperformance potential from this ODI. Ofwat argued that our 2018 customer research does not show that our customers support the use of such payments and that the company had not presented new customer evidence supporting their retention.
- 1.78. Outperformance rewards play a key role in incentivising companies to improve their performance towards and beyond target levels. Ofwat consider that outperformance payments are to be used only where supported by customers. We note that Ofwat has allowed outperformance rates for most wastewater companies.
- 1.79. Our 2018 customer research⁶ established that:
- 1) Customers see pollution incidents as a very important measure and they want a penalty imposed if Thames Water does not meet these targets;
 - 2) A small majority of customers felt that outperformance incentives are not needed as the combination of penalty and reputational fall-out means that Thames Water is likely to take this seriously; and
 - 3) Some customers called for outperformance payments, recognising the strong incentives they give Thames Water to improve in this area. These customers were particularly outspoken in the discussion that followed the initial voting.
- 1.80. Our February 2019 supplementary research determined that there is broad support among our customers for Thames Water to pursue enhanced rates for areas where we are currently performing well, namely pollution incidents and the health of the sewer network⁷.
- 1.81. In all, our customer research shows that our customers place great value on and support the use of enhanced rates for this measure. Views on the use of outperformance payments are mixed. A small majority felt that such payments are not needed, but a material minority strongly favoured them recognising their positive incentive effects.
- 1.82. The decision to use outperformance payments was also taken in the context of their role in incentivising stretching performance and accounting for customers' views on their use and merits. Doing this, on balance, supports using outperformance payments for this ODI:
- 1) They play an important role in incentivising us to stretch our performance on pollution incidents (which has been historically strong) over and above target levels. Removing outperformance will reduce such incentives. This does not align with the value that customers place on this measure and improved performance on it; and
 - 2) While customers' views on the use of outperformance payments for this ODI are mixed, it is clear that our customers place great value on and support the use of enhanced rates for this measure. We interpret this as that our customers recognise and support the provision of stronger incentives for this ODI, amongst other by using outperformance payments.

Removing collars exposes us to an unreasonable degree to extreme weather

- 1.83. Ofwat removed collars on the ground of the performance commitment not being financially material. In further support of their intervention, they argued that proposed collars were not set at

⁶ See slide 86 of our 2018 Britain Thinks Report called "CR27 PCs ODIS full report 100818".

⁷ TW-CSE-A3-CR70a, PC/ODI Customer Workshops, January 2019, Overall findings.



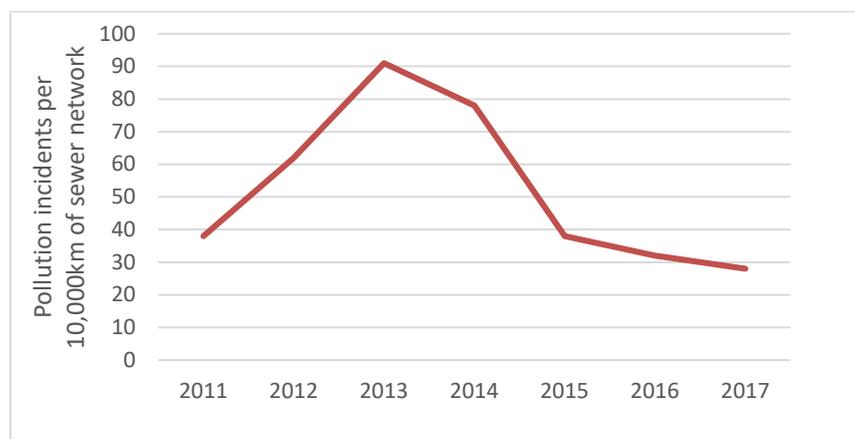
levels that provide appropriate incentives, which companies should be incentivised to mitigate the impacts of weather, and that customer benefits of proposed collars are unproven.

1.84. We regard the removal of collars as unreasonable.

- 1) It fully exposes companies to underperformance on pollution incidents. This is unreasonable given the susceptibility of performance on this measure to extreme weather events (see Figure 6 below for the impact that wet winters had on our historical performance on pollution incidents);
- 2) Ofwat's argument that companies should be incentivised to mitigate impacts of weather understates the increased incidence and magnitude of extreme weather, and their implications for our performance on this measure. Moreover, our proposed underperformance payments already incentivise us to enhance the resilience of our sewerage operations to extreme weather;
- 3) Ofwat's test for financial materiality and their approach to deciding on the removal of caps and collars when a performance commitment is not deemed financially material are too dogmatic. The risks of high penalties for reasons outside our control are simply too great. Figure 7 illustrates the scale of these risks. Some protection is appropriate; and
- 4) The removal of collars should be guided by what our customers have told us. Our customers understand that extreme weather can affect performance on this measure, and at least some customers felt that it would be unfair for us to be punished for unpredictable weather. We interpret this as that our customers do not oppose the use of collars where this protects us against very significant impacts of extreme weather that we cannot mitigate.

1.85. The wet winters of 2012-2013 and 2013-2014, which saw groundwater rise to very high levels, resulted in a significant increase in pollution incidents as our sewerage network was locally overwhelmed. Figure 6, below, reports our historical performance on pollution incidents (in categories 1-3) over the 2011 to 2017 period. Pollution incidents increased very significantly in the first two years, peaking in 2013 and 2014, as a consequence of the wet winters in these two years. Our performance was more than double that in 2013 compared to performances in 2011 and from 2015 onwards.

Figure 7: Performance on pollution incidents as a function of extreme weather

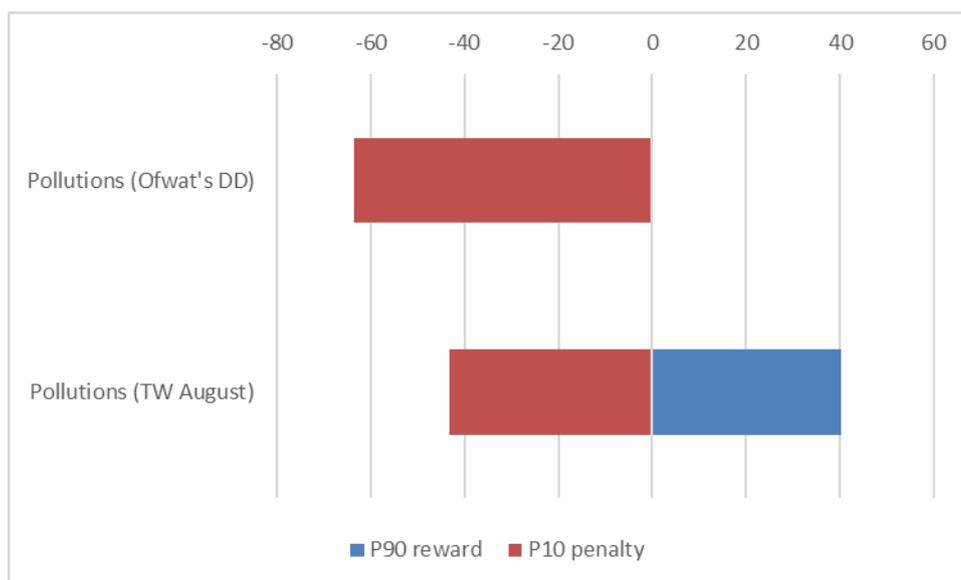


Source: Thames Water analysis based on our historical performance on pollution incidents.



- 1.86. As we are not able to limit the impact of such extreme weather on our performance to a significant extent (illustrated in Figure 7 above), we face a significant risk of underperforming on this measure for factors outside our control⁸. This justifies some protection. Figure 8 compares the P10/P90 range for Ofwat's interventions on this ODI to the range based on our proposals. It shows that Ofwat's interventions increase our P10 with almost £20 million compared to our proposals.

Figure 8: Comparison of the P10/P90 range – Ofwat's interventions vs our August proposals



Source: April and August data tables

- 1.87. Removing collars warrants a more practical approach. Such decisions should be based on an in-the-round assessment of relevant evidence and mindful of dependencies on factors outside the control of companies. Where Ofwat continue to rely on their financial materiality test, we recommend they revisit their test as it would make sense for this performance commitment to be regarded as financially material. We also note that Ofwat did not remove caps and collars for the majority of companies.

Request of Ofwat

- 1.88. We propose that for the FDs Ofwat reverse their decision to remove outperformance payments and caps/collars. We had determined the rates and levels included in our plan to set an appropriate balance between incentivising us to deliver for customers and protecting us a disproportionate impact due to extreme weather.
- 1.89. Our proposed reward and penalty rates are £0.892 million and -£0.865 million (both per category 1-3 pollution incidents per 10,000 km of sewer length). Table 6 reports our proposed caps and collars for this ODI.

⁸ We recognise Ofwat's point as that companies should be incentivised to improve the resilience of their operations to extreme weather. We consider that our work in AMP6 and work planned for AMP7 concerns the best we can do in enhancing the resilience of our sewerage operations.

**Table 6: Pollution incidents (per 10,000km of sewer) proposed caps and collars**

	2020/21	2021/22	2022/23	2023/24	2024/25
Outperformance cap	15.5	14.7	14.0	13.4	10.5
Underperformance collar	34.5	33.7	33.0	32.4	29.5

Source: Thames Water proposed collars.

H D-MeX

- 1.90. We have continually engaged with both Ofwat and its appointed agents (BMG and previously Allto) over the past 18 months, to help shape the D-MeX measure, with the objective of developing the best methodology both for the industry and its customers. We are concerned with the proposals set out in the DD, in respect of the sole reliance on a transactional survey to gauge customer satisfaction across a complex stakeholder landscape. We have strong reservations that that this will not give adequate voice to key customer groups, including Self Lay Providers and NAVs. We strongly recommend further consideration of an additional survey format to allow this to take place. The “Relationship” survey previously trialled was much more than the name alludes to. Its purpose was to ascertain customer satisfaction from those customers who receive a small volume, but high value service from us, and as such was focused on overall experience; we strongly believe that there is more to customer satisfaction for specific segments, than just how well a single transaction has been enacted, which is why we continue to champion this additional survey format.
- 1.91. We welcome the clarification that the DD has provided over a number of policy areas, which we made recommendations on through previous communications, and while we are disappointed that Ofwat feels these do not warrant further scrutiny or adjustment at this stage, we look forward to working with you and hope the results from the shadow surveys corroborate that these factors do not materially drive scores. As the overall measure is clearly still in development, we would welcome the opportunity for a review at the end of Year 1 of the next AMP, as to whether it has achieved the objectives set out.
- 1.92. Our final concern is regarding the state of flux the guidance and methodology remains in development. We have consistently signposted that we need to complete systems development in order to robustly provide the information required to enact the measure, and with the guidance yet to be locked down, we will not be able to fully systemise in time for Go Live on 1 April 2020.

I Renewable energy produced

- 1.93. Ofwat have imposed caps and collars on this performance metric on the basis of the incentive being material. This performance commitment is to encourage us to stretch ourselves to perform for the environment is and something our customers want us to deliver. This does not seem to be something that should be restricted by the imposition of a cap. The caps and collars that Ofwat has intervened to include will limit upside and downside potential to £3 million p.a. which equates to 0.05% of RORE. This does not appear to be material and contrasts with the level of caps and collars that Ofwat have intervened elsewhere in the draft determinations, where Ofwat have intervened to reduce materiality to around 1% of RORE.



- 1.94. We consider that this performance commitment does not need any caps or collars as performance will be naturally limited by practical factors.

J Sludge treated before disposal

- 1.95. In the DD, Ofwat has included a Specific exclusion - Sludge exported out of the company's region is excluded if it is treated before disposal. The purpose of this Performance Commitment is to incentivise us to improve the percentage of sludge that is treated before disposal, thus reducing the environmental impact of our operations through fewer vehicles leaving sludge centres and increased energy recovery from sludge. In our original PC document submitted in September we stated that the only excluded sludge would be any we sent to a 3rd Party for treatment/disposal, such as another WASC or AD operator.
- 1.96. Sewage sludge is a by-product of the wastewater treatment process which is managed in one of 3 ways:
- 1) Recycled to agricultural land following an appropriate form of treatment;
 - 2) Thermally disposed (incinerated as an example); and
 - 3) Untreated and disposed to landfill or land restoration sites.
- 1.97. Options 1 and 2 require a sludge treatment process to be undertaken, where treatment is defined as including all chemical, biological and thermal processes, some of which recover renewable energy. Option 3 involves neither the treatment of sludge nor the recovery of energy. We plan for all sludge to be treated and currently around 40% of our treated sludge is recycled out of region. However due to operational events, such as unforeseen plant outages and capital reconfiguration of sites, we occasionally have to send untreated sludge to land restoration or landfill outlets. While this is a compliant route, as the activity is carried out under an Environmental Permit, it is not as cost effective or sustainable as Options 1 and 2.
- 1.98. This commitment measures the proportion of sludge treated before disposal against our total production less the amount sent to a third party for treatment & onward disposal. We exclude sludge sent to 3rd Parties as we do not have control of their processes and only utilise their services if it is more beneficial than treating it ourselves.
- 1.99. We think the exclusion should be redrafted as "Untreated sludge exported to 3rd parties for treatment is excluded".

K Reducing risk of lead

- 1.100. Ofwat has instated a cap for this performance commitment, however there is no action and intervention explanation in the appendix Thames Water – Delivering outcomes for customers actions and interventions.

Table 7: Ofwat's cap

	2020/21	2021/22	2022/23	2023/24	2024/25
Cap	11,305	22,611	33,916	45,222	56,529

Source: Ofwat, Thames Water – Outcomes performance commitment appendix



- 1.101. Ofwat's standard approach is to apply cap when the P90 is financially material, however our April business plan submission showed our likely P90 payment is £0.8 million for the AMP. Please also refer to our representation proforma TW-DD-003.
- 1.102. Our customers preferred that performance for this commitment was not collared or capped as this might reduce our level of incentive. Most saw this as a priority, especially in schools and nurseries, and want to incentivise Thames Water to remove as much as possible⁹. Almost all the customers surveyed want all lead pipes in Thames Water's network to be replaced quickly, and when presented with the actual suggested bill increase, the vast majority are supportive of the plan¹⁰.
- 1.103. We request the cap is removed for this performance commitment.

L SEMD

Issue summary

- 1.104. We have three issues with Ofwat's draft determination proposals for SEMD:
- 1) They appear to have misunderstood our AMP6 performance commitment;
 - 2) The profile for delivery of the AMP7 programme; and
 - 3) The calculation of the incentive rate is inappropriate.
- 1.105. Following our April Plan, we have been able to finalise our AMP7 programme, which includes 292 outputs including the 28 outputs included in April. We have included the full programme of projects for the 2020-25 period in our revised enhancement case (TW-DD-A07). This programme is based on the acknowledgement that our AMP6 commitment is for the 326 outputs.
- 1.106. We are proposing an AMP7 penalty based on our estimate of the full programme scope and cost, with an associated delivery incentive to protect our customers from any delay to the delivery the agreed outputs.
- 1.107. We consider that this is a more balanced approach that recognises the proposed increase to our AMP7 programme of work and the uncertainty inherent in securing our sites.

Legacy performance commitment

- 1.108. SEMD performance commitment PR19TMS_DWS03 should be removed.
- 1.109. We are concerned with the introduction of a new performance commitment in our DD - Securing our Sites (legacy projects). Ofwat appear to have included this PC on the understanding that we have not delivered our AMP6 programme. However, we have provided additional evidence clarifying our AMP6 programme of work (TW-DD-A07) and in light of this and the existing AMP6 penalty mechanism this PC is an unnecessary duplication.
- 1.110. The AMP6 performance commitment is not to deliver 591 outputs but to deliver 100% of the SEMD advice notes. The programme to deliver this, in terms of outputs, is variable over time through an iterative process of discussion with Defra.

⁹ TSD019-CR27 PC and ODIs, Britain Thinks, August 2018, Page 72.

¹⁰ TSD019-CR61a-PR19-Lead pipes online community task.



- 1.111. If the performance commitment for our AMP6 programme is retained for any of the 326 outputs not delivered, we propose that the underperformance rate applied is consistent with the underperformance rate that was agreed at AMP6. When Water and Wastewater are combined this results in an overall underperformance rate of £-0.078, based on the original underperformance rates of £-0.093 million and £-0.037 per percentage delay for Water and Waste respectively¹¹.

Profile for delivery of AMP7 SEMD programme

- 1.112. SEMD delivery profile of our AMP7 SEMD programme specified in PR19TMS_DWS02 should be amended to reflect forecast delivery of our full AMP7 programme consisting of 292 outputs at a cost of £122.9 million.
- 1.113. Using totex spend as a basis for determining the phasing of delivery is not appropriate for SEMD. A more appropriate basis is to consider the actual programme of work. This is because the time required in the planning and installation stage is considerably longer and more costly than the commissioning and completion stage.
- 1.114. The delivery profile is dependent on the nature and type of work to secure the sites and assets and the phasing of this work. It is also impacted by the changes we are making to our governance and supply chain structures.
- 1.115. Service reservoir sites containing wireless modes of communication (vs hardwired installed in AMP6) will require longer testing regime to ensure reliability as well as installation of external aerials to improve reliability.
- 1.116. We have also taken on board our lessons learned from previous AMPs and our forecast includes a more realistic delivery profile that avoids front end loading.
- 1.117. Our delivery profile has taken account of existing Thames Water infrastructure limitations, for example not being able to commission a large number of sites onto our control network at any one time. This is in response to our lessons learned from AMP6 in improving our forecast accuracy for delivery and cost of programme.
- 1.118. We have determined a delivery profile based on our current forecast of work, the details of which are included in our enhancement case, TW-DD-A07.
- 1.119. We recommend a delivery profile for our AMP7 SEMD performance commitment that reflects the nature of the underlying work required to be completed, which in many cases is different to the phasing of the costs incurred in delivering the project. We summarise the delivery profile in the table below:

Table 8: Delivery profile for AMP7 SEMD programme

AMP6 Target (Outputs)	AMP7 Targets (outputs)				
Yr5	Yr1	Yr2	Yr3	Yr4	Yr5
Agreed outputs (cumulative)	19	77	151	225	292
100% (percentage)	6.0	26.0	51.0	77.0	100.0

Source: Thames Water analysis of SEMD programme.

¹¹ Rates calculated based on 2018-19 Thames Water ODI calculator.



Delivery incentive rate is inappropriate

- 1.120. The proposed underperformance rate should be updated to reflect the full AMP7 programme and calculated based on the WACC and run-off attributable to the programme totex.
- 1.121. Our SEMD consists predominantly of capital projects. We consider underperformance payments are needed to protect customers from delayed delivery (projects will ultimately have to be progressed as they are needed to meet Advice Notes. As such, we are proposing performance commitment levels and underperformance rates such that there are milestones which indicate SEMD programme delivery progress.
- 1.122. We have no reliable evidence of customer benefits from delivery of our SEMD programme. Therefore, we propose the calculation of the incentive rate for the new AMP7 programme reflect the total WACC and run-off rate associated with the £122.9 million totex (292 outputs) we are committing to deliver. This is consistent with the approach put forward in our DD¹² for performance commitment: Improving system resilience of North East London water supply.
- 1.123. When Water and Wastewater are combined, this results in an underperformance rate of -£0.078 million per percentage delay for the full £122.9 million programme. This is broadly consistent with the incentive rate for delay to delivery in AMP6. Our approach to calculating the underperformance rate is shown below:

$$((Totex \times WACC) + (Totex \times Runoff\ rate)) \div 100$$

- 1.124. Where totex is the £122.9 million proposed for AMP7 split 93% Water and 7% Wastewater; WACC is based on the wholesale rate per the DD of 3.1% and the run-off rates are 4.2% for Water and 5.4% for Wastewater.
- 1.125. We do not consider it appropriate to return totex to customers. This is because our SEMD programme totex is 'ring-fenced', with any under-spend due to efficiency or delay is required to be used toward additional SEMD activities.

Additional performance commitment considerations

- 1.126. At the time our business plan was submitted in September 2018, we requested an additional £112 million to address the programme of SEMD work that remained uncertain. We have resolved the uncertainty and in addition to the £14.4 million allowed for the 28 sites in the draft determination we set out in our revised enhancement case a requirement for £108.5 million for a further 264 outputs, bringing the total size of our AM7 programme to 292 outputs and £122.9 million.
- 1.127. In some cases, there is uncertainty relating to the nature and extent of security required for specific assets or sites. There is also uncertainty relating to the risk assessment which informs the prioritisation of our programme. We will be flexible regarding changes to the SEMD programme that may arise within the delivery period and will continue to work closely with Defra. Any changes will be agreed with Defra.
- 1.128. Our process for updating Ofwat on changes made to the SEMD programme will be through email correspondence within one month after agreement with Defra. Our notification will include details of any changes, what this means for our performance commitment and the forecast impact of applying the associated ODI.

¹²

PR19-draft-determinations-Thames-Water-Delivering-outcomes-for-customers-actions-and-interventions, TMS.OC.A53.



- 1.129. Our target will be amended to deliver all the agreed outputs within the AMP period. We will then express the number of measures delivered against the revised target number. We will use the associated ODI and Totex incentive mechanism to adjust the allocation for this programme accordingly.

Request of Ofwat

- 1.130. We consider that Ofwat's basis for including a performance commitment (PR19TMS_DWS03) for AMP6 'legacy sites' is misplaced, and it should be removed.
- 1.131. We have also put forward an amended delivery profile against which our performance will be measured on an annual basis and reported in terms of % completion.
- 1.132. Against the background of addressing the uncertainty in our AMP7 SEMD programme and formalising our commitment to deliver 292 outputs in AMP7, we consider that it is appropriate for the performance commitment to be updated to reflect the full size of the programme and the underperformance rate calculated as £-0.078 million per % delay on the basis proposed above.
- 1.133. To address the deficiencies in our AMP6 performance commitment definition we also propose the inclusion of the following statement in our AMP7 performance commitment definition, which will allow for changes in scope (both increases and reductions) where it is appropriate and necessary to ensure compliance with Advice Notes:
- 1.134. "We will be flexible regarding changes to the SEMD programme that may arise within the delivery period and will continue to work closely with Defra. Any changes will be agreed with Defra."

M Environmental measures delivered

Issue summary

- 1.135. We broadly agree with Ofwat's proposed changes to our environmental measures delivered metric. However, we consider that the underperformance penalty should not apply where the Environment Agency agrees that delay was caused by factors outside of the company's control.
- 1.136. We consider that this change is required as:
- 1) Historically the Environment Agency have accepted swapped delivery dates for broadly equivalent schemes within the NEP. The penalty should only apply where the EA did not accept a swap and the number of measures delivered in the year is below the agreed number;
 - 2) Where it is found that measures can be achieved to the EA's satisfaction through alternative means to that of the measures listed in the 1 April 2019 WINEP (e.g. rescinding a discharge permit in lieu of installing a monitor), this should be considered the equivalent as delivering the original scheme in terms of meeting the performance commitment;
 - 3) If the Environment Agency states the scheme is no longer required and no intervention at all is required, we should not be penalised. We note that historically this has happened for "green" schemes, typically when new information comes to light, or errors are discovered; and



- 4) Where the Environment Agency accepts a new, later regulatory delivery date can apply for a scheme (not swapped), penalties are not applied. Historically this has happened when Government revises regulatory delivery programmes nationally (e.g. with installation of eel screens) or where delays to scheme delivery are outside of the company's control; typically as a result of planning delays caused by third parties unwilling or unable to grant access to land required for delivery of measures.

Request of Ofwat

- 1.137. We propose that for the final determinations, Ofwat amends the definition of the metric, so that the annual targets can be updated to reflect agreed changes with the Environment Agency.

N Thames Tideway PCs/ODIs

- 1.138. Ofwat has intervened to make a number of proposed changes to our TTT related performance commitments. These were discussed in a tripartite meeting with Ofwat, Tideway and Thames Water on 9 August 2019 where Tideway provided their comments on the draft determination. At that meeting Ofwat asked us to comment on Tideway's proposals in our DD response. We provide full details of our representations and comment on Tideway's observations in TW-DD-A10-Thames Tideway Tunnel and set out below a summary of our representations on the DD.

- 1.139. Thames Water in general supports the approach set out in Ofwat's DD for the TTT project PCs.

- **ET01 – Readiness to receive tunnel flow at Beckton:** Thames Water supports the PC and the move to a monthly £0.0996 million underperformance payment for delay to system commissioning commencement date (SCCD);
- **ET02 – Effective Stakeholder Engagement:** Thames Water supports the overall approach to the reputation only PC. We however disagree with the target score of 5.0 / 6.0. The score is based on a small sample of 4 stakeholders, and as a consequence any one stakeholder has a significant impact, which can result in a failure to achieve the target, even if the other stakeholders score maximums. Hence we believe the target score should be 4.5;
- **ET03 – Timely return to customers from land sales:** ET03 focussed on ensuring the early return of land from the TTT project and has been replaced by ET06 Maximising the value of land sales, where the focus has shifted and Thames Water is incentivised to seek to maximise the financial benefit for customers from land disposals relating to the TTT project.

Thames Water welcomes the replacement of ET03 by ET06, which it views as transparent and focussing on maximising end customer value;

- **ET04 – Critical Asset Readiness:** Thames Water support the overall approach to the PC, which focuses on ensuring the delivery of ten critical assets in its wider wastewater network.

Thames Water recognises the requirement to deliver these assets by SCCD and welcomes Ofwat's move to a monthly based underperformance payment. We however



challenge the value of the payment £1.43 million per month, which equates to a maximum of £42.9 million over the AMP, if we fail to deliver the critical assets;

- **ET05 – Establish an effective system operator:** Ofwat has intervened to separate out the reputational elements of the original ET04, which relate to the development of the accredited management system against certification.

We support Ofwat's PC; and

- **ET06 – Maximising the value of land sales:** Ofwat's new PC seeks to maximise the financial benefit for customers from land disposals relating to the TTT project. Ofwat has suggested a profit / loss sharing mechanism with customers based on Sale Proceeds less Purchase Price; whereby Thames Water keeps 20% of the benefit / loss and the customer retains 80%.

1.140. We have sought legal opinion on the impact on Licence Condition T, which explicitly states that customers shall be liable for any gains / losses arising from a disposal of project land. We do not believe that the licence condition (as drafted) is compatible with the PC and will need updating if it is to accommodate ET06.

O Empty household properties

1.141. We note and accept Ofwat's intervention with regards to the revised target and incentive rates for our performance commitment ER02 Empty Household Properties. We acknowledge that this is a key concern across the industry and are pleased to see that this has also been recognised by other companies. This mitigates some of our concerns around the element of void properties that remain outside our control (as they are billed on our behalf by water only companies). While the target remains challenging, it will ensure that all customers are billed fairly now and in the future.

1.142. We note that Ofwat has significantly increased the penalty rate for this measure. We recognise the logic that Ofwat has applied, however, we would appreciate clarity on where the £30 estimate for the marginal cost of identifying a void has come from.

P Number of customers on the priority services register

1.143. In the draft determination Ofwat confirmed that for companies to gain recognition for delivering their priority service growth targets, a 90% check-in with customers with a 50% response rate must also be achieved.

1.144. We have serious concerns about the achievability of the 50% response rate that Ofwat is expecting and we are aware that other companies share this concern. We have been working with the Energy sector for over a year now and have been able to learn from them about their experience of growing and maintaining their priority services register. This has included understanding the approach they have taken to the customer check-in and how successful this has been. Table 9 below provides details of the insight that has been shared. We have anonymised the data at the request of the Energy companies.

**Table 9: Response channels from energy companies**

Company	Response rate achieved	Other insight
Company A	30% - by post	Was 20% and increased to 30% when made clear that customer would be removed from the register for non-response
Company B	30% - multiple channels	Communications tailored to needs codes
Company C	30% - post and telephone	Have achieved 50% once in 2016-17 when undertaking data cleanse of historical records which included removal customers with no contact for 5 years. Now employ 20 FTE to maintain check-in process.
Company D	10% - by post	

Source: Thames Water Vulnerability Team

- 1.145. We have trialled our own check-in process and a joint approach with UKPN. Our check-in process showed that post was the best channel for connecting with customers and we achieved a 22% response rate. We also co-sponsored a campaign with UKPN, the first of its kind in the industry. This involved a joint branded mailing to customers on the UKPN priority services register. We had high hopes for this trial, however the response rate was disappointing at 7%. While we have taken learning from this pilot it is likely that the changes that could be made will only improve the response to 10-20%.
- 1.146. With engagement with the 3rd sector, we have also benchmarked response rates;

Table 10: Response rate benchmarking

Company	Response rate achieved	Other insight
Organisation A	1% - by post if cold 10% - by post if communication was expected 7% - by telephone	Customers often were uncooperative to incoming calls as they are wary of scam calls
Organisation B	25% - by post	Customers who are susceptible to vulnerability need to be given choice and control from the start.

Source: Thames Water Vulnerability Team

- 1.147. It should also be noted that our internal marketing teams would expect to see a response rate of 3% for campaigns undertaken under the Thames Water brand, so an achievement of 30% is exceptional.
- 1.148. For Thames Water to achieve the 50% response rate target we believe it would require an additional investment in resources estimated to be £1.2 million in AMP7 (excludes the cost of campaign materials and channels) and an unpalatable approach to be taken which could be seen as aggressive to our most vulnerable customers. Neither of these approaches seems to us to be in the best interest of customers. In fact, it could easily be seen as harassment leading to distress for those customers who are likely to be less able to cope. It is also difficult to see how this would be supported by any customer/consumer group or 3rd Sector organisation.
- 1.149. The inclusion of newly registered customers in the contact response would help towards achieving a 50% target. However, we do not believe that this is what Ofwat intended and this would not be sustainable in the long term.
- 1.150. When considering what has been achieved by the Energy sector, who started their journey a number of years ago, we believe a 30% response rate is a challenging and a stretching target for companies to achieve given this is so new to the industry. 1 shows the proposed performance commitment for Thames Water including this target.



- 1.151. The industry is working well together and is collaborating with the Energy sector to grow the priority service register and improve services for customer in vulnerable circumstances. It would be disappointing for the industry if the hurdle to achieving the common performance commitment was set so high that it resulted in reporting showing that we have failed to deliver for customers, when in fact huge advancements had been made that should be recognised and celebrated.

Table 11: AMP7 targets

Measure AR06	AMP7 Targets				
	Yr1	Yr2	Yr3	Yr4	Yr5
Household customers on the Priority Services Register ¹⁰	165,000	220,000	280,000	340,000	410,000
Percentage of households on the Priority Services Register	3%	4%	5%	6%	7%
Percentage of households with individuals on the PSR contacted at least once over the previous two years	90%	90%	90%	90%	90%
Percentage contact response	30%	30%	30%	30%	30%
Target as reported in data table App1:	3 / 90 / 30	4 / 90 / 30	5 / 90 / 30	6 / 90 / 30	7 / 90 / 30

Source: Thames Water - Retail Team

- 1.152. Note: Percentage calculated based on property figures in data table R1, line 6 for AMP7 and AMP8 and included in data table App4. AMP9 percentage figures based on static growth in properties served and will be subject to review/update as forecasts change.

Request of Ofwat

- 1.153. Based on the evidence, we propose 30% as a stretching target. Since this is new for the sector, we also propose an industry check in facilitated by Water UK at an appropriate point to benchmark how companies are doing and if this needs to be reset based on learning.

Q Achieving British Standard BS18477 for Inclusive Service Provision

- 1.154. In our April response to the IAP feedback we included a new performance commitment to attain BSI accreditation for customers in vulnerable circumstances. Our performance profile, shown in Table 12 was based on our understanding and assessment of what was involved to attain the accreditation following engagement with the Institute and our operational teams.

Table 12: Forecast profile of our level of performance

AMP6 Forecast		AMP7 Targets		AMP8 Targets		AMP9 Targets	
Yr5	Yr1	Yr2	Yr3	Yr4	Yr5	Yr5	Yr5
Commence implementation	BSI audit Revenue and Water operations	BSI audit Waste operations	Achieve BS18477	Maintain BS18477	Maintain BS18477	Maintain BS18477	Maintain BS18477

Source: Thames Water table APP1, 1 April 2019.



- 1.155. In the DD, Ofwat appears to have challenged us to achieve accreditation in 2019-20 by stating the accreditation should be 'maintained' in 2020-21 and to maintain that accreditation throughout AMP7. This is not in line with any other companies' commitments including the fast track companies. In most/all cases companies have the target to 'Achieve' in year 1 and then maintain in years 2-5.
- 1.156. We have now had further opportunity to assess the requirements for achieving the accreditation. As a result, we feel that a realistic and stretching target is for us to achieve the BSI standard in Year 1. Please see Table 153. This requires us to take a different approach to implementation and is significantly earlier than the profile we submitted and would mean that our performance commitment is aligned with other companies.

Table 13: Revised profile of our level of performance

AMP6 Forecast		AMP7 Targets		AMP8 Targets		AMP9 Targets	
Yr5	Yr1	Yr2	Yr3	Yr4	Yr5	Yr5	Yr5
Commence implementation	Achieve BS18477	Maintain BS18477	Maintain BS18477	Maintain BS18477	Maintain BS18477	Maintain BS18477	Maintain BS18477

Source: Thames Water.

Request of Ofwat

- 1.157. Revise the target in line with other companies' commitments to 'Achieve' in year 1 and then maintain in years 2-5.

R Percentage of satisfied vulnerable customers

- 1.158. In the DD Ofwat asked Thames Water to add a new performance commitment to measure the satisfaction of customers in vulnerable circumstances. A flat target of 91% was given.
- 1.159. It is unclear how the target has been derived or why a flat target has been given, when other companies with a similar commitment have a glide path to improvement. We believe that it may have come from data table APP4 line 20, however this is a different metric.
- 1.160. In our September 2018 Business Plan, Thames Water had included a performance commitment that used Net Promoter Score (NPS) to measure advocacy as the metric. This was removed following the inclusion of the BSI performance commitment requested by Ofwat in its IAP feedback.
- 1.161. Our decision to remove the performance commitment was based on two things. Firstly, to achieve BSI accreditation we have to be able to demonstrate that we seek feedback from our customers. If we are unable to do this then we cannot gain accreditation. The BSI for inclusive services standard requires an organisation to seek feedback from customers in vulnerable circumstances on the service they have received, with particular reference to any additional assistance or care given. Further, satisfaction with each element of the service should be assessed, including delivery, timeliness, information, access and quality of service. (Section 5.11.1.1). The relevant sections of the standard are as follows:

5.11.1 Performance indicators of customer satisfaction



5.11.1.1 As part of its regular arrangements for assessing customer satisfaction, the organization shall target a sample of consumers it has identified as vulnerable to seek their feedback on the service they have received, with particular reference to any additional assistance or care given. NOTE Satisfaction with each element of the service should be assessed, including delivery, timeliness, information, access and quality of service.

3.3 Resources Sufficient resources shall be made available for the effective identification and assistance of those considered vulnerable; both new consumers and existing consumers whose circumstances might have changed. This may involve one or more of the following

b) Putting new processes or checks in place to obtain feedback from consumers on certain issues;

6.7 Continual improvement. The organisation shall:

a) Continually improve the effectiveness and efficiency of the process, using such means as preventive and corrective actions and innovative improvements.

- 1.162. Second, we felt that having two performance commitments for customers in vulnerable circumstances meant it was kept simple and was a good balance of growth of customers on the register with the quality of service delivered.
- 1.163. We discussed this with our CCG, who has been impressed by our progress with implementing our Vulnerability strategy and with their agreement we removed the NPS performance commitment. This was referenced in their IAP report.
- 1.164. Ofwat has now introduced the common performance commitment for priority services customer growth which includes 2 hurdles to achieving targets. A company must carry out a two-year check-in process of 90% of customers and achieve a 50% response rate. Therefore, with BSI and Customer Satisfaction performance commitments, in total, Ofwat has suggested that Thames Water has the equivalent of 5 targets/commitments for priority service customers. We believe this is a disproportionate number of targets, as while providing services for customers in vulnerable circumstances is clearly important, they do represent a small proportion of our customer base.
- 1.165. We feel that keeping it simple is important. We are confident that with the new common performance commitment and BSI, our customers and key stakeholders will be able to hold us to account for delivering and improving services for customers in vulnerable circumstances without the need for an additional performance commitment to measure customer satisfaction.

Request of Ofwat

- 1.166. We ask Ofwat to reconsider the inclusion of this performance commitment in our Final Determination.



S Power resilience

Issue summary

1.167. In the DD, Ofwat increased our penalty rate and removed our reward rate. The incentive rates included in our April plan reflect extensive customer research.

Request of Ofwat

1.168. We therefore request that Ofwat re-instates our penalty rate for the final determination – i.e. a penalty rate of -£0.143 million per site.

T Measures to be removed

1.169. As described above, we have significantly challenged ourselves relative to our April plan, with proposals for radical improvements in service across a number of different measures.

1.170. In order to achieve this, we are going to need to focus our efforts on the key measures where Ofwat has applied material challenge. As such, we are proposing to remove the following performance commitments from our plan:

- 1) Sewage pumping station availability;
- 2) Surface Water Management;
- 3) Water Quality Events;
- 4) SEMD - Securing our sites (legacy projects)
- 5) Responding to Trunk Mains Bursts;
- 6) Percentage of satisfied vulnerable customers (see Section R);
- 7) Installing new smart meters in London; and
- 8) Replacing existing meters with smart meters in London.

1.171. We will seek to deliver against these measures where we can, and may consider performance commitments at PR24. However, for AMP7, given the scale of the challenges elsewhere, we cannot commit to performance targets on these measures.

1.172. Our acceptance of the other performance commitment targets is dependent on these measures being removed.

1.173. We note the DD removes a number of performance commitments from our April submission (strategic regional solution development, household accounts on our new billing system, and the retailer measure of experience). We consider these removals to be appropriate.

Request of Ofwat

1.174. We propose that for the final determinations, Ofwat does not include these measures in our outcome package.



U Agreed measures

- 1.175. We note that Ofwat has accepted our April business plan's proposals for the following measures:
- Treatment works compliance;
 - Sewer collapses;
 - Security of supply index (SOSI);
 - Unregistered household properties;
 - Empty business properties;
 - Sludge treated before disposal; and
 - Abstraction incentive mechanism.
- 1.176. As Ofwat has accepted our proposals, we have not provided further comment on these measures in our representation. It should be noted that any changes to these measures should be subject to formal consultation, due to the potentially material impact on costs.
- 1.177. We also note that Ofwat has added an outperformance cap for the Reducing risk of lead measure, and removed the reward rate for the Properties at risk of receiving low pressure. We do not agree with these interventions. However, we note that the interventions are of low materiality.
- 1.178. There are also a number of non-financial measures that we have not provided specific comment on at this time: Risk of severe restrictions in a drought, Risk of sewer flooding in a storm, Proactive customer engagement, Households on the Thames Water social tariff, and Delivery of water industry national environment programme requirements.
- 1.179. Given the short period of time we have been given to respond to Ofwat's DD, we have focused on the financial measures in this response.

V Revisions to the outcome performance commitment appendix

- 1.180. Please also refer to our TW-DD-003 proforma for our Water quality compliance (CRI) and Effective stakeholder engagement change requests.



- 1.181. There are a number of inconsistencies within the outcomes appendix, which should be resolved for the Final Determination:

Table 14: Inconsistencies in our outcomes appendix

Page	Measure	Change
5	Water quality compliance (CRI)	Unit should be CRI score and not number (consistent with the SOSI PC).
7	Water supply interruptions	To calculate the penalty, HH:MM:SS needs to be converted to minutes, so the penalty £/unit is not that same as the performance commitment. So the penalty should be £m/minute as the information cannot be read as a standalone table.
11 14	Leakage Per capita consumption	To calculate the penalty, % needs to be converted to ML/day, so the penalty £/unit is not that same as the performance commitment. The penalties should be: So the penalties should be £m/ML/d and £m/l/p/d as the information cannot be read standalone tables.
94	Effective stakeholder engagement	'Measurement unit and decimal places' and 'unit' should be changed to score instead of number.
52 113	Surface water management Empty business properties	Both units should be number, not hectares and properties respectively. Otherwise other PCs should be updated, i.e. Properties at risk of receiving low pressure should be changed from 'number' to 'properties'.

Source: Thames Water and Thames Water – Outcomes performance commitment appendix

- 1.182. If the Performance commitment levels are supposed to be interpreted as stand-alone tables, then the unit should also reflect the normalised measures. i.e. number per 1,000 km mains rather than just number. This applies to:

Table 15: Optional full unit descriptions

Page	Measure	Full unit
16	Mains repairs	Number of repairs per 1,000km of mains
26	Internal sewer flooding	Number of incidents per 10,000 sewer connections
28	Pollution incidents	Number of pollution incidents per 10,000 km sewer network (not wastewater network)
32	Sewer collapses	Number of collapses per 1,000km of sewer network

Source: Thames Water and Thames Water – Outcomes performance commitment appendix



W Conclusion

1.183. In this Appendix, we have justified changes in PCs and ODIs to meet the needs of the business to serve our customers. The overall impact are summarised in the table below.

Table 16: Our proposed approach

Measure	Ofwat DD 2024/25 target	Proposed Business Plan Scenario			
		2024/25 target	Glide path to 2024/25	ODI penalty rate	Other
Key areas of disagreement with the DDs					
Leakage <i>(based on MI/d AMP6 annual average methodology)</i>	477* (25% reduction)	509 MI/d (20% reduction)	Our April plan basis	✓	Reducing collar to 5%
Supply interruptions <i>(mins per property)</i>	3 mins	6 mins	DD glide path shifted upwards to reflect new end target	Our April plan basis	14mins, 42 sec collar (April plan basis)
Unplanned outages <i>(% peak week capacity)</i>	2.34%	5%	Straight line from 18/19 position similar to other companies	Non-financial ODI	True-down for specific related enhancements
Mains repairs <i>(No. per 1k km of mains)</i>	231.3	✓	Straight line from current position similar to other companies	Our April plan basis	
CRI <i>(Index)</i>	0.00	0.00	n/a	✓	Exclusion of metaldehyde
C-Mex	n/a	n/a	n/a	n/a	Proposing an alternative structure to the incentive, and other changes
Other measures**					
Per capita consumption <i>(Litres/head/day 3 year average)</i>	6.3% reduction	✓	✓	✓	
Metering	-	-	-	-	Rejected - duplication with other PCs
Acceptability of water to consumers <i>(No. contact/1000 population)</i>	0.6	✓	✓	Our April plan basis	
Internal sewer flooding <i>(No./10k properties)</i>	1.34	✓	New profile to reflect actions to meet Ofwat target	Our April plan basis	Exclusion for extreme weather; Collars as per our April plan basis
Blockages <i>(Number)</i>	62,500	✓	✓	Our April plan basis	Penalty collar to 120k
Pollution incidents <i>(No. /10k of mains)</i>	19.5	✓	✓	Our April plan basis	Reducing collar as per our April plan basis
D-MeX	n/a	n/a	n/a	n/a	We comment on the structure of the metric
Renewable energy generation <i>(GWhrs)</i>	517	✓	✓	✓	Remove cap/collar
Sludge treated before disposal <i>(%)</i>	n/a	n/a	n/a	n/a	Excluding untreated sewerage exported to 3 rd parties for treatment
SEMD	100%	✓	-	AMP6 legacy PC, ODI rate same as AMP6; AMP7 rate related to project delay	Remove AMP6 legacy PC;
Environmental measures definition <i>(No. sites)</i>	724	✓	✓	✓	Ability to update target based on EA agreed changes
Empty household properties (voids) <i>(% of household properties)</i>	✓	✓	✓	✓	-
Number of customers on the priority services register <i>(% reached/actual/attempted contact)</i>	7% / 50% / 90%	✓ / 30% / ✓	n/a	n/a	
Achieving British Standard BS18477 for Inclusive Service Provision	✓	✓	Accreditation by 2020/21	✓	Drafting change on first year target

Source: Thames Water, ✓ = accepting DD target/basis; * Thames Tideway Tunnel PCs discussed in Appendix TW-DD-A10-Thames Tideway Tunnel.

